Université de Montréal

Screenlife films: graphical user interfaces as mise en scène, impacts on cinematic conventions, storytelling and mystery fiction techniques

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Ce mémoire intitulé

Screenlife films: graphical user interfaces as mise en scène, impacts on cinematic conventions, storytelling and mystery fiction techniques

Présenté par

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A été évalué(e) par un jury composé des personnes suivantes

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Résumé

Ce mémoire est une description et une analyse de la mise en scène dans trois films *screenlife* – *Unfriended* (Leo Gabriadze, 2014), *Unfriended: Dark Web* (Stephen Susco, 2018) et *Searching* (Aneesh Chaganty, 2018) – qui est principalement défini par les interfaces utilisateur graphiques (IUG) affichées dans les représentations des enregistrements d'écran d'ordinateur par lesquels ces films sont définis. Le but de cette étude était de découvrir – en utilisant la recherche sur les IUG par Lev Manovich et Anne Friedberg – comment la nature modulaire des médias numériques – vidéo, photo et texte – positionnés à l'intérieur de chaque IUG permet de transposer certaines conventions cinématographiques, techniques de narration et de roman policier sur les IUG. La recherche révèle qu'en raison des IUG (associées au système d'exploitation et à des applications), certaines traditions narratives ont été présentées de manière multiple, simultanée et superposée dans la mise en scène, par opposition à la manière singulière et séquentielle que les films ont généralement représenté le temps et l'espace en montrant un plan à la fois.

Le premier chapitre raconte l'histoire du film *screenlife* et comment il a connu plusieurs itérations en raison de ce qui avait pu être affiché dans les IUG à différentes périodes entre 2002 et 2018, notamment les types d'appels vidéo, de sites Web et de médias sociaux. Le deuxième chapitre propose une mise en scène *screenlife* qui divise l'espace de l'écran en trois niveaux pour articuler comment les traditions cinématographiques et narratives ont été transposées dans *Unfriended*, *Unfriended: Dark Web* et *Searching*. Le troisième chapitre est une continuation de ce processus, mais avec un accent sur les techniques de roman policier, les indices et les fausses pistes, présents dans chacun de ces trois films *screenlife*. La description et l'analyse confirment que ces traditions de mystification sont également transposées dans les IUG de manière multiple, simultanée et superposée à partir de la manière singulière et séquentielle dont elles ont été présentées dans les romans policiers et les films policiers traditionnellement tournés.

Mots-clés : *screenlife*, mise en scène, interface utilisateur graphique (IUG), roman policier, *Unfriended*, *Unfriended : Dark Web*, *Searching*, indice, numérique, écran, transposition.

Abstract

This master's thesis is a description and analysis of the mise en scène in three *screenlife* films – *Unfriended* (Leo Gabriadze, 2014), *Unfriended: Dark Web* (Stephen Susco, 2018) and *Searching* (Aneesh Chaganty, 2018) – that is primarily defined by the graphical user interfaces (GUIs) displayed within the representations of computer screen recordings these films (and this format) are defined by. The purpose of this study was to find out – using the research into GUIs by Lev Manovich and Anne Friedberg as a framework to interpret the space within a computer screen – how the modular nature of individual digital media – video, photo and text – positioned within each GUI permit certain cinematic conventions, storytelling and mystery fiction techniques to be transposed onto a computer screen's interfaces (GUIs). The research reveals that due to the GUIs (associated with the computer's operating system and its various applications) certain narrative traditions have been presented in a multiple, simultaneous and overlapping way within the mise en scène as opposed to the singular and sequential manner that films have typically represented time and space by showing one shot, one spatio-temporality, within the frame at a time.

The first chapter recounts the history of the *screenlife* film and how it has had several iterations because of what had been possible to display within GUIs at various periods between 2002 and 2018, notably the types of video calls, websites and social media. The second chapter proposes a *screenlife* mise en scène that divides the screen space into three levels to articulate how cinematic and narrative traditions have been transposed into *Unfriended*, *Unfriended: Dark Web* and *Searching*. The third chapter is a continuation of this process, but with a focus on mystery fiction techniques, clues and red herrings, present in each of these three *screenlife* films. The description and analysis confirms that these mystification traditions are also transposed into the GUIs in a multiple, simultaneous and overlapping way from the singular and sequential manner that they have been presented in detective novels and traditionally shot mystery genre films.

Keywords : *screenlife*, mise en scène, graphical user interface (GUI), mystery fiction, *Unfriended*, *Unfriended : Dark Web*, *Searching*, desktop, computer screen, transposition.

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Liste des sigles et abréviations

GUI : graphical user interface

POV : point of view

fig. : figure

OS : operating system

I dedicate this master's thesis to my family and friends.

Remerciements

First, I want to thank my research director André Habib. Without his guidance, suggested readings and insightful feedback into this problematic, this master's thesis would not have taken its current form. During the research process, André kept pushing me to find new angles to approach the problematic which led to questions surrounding the impact of the graphical user interfaces on the mise en scène of the *screenlife* films. As well, his feedback during the writing process really helped to bolster the initial drafts that required additional sources, corrections and certain elements to be made clearer. Without André's collaboration, I would not have been able to realize this project, so I am very grateful for his time and expertise that was necessary in addressing a film format that has very few academic sources that specifically address it.

Another important thank you must go to my family, most notably my mother who also helped keep me motivated through this process that was challenging at times. I should thank my friends here in Montréal and in British Columbia who kept a smile on my face, especially during the pandemic when it was not always easy to do research and writing in a solitary environment. And I want to thank the volunteers at Thèsez-vous in Montréal, an organization that created a positive work space for me to write my thesis with other students in the final eight months of the process.

I would also like to thank Santiago Hidalgo and Marc Steinberg for taking their important time to be members of the jury for this master's thesis. And finally, I want to thank Université de Montréal for giving me this opportunity that has not only changed the way that I think about cinema, but has also changed how I will approach thinking about cinema and other important questions in the future.

Introduction

A *screenlife* film is a story that limits its mise en scène to a character's computer screen. In the three films that will be investigated to uncover how this moving picture format operates – *Unfriended* (Leo Gabriadze, 2014), *Unfriended: Dark Web* (Stephen Susco, 2018) and *Searching* (Aneesh Chaganty, 2018) – the main limitation to the storytelling is that action unfolds uniquely on the screens of characters' computers (fig. 1).

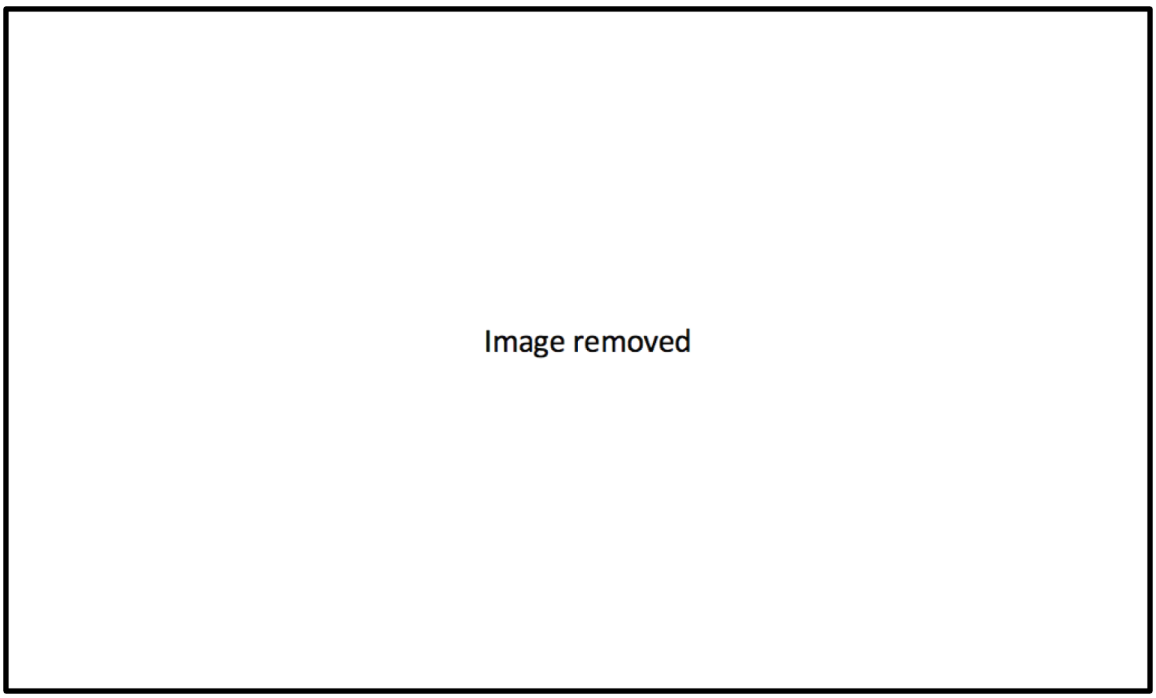

Figure 1. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 45 min 54 s. The mise en scène is limited to a character's (Matias O'Brien) computer screen. ©Bazelevs Production.

The diegesis is effectively the pixels that make up these interface displays that characters use. The personal computer screen serves, both within the fictional *screenlife* diegesis and in non-fiction reality, as an interface to the digital world. Possibly the most human element of this digital environment is the possibility for users to communicate with others over the internet using

moving pictures and sound. Ever since the first two films were released – *Thomas est amoureux* (Pierre-Paul Renders, 2000) (fig. 2) and *The Collingswood Story* (Michael Costanza, 2002)) (fig. 3) – that formed the foundation of what defines a *screenlife* film, relatively simple video call interfaces were at the heart of these stories because they allowed characters to communicate face to face over a network.

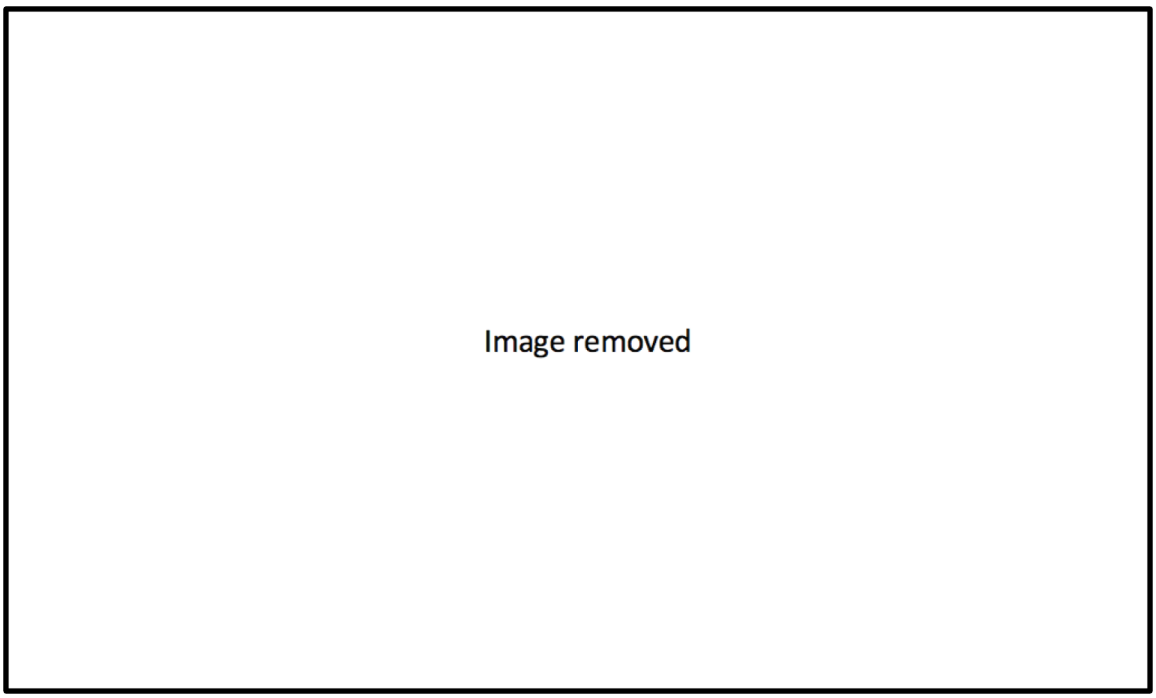

Figure 2. – Frame from the film *Thomas est amoureux* (Pierre-Paul Renders, 2000) at 25 min 50 s. Video call interfaces used in this story are displayed in the background. ©eOne Films.

Figure 3. – Frame from the film *The Collingswood Story* (Michael Costanza, 2002). The fictional *dekko* videophone is an example of a simple video call interface. Reproduced with the permission of ©Cinerebel Films.

While video calls provided the primary interfaces on computer screens in these two films, the advent of more sophisticated interfaces, graphical user interfaces (GUIs), notably for the *Apple* (fig. 4) and *Microsoft* operating systems (fig. 5), provided a more interactive computer display technology allowing not only for video calls to be shown on the screen, but also other digital images to be simultaneously positioned within virtual windows on the same screen.

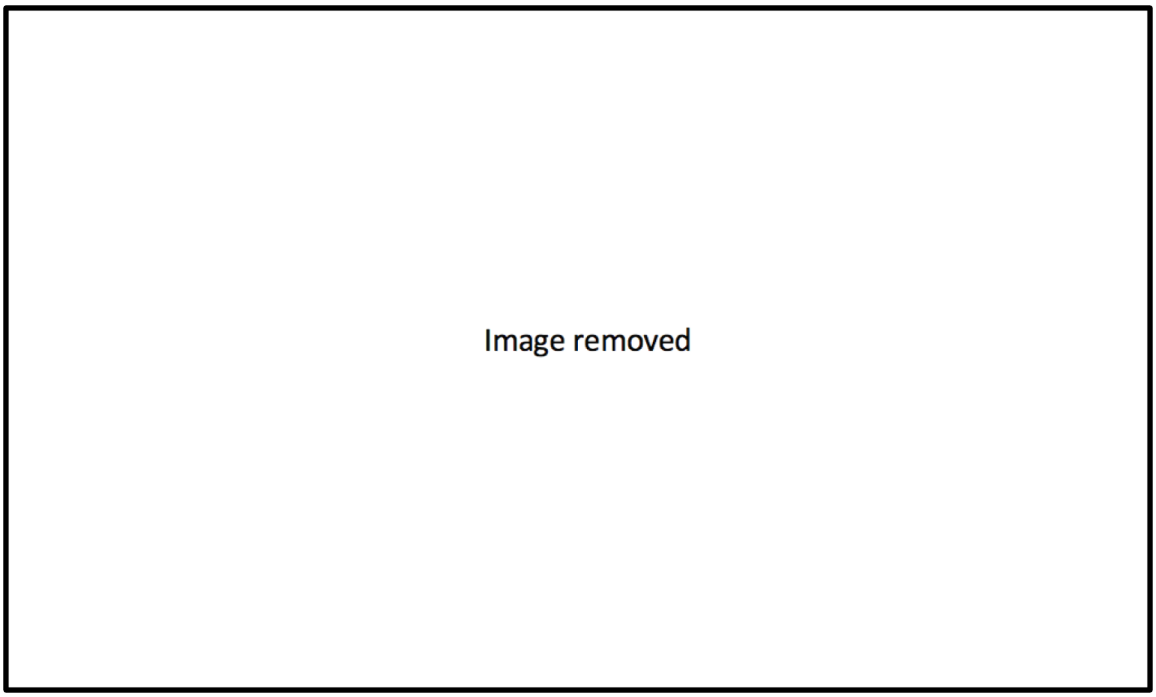

Figure 4. – Frame from the film *Unfriended* (Leo Gabriadze, 2014) at 21 min 01 s. An example of the graphical user interface (GUI) for the *macOS*. ©Bazelevs Production.

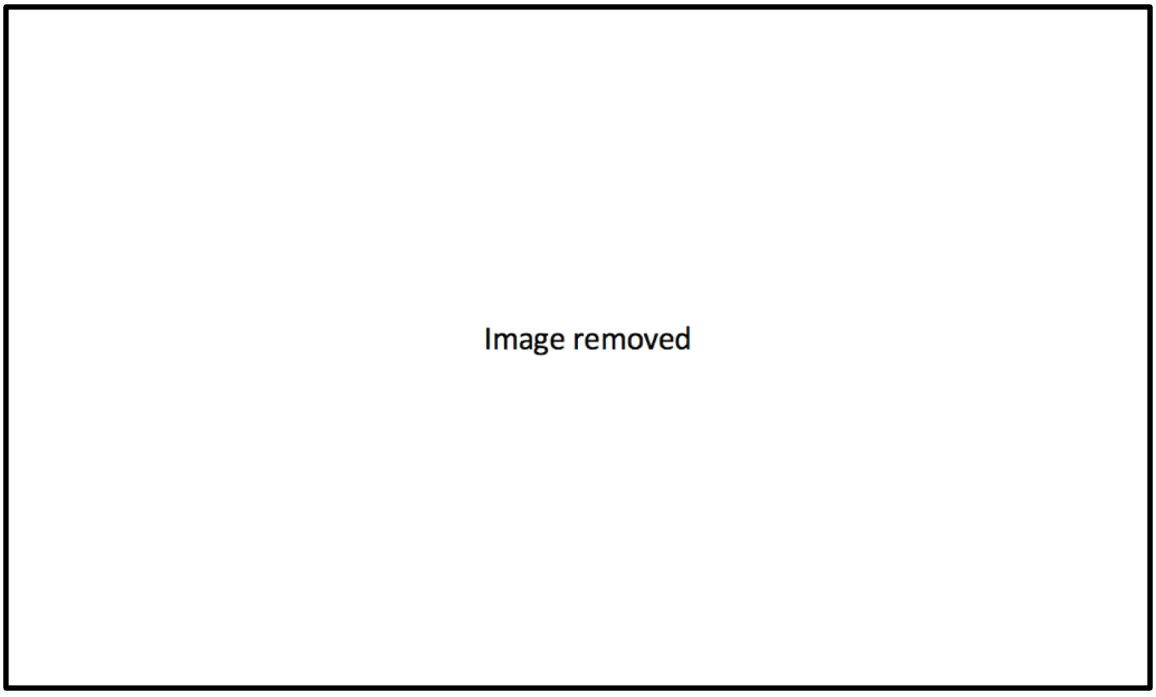

Figure 5. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 20 min 55 s. An example of the graphical user interface for *Microsoft Windows XP*. ©Screen Gems.

A virtual window can simultaneously display videos, photos and texts assigned to distinct spaces within its two-dimensional boundaries. Additionally, multiple virtual windows can not only co-exist within the same screen space, they can also overlap which increases the perceived space that can be represented within a fixed frame size. The simultaneous, overlapping way that multiple images can be organized within the graphical user interface has effectively changed how the mise en scène can be organized within the frame because of the way that visual information can be shown on a screen within one of three spaces: the individual media, the individual virtual window and the individual screen.

Beyond the video calls that anchor audio-visual communication in *Thomas est amoureux* and *The Collingswood Story*, these initial *screenlife* films do not exploit the potential of the interface as a storytelling device as future films like *Unfriended* and *Searching* would do with *macOS* and *Windows* GUIs. GUI features such as displaying multiple virtual windows (associated with corresponding applications) simultaneously changed how these screen stories are told. Another important technological factor that also limited what could be displayed within virtual windows serving as interfaces to the internet is that most websites in the early 2000s had Web 1.0 functionalities that did not allow for many interactive features that became common in social media such as *Facebook*. Webpages reflecting Web 1.0 conventions were typically limited to more of a read-only display with a few hyperlinks, but very little interactivity on the interface (McArthur, Lam-McArthur, and Fontaine 2018, para. 1). These Web 1.0 technical limitations are reflected in *The Collingswood Story* that shows some very simple websites that display photos and text with some hyperlinks (fig. 6).

Figure 6. – Frame from the film *The Collingswood Story* (Michael Costanza, 2002). An example of a webpage reflecting Web 1.0 aesthetics. Reproduced with the permission of ©Cinerebel Films.

Web 2.0 marked a major shift in how many websites were constructed in the mid-2000s as their interfaces began to have many more interactive features that are demonstrated in social media such as *Facebook*, *YouTube* and *Twitter* that allow users to easily share their own texts, photos and videos within these sites (McArthur, Lam-McArthur, and Fontaine 2018, para. 1,3). These social networks exploded in popularity during the second half of the 2000s and into the 2010s. This technological and cultural shift toward social media is reflected in *screenlife* films such as *Noah* in 2013, then *Unfriended* in 2014 (fig. 7).

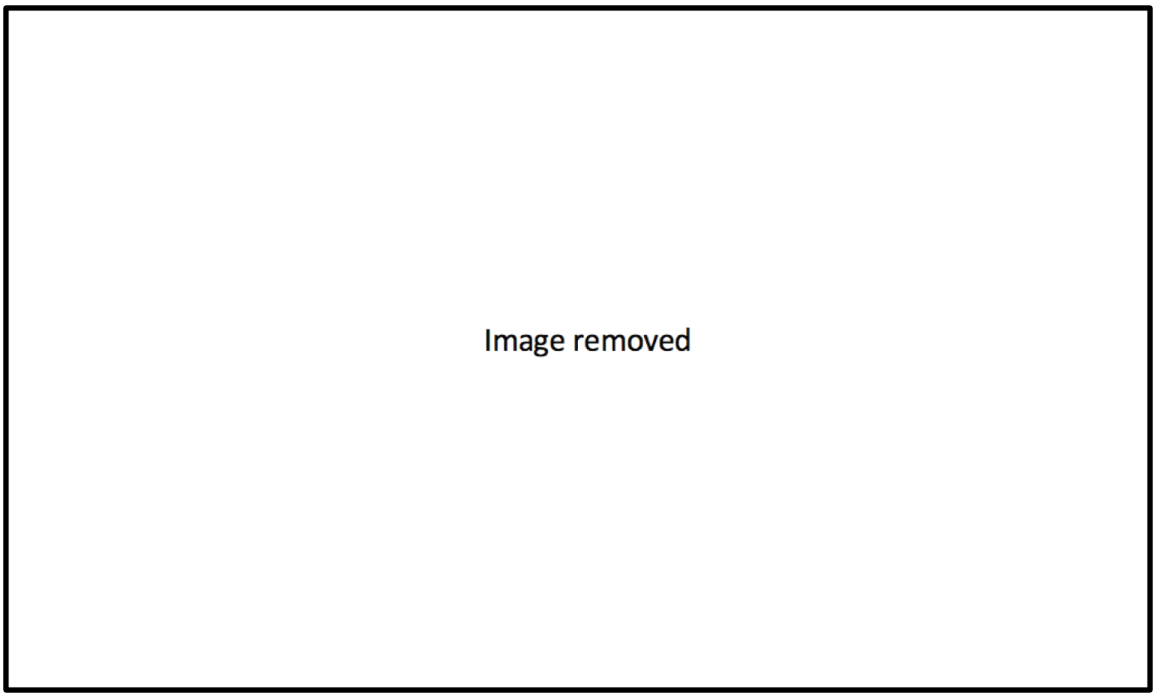

Figure 7. – Frame from the film *Unfriended* (Leo Gabriadze, 2014) at 1 h 15 min 45 s. An example of Web 2.0 on a *Facebook* page displaying user generated content. ©Bazelevs Production.

However, what has remained relatively consistent throughout the evolution of video calls, instant text messaging applications and social media is that they all rely on some form of visual interface, most notably the graphical user interface (GUI), to make it easier for users to interact with these computer applications.

> **Graphical user interface (GUI)**, a computer program that enables a person to communicate with a computer through the use of symbols, visual metaphors, and pointing devices. Best known for its implementation in Apple Inc.'s Macintosh and Microsoft Corporation's Windows operating system, the GUI has replaced the arcane and difficult textual interfaces of earlier computing with a relatively intuitive system that has made computer operation not only easier to learn but more pleasant and natural. The GUI is now the standard computer interface, and its components have themselves become unmistakable cultural artifacts ('Graphical User Interface | Computing | Britannica' n.d.).

As this definition suggests, without a visual interface, such as a GUI, it would not be possible to have the real-time audio-visual communication between characters in *screenlife* films, nor would it be possible to have the simultaneously displayed images within social media applications on the screen. This definition also implies that interfaces, more specifically the GUIs, are designed to

present the individual media components that make up a video call or a social media application in a way to make communication and other tasks easier through the computer screen. The virtual windows and the individual media (video, photo, text) contained within GUIs have not only made computers more intuitive to use, for *screenlife* films, they have significantly changed the way that the mise en scène functions when compared to traditionally shot films that limit mise en scène to a single frame representing one time and space filmed from a single point of view.

The current literature available to specifically address the transposition of cinematic conventions as well as storytelling and mystery fiction techniques into the GUIs used as mise en scène within *screenlife* films is very limited. Most of the sources that address *screenlife* films specifically are not found in scholarly articles or books, but in online magazine stories and articles that recount the release of specific films and discuss the format's unique qualities. Perhaps the most important article in helping to define the term *screenlife* was published by Timur Bekmambetov, the producer of the three *screenlife* films analyzed, on the *MovieMaker.com* website that details his manifesto for the "screenmovie," a term that would later be replaced by *screenlife* (Bekmambetov 2015). Another pertinent source is an article by Emily Wei for the site *Medium.com* that describes the *screenlife* film as presenting a "semi-first-person perspective" which is unique because the spectator observes the same screen information as a character, but he or she cannot see beyond its pixel dimensions into the physical space of the diegesis (see Wei 2018).

As far as scholarly sources, these were more pertinent to the problematic as they were primarily used as the framework for interpreting the mise en scène as having three separate levels. However, these authors do not refer to *screenlife* films within their texts, they instead specifically define characteristics of the interface technologies and media contained within them that define the mise en scène that is represented in *screenlife* films. In order to form the basis of this mise en scène analysis, *The Language of New Media* by Lev Manovich proposes a way to interpret the GUIs, so that they can be divided into two levels or spaces within the mise en scène (Manovich 2001, 64). As well, he articulates the modular nature of individual media displayed within GUIs (Manovich 2001, 31) which helps to identify a third level within the *screenlife* mise en scène. While this book was published in 2001, it remains pertinent today because the analysis of GUIs

by Manovich relates to their foundational characteristics developed in the 1970s that centre around the use of multiple overlapping windows that can each embed media in a modular way. Anne Friedberg's *The Virtual Window: From Alberti to Microsoft* also aids in defining the role that the GUI in conjunction with the internet has played in changing the types of images that can be presented within the film frame (Friedberg 2006, 221-222, 243). And Thomas Elsaesser and Malte Hagener's *Film Theory: An Introduction Through the Senses* proposes the metaphor "portal" to describe how webpage images could be perceived because of their visible hyperlinks that offer a seemingly unlimited access to other texts, imagery and webpages in other locations (Elsaesser and Hagener 2015, 200). The term portal becomes important because it allows the amateur detective characters in each story to jump from one location to another with a click on their trackpad.

In terms of explaining why there are certain types of multimedia images shown in *screenlife* films built around video calls, authors such as Paula Albuquerque as well as Daniel Miller and Jolynna Sinanan use the term *polymedia* to describe how certain cultural phenomena and technological trends have resulted in a type of multitasking that is anchored by the video call centred within other media displayed on the computer screen (Albuquerque 2018, 18; Miller and Sinanan 2014, 136). It is this dynamic between the video call and other simultaneously displayed applications such as social media that is most relevant when analyzing the transposition of cinematic conventions into the GUIs within the three *screenlife* films. Finally, authors such as Jesper Gulddal, Shosuke Kinugawa, Michel Sirvent, Albert W. Halsall and Mary F. Rodell have defined different clues types and red herrings while also elaborating on how these techniques have been used in mystery fiction, primarily within the detective novel (see Gulddal 2020; Halsall 1991; Kinugawa 2018; Rodell 1946; Sirvent 1999). These definitions serve as an important foundation for detecting, then describing and analyzing how the different clues and red herrings have been transposed into the GUIs represented in the three *screenlife* films.

While none of the authors of scholarly sources referred to within the three chapters specifically address *screenlife* films or the transposition of narration techniques into a GUI environment, which is the focus of this thesis, they nonetheless establish the foundation for this description and analysis because they help to divide the individual interface technologies (GUIs), cinematic

conventions, storytelling traditions and mystery fiction techniques into individual components that are used to construct this film format. Isolating how individual media and virtual windows operate within the larger GUI environment is important to clarify because it is these units that are used to transpose the specific cinematic conventions, storytelling traditions and mystery fiction techniques onto a screen. It is also important to define the mystery fiction, storytelling and cinematic conventions, so that it is clear what has been transposed into the GUI environments. It is this transposition of these conventions that distinguish these *screenlife* films as unique in relation to traditionally shot films and the novel.

Much of the analysis within this thesis is based on dividing the mise en scène into three levels to be able to better describe how the GUIs transpose narrative traditions into the *screenlife* films. Manovich, in his book *The Language of New Media*, proposes that two distinct types of interfaces (GUIs) exist on a computer screen that can be divided into two distinct spaces: the first is the interface (GUI), associated with a specific application, that determines how a single virtual window displays information; the second is the interface (GUI), associated with the operating system (OS), that primarily determines how virtual windows are displayed within the entire computer screen space (Manovich 2001, 64). Manovich states that these two interfaces (GUIs) have the potential to influence the meaning of individual media shown on the computer screen.

> In semiotic terms, the computer interface acts as a code that carries cultural messages in a variety of media. When you use the Internet, everything you access — texts, music, video, navigable spaces — passes through the interface of the browser and then, in turn, the interface of the OS. In cultural communication, a code is rarely simply a neutral transport mechanism; usually it affects the messages transmitted with its help. For instance, it may make some messages easy to conceive and render others unthinkable. A code may also provide its own model of the world, its own logical system, or ideology; subsequent cultural messages or whole languages created with this code will be limited by its accompanying model, system, or ideology (Manovich 2001, 64).

When Manovich uses the example of the browser as the type of application that defines the first interface (GUI) that individual media pass through, the browser can be applied more broadly to any computer application that displays information within a virtual window that has an interface (GUI) that determines how media are displayed within it. For example, *Microsoft Word* is an application that has an interface that determines how text is organized within its virtual window

much like how another type of application such as *Google Chrome* – which is a browser – has its own interface that governs how text, photos and video can be organized and interacted with in its virtual window.

The main point that Manovich is trying to make is that the browser, or more specifically an application, has an interface that determines or governs how media are displayed within a virtual window. He states that the way that text, photo and video are organized within a virtual window is rarely neutral, instead suggesting the way that these individual media are displayed could potentially reflect certain ideologies or systems. In the context of *screenlife* films that display several individual media – text, photography and video – simultaneously within a virtual window, one can observe that certain systems, more specifically cinematic conventions as well as storytelling and mystery fiction techniques have been transposed into these defined spaces to preserve pre-existing traditions, pre-existing ways of communicating story using moving images, but in a way that reflects the multiple and the simultaneous qualities of image display on the modern computer display interface. Thus, the specific applications that have been chosen to transpose these pre-existing cinematic conventions and storytelling techniques reflect a desire to continue using these systems in an attempt to maintain a certain continuity or logic in visual communication for the built-in audiences associated with these established traditions. The challenge faced with transposing these well-established cinematic and genre traditions into the GUI environments is that the diegesis is now a two-dimensional space defined by a grid of pixels that can show multiple images simultaneously within virtual windows. In the traditionally shot film where cinematic and genre film storytelling conventions have been evolving for decades, the diegesis is typically within the three-dimensional physical world represented within a single image representing one time and space.

While individual media such as text, photo and video are mainly contained within the virtual window interface (GUI) of an application, the other interface (GUI) that Manovich refers to is the one associated with the operating system (OS). There are many operations that the graphical user interface (GUI) for an operating system is responsible for, but within the context of the three *screenlife* films, it is the way that this interface offers multiple ways for multiple virtual windows to be displayed within the screen space at the same time that is most pertinent. The interactions

between virtual windows are important in the three *screenlife* films because of how their relationships, their juxtapositions between each of them can also serve to transpose or emulate certain cinematic conventions and storytelling traditions.

It should also be pointed out that there are several different types of operating systems that have their own unique interfaces (GUIs), but in the past 20 years, since *screenlife* films have evolved, it has predominantly been *macOS* (Macintosh operating system) for Apple computers and *Microsoft Windows* for other personal computers. The three *screenlife* films predominantly use the *MacOS* to tell their stories, but *Microsoft Windows* is also used in a couple of short scenes in *Searching* and *Ubuntu* is used as well in a few scenes in *Unfriended: Dark Web*. Regardless of the operating system, the most pertinent functionalities of the graphical user interfaces (GUI) affiliated with these operating systems that are used to transpose cinematic conventions and storytelling techniques are relatively similar. They all exhibit the ability to resize, reposition and overlap virtual windows. These qualities are three of the fundamental techniques associated with each of the operating systems' graphical user interfaces (GUIs) used in the three *screenlife* films. With the advent of virtual windows, Anne Friedberg has articulated a change in the meaning given to the frame which represents the space within the computer screen. For the traditional film frame that represents one space and time, the transparent window has been the metaphor for this type of frame that only shows one perspective (Friedberg 2006, 231). However, virtual windows on the computer screen change how objects, individual media, can be represented within the space of a screen, thus within the *screenlife* film frame.

> The window's metaphoric boundary is no longer the singular frame of perspective – as beholders of multiple-screen "windows," we now see the world in spatially and temporally fractured frames, through "virtual windows" that rely more on the multiple and the simultaneous than on the singular and sequential (Friedberg 2006, 243).

The qualities of the "multiple" and the "simultaneous" that define virtual windows are two of the most relevant characteristics when making a comparison between multiple images being simultaneously displayed in the three *screenlife* films and images that represent one space and time found in traditionally shot and edited films that represent, "the singular and the sequential." The multiple and the simultaneous are defining qualities of the interfaces (GUIs) within the three *screenlife* films, but it is important to stress that the two interfaces identified by Manovich

function on two levels: the possibility of having the multiple and the simultaneous within a virtual window with various combinations of text, photo and video; and the potential of having the multiple and the simultaneous within the computer screen because it can display multiple virtual windows at the same time. So, if one interprets how individual media such as text, photos and video pass through two interfaces on a computer screen as Manovich does – the interface of the browser (space within a virtual window that governs how individual media are displayed for an application) and the interface of the operating system (entire screen space that governs how virtual windows can be simultaneously displayed) – one could apply this division of space to the film frame that represents *screenlife* films because they display the very types of interfaces (GUI) that Manovich refers to.

This division of the GUIs into two spaces is a conceptual one that helps to interpret how the mise en scène is structured. One can also go a step further and interpret the objects within each virtual window – the video, photo and text – as having their own internal mise en scène. For example, within the frame of a single video from a webcam located within a video call virtual window such as *Skype*, the filmed images have their own mise en scène such as a person in their room looking in the direction of the webcam. Thus, it appears that images within a computer screen (using a graphical user interface (GUI)) can be divided into three distinct levels. These three spaces are unique when compared to the single perspective, single space represented in most traditional films that show one shot at time. While Friedberg describes this shift toward image display within a GUI environment as a movement into the multiple and simultaneous away from the singular and sequential (Friedberg 2006, 243), Manovich adds to this description of "the multiple and the simultaneous" by suggesting that images within virtual windows are also modular. He refers to these images as "new media" which is somewhat of a misleading term because these media are comprised of the same media used in traditionally shot films such as video, photo and text. What makes the "new media" that Manovich refers to different is that they are displayed within interfaces (GUIs). The GUIs for computer operating systems developed by *Windows*, *Ubuntu* and *Apple* offer the ability to display, move and overlap multiple virtual windows at the same time to create unique juxtapositions between "new media" contained within individual virtual windows. Manovich illustrates that each "new media" within a virtual window is modular because of the

way that digital videos, photos and text that are displayed within GUIs can be added, rearranged and deleted with relative ease.

> In contrast, as with traditional media, deleting parts of a new media object does not render it meaningless. In fact, the modular structure of new media makes such deletion and substitution of parts particularly easy. For example, since an HTML document consists of a number of separate objects each represented by a line of HTML code, it is very easy to delete, substitute, or add new objects (Manovich 2001, 31).

Manovich uses an HTML document as an example not only because it determines how a "new media object" will be displayed on a webpage, but it also demonstrates just how modular each of the new media objects are because of the ease at which one can be added or deleted from the HTML document. It is ultimately the graphical user interface within the browser that interprets the HTML document in order to organize the layout of text, photos and videos in a virtual window. This "modular structure of new media" that Manovich describes opens up an important conversation about the imagery in *screenlife* films because of the way that "new media," such as video, photo and text, can be resized, repositioned and layered within the screen. The way that the modular structures within the GUIs are organized in the *screenlife* films define the specific types of collages of images that are commonly presented within this film format to achieve transpositions of specific cinematic conventions and storytelling techniques. The two interfaces (GUI) that digital images must pass through when displayed on a computer screen, as defined by Manovich, suggest a new way of interpreting the mise en scène of images displayed on the computer screen. This is especially pertinent because the computer screen is the only part of the diegetic world visible within each of the stories of the three *screenlife* films analyzed. What this analysis will reveal is that in the case of these three *screenlife* films, the modular nature of the two interfaces and the individual media within them are often structured in similar ways in order to achieve transpositions of certain cinematic and storytelling techniques (most notably clue techniques for each film's mystery genre elements) onto the computer screen's interfaces (GUIs) that reflect their "multiple" and "simultaneous" nature.

While the impact of graphical user interfaces (GUIs) is the central focus of this study, how each individual media embedded within virtual windows are produced by characters and their devices within the diegesis is also important to observe. This is because the aesthetics of each of the

individual media are also influenced by the gestures of the characters, most notably by their hands when filming video or taking photos on a mobile phone, but also by the movement of their entire body whenever positioning themselves in front of their computer's webcam. How text is represented on screen is also determined by the way that characters manipulate the keyboard, their typing rhythm and what exactly they have typed. There are often spelling and grammatical errors in the texts which adds another layer of meaning to images produced within the diegesis of these films because they are made intentionally imperfect. Thus, it will not only be important to describe and analyze how text, photo and video are displayed with each of their GUI environments to achieve certain transpositions of narrative and cinematic conventions, but it will also be essential to understand how the devices that produce each of the individual digital images or texts are manipulated by characters within the diegesis to tell the story.

The objective of this description and analysis of *Unfriended*, *Unfriended: Dark Web* and *Searching* is to articulate how these three fictional narrative *screenlife* films stage certain cinematic conventions and story techniques, notably from the mystery genre, in a unique way because of a mise en scène that is not only defined by its individual media (video, photo, text), but also its two interfaces (GUIs). Rather than a film or video production camera, it is the webcam, keyboard and trackpad that are used to produce much of the imagery displayed within a frame. However, it is ultimately the two interfaces (GUIs) that provide the structures to interpret the mise en scène within the *screenlife* film as having three separate levels or spaces for structuring objects contained within them. The three levels of the *screenlife* mise en scène are individual digital media, individual virtual windows and individual screens.

While this study focuses on *screenlife* films that tell fictional stories using mystery genre techniques, there are also elements from other genres – horror, drama and suspense – that will not be addressed with any depth. As well, beyond the three *screenlife* films that represent fiction, there are also certain documentary and experimental films, which will also not be analyzed, that have taken a similar approach as the fictional *screenlife* films by limiting the diegesis to the computer screen. However, it appears that most documentary and experimental films based on representations of screen recordings do not build their stories around the video call like most fictional *screenlife* films do, so it would have been difficult to include them in the analysis because

of the significant role video calls play in storytelling. As well, the three *screenlife* films analyzed exhibit the use of mystery fiction techniques more than any other storytelling elements associated with other genres. The most notable mystery elements are the presence of clues and red herrings within the imagery. This trend presented an opportunity to investigate how each of these *screenlife* films has displayed these mystery fiction elements within the mise en scène in unique ways. While there are horror, drama and suspense elements in the three *screenlife* films analyzed, they were not as prominent as the mystery fiction techniques, especially in terms of exploiting the GUIs potential to display multiple media simultaneously in an overlapping way.

This thesis is also divided into three chapters that each address the transposition of cinematic conventions, storytelling and mystery fiction techniques into the interface technologies that define the mise en scène of *screenlife* films, most notably the GUIs in *Unfriended*, *Unfriended: Dark Web* and *Searching*. The first chapter is an attempt to define what a fictional *screenlife* film is, its origins and its evolution to show how the interfaces used to show video calls and social media on computer screens to tell these stories have mirrored in certain ways the technological and social contexts they existed within between 2002 and 2018. The second chapter further elaborates on the proposed three levels or spaces within the mise en scène that define the *screenlife* film (individual media, individual virtual window, individual screen) to reveal how certain cinematic conventions such as the shot reverse-shot, the subjective point of view shot and cross-cut editing have been transposed into each of these three spaces to present certain traditional narrative filming and editing techniques in a multiple, simultaneous and overlapping way within a single film frame. The third chapter is also a deconstruction of the transposition of certain storytelling techniques into the *screenlife* mise en scène defined by GUIs, but more specifically addressing specific mystery fiction devices, the clue and the red herring. The importance of this final chapter is to show how clues and red herrings function in unique ways because they do not exist exclusively within individual media, it is also the virtual windows and other individual media displayed simultaneously that serve to present these mystery fiction techniques effectively. Each of these three chapters is aimed at addressing specific questions related to the problematic: how certain cinematic conventions and detective novel techniques have been transposed into the GUIs of narrative *screenlife* films containing a mise en scène

defined by three distinct levels in a two-dimensional space. This problematic surrounding *screenlife* films is not only important to address because it is an emerging storytelling format, but also because computer, tablet and smartphone screens have never been more present in the daily lives of people in almost all corners of the world. The hope is to show how these digital screen spaces that have their own unique characteristics – different from those within the physical and material world – have been used to continue certain cinematic traditions and specific genre storytelling techniques in a way that, as Anne Friedberg describes, is less about the "singular and sequential" and more about "the multiple and the simultaneous."

Chapter 1: The evolution of the *screenlife* film

The origins of the *screenlife* film

Before delving into the description and analysis of how images evoking cinematic conventions have been transposed into the *screenlife* mise en scène, it is important to recount the evolution of the fictional *screenlife* film to better understand where *Unfriended*, *Unfriended: Dark Web* and *Searching* are situated within this format of fiction filmmaking that has had various iterations since 2000. To better categorize *screenlife* films as a format of filmmaking or genre, one could consider them as a subcategory of *desktop* or computer screen films which have also been classified as a subgenre of *found-footage* films. The term *desktop movie* has been used to describe any film that represents a computer screen recording which is not limited to fiction films, but also implicates documentaries and experimental films (Béghin 2016, 40-41). The term *screenlife* film has been generally used to describe popular fiction films that are based on screen recordings. These are typically films that are more commercial in nature, that often have built in genre film elements such as mystery, suspense or horror. However, the term *screenlife* is still relatively new as is the term *desktop* film, so these definitions are not necessarily fixed. In recent years, the term *screenlife* film has become more and more common that in some cases it appears as though it has become an interchangeable term with *desktop movie* (Bishop 2015, title; Willmore 2018, para. 10,11; Rindner 2021, para. 1, 15). For the purposes of this study, the overwhelming majority of films referred to as *screenlife* are fiction films, typically genre films – meant to entertain a broader, often younger, digital literate audience – that represent computer screen recordings from at least one character's computer, typically the protagonist's.

The term *screenlife* evolves from the term *screenmovie* used by Timur Bekmambetov in 2015 after having produced *Unfriended* (2014). Bekmambetov had written and published a manifesto on MovieMaker.com to outline rules for this storytelling format he referred to as the *screenmovie* which was based on the representation of screen recordings and how they should be represented as a format. The manifesto is divided into three main principles: unity of place, unity of time, and unity of sound. These three unities are referencing the unities of dramatic literature which are

based on the principles of unity of action, unity of place and unity of time (unities | dramatic literature | Britannica. (n. d.)). For the *screenmovie*, unity of place, according to Bekmambetov, implies that a spectator only looks at a single screen of a single computer of a single character and that the size of this screen remains constant. This means that all the pixels of a screen are always shown, no less, no more. Respecting the unity of time means that "all the action takes place in real time" (Bekmambetov 2015, para. 5). This rule suggests that ellipses should be avoided because the spectator should have the impression that he or she is looking at an uninterrupted representation of a character's screen in real time. The principle of the unity of sound dictates that audible sounds should only originate from the computer. This implies that all speech, music and natural sound must come from the computer, essentially the only sound a spectator should hear should come from the diegesis which is the sound emitted from the computer linked to the display screen being shown. Bekmambetov suggests that these three principles of his manifesto can be broken, but he stresses that it is important to "observe" these three rules before transgressing them (Bekmambetov 2015, para. 3). *Unfriended* appears to be the first feature film to respect these three rules of Bekmambetov's *screenmovie* manifesto.[1] For the most part, fiction films based on representations of computer screen recordings released

[1] Bekmambetov's *screenmovie* manifesto is also pertinent in the conversation concerning authorship in the three *screenlife* films analyzed. The three main unities outlined in this manifesto are for the most part respected by the directors, Levan Gabriadze and Stephen Susco, for *Unfriended* and *Unfriended: Dark Web*. *Searching*, directed by Aneesh Chaganty, breaks away from these core principles by including reframings within the screen space, ellipses and non-diegetic music. However, it appears that each of these three films produced by Bekmambetov have a similar look and feel because of the heavy use of similar *macOS* operating systems and very similar video call, social media and text messaging applications used in the screen space that define much of the visual style. As far as the content of each story, each *screenlife* film is also a genre film with adolescents and young adults as the victims within the plots that have mystery elements. There are differences in how each film uses specific applications for specific purposes within each film such as the way clues and red herrings are displayed, but these are relatively minor. Thus, because of this, much of the question of authorship has been somewhat deferred to Bekmambetov because of his *screenmovie* manifesto and being the person who coined the term "*screenlife*" to categorize these three films that he had produced. Any differences in authorship that could be attributed to any of the three directors could be deduced from the description and analysis of the transposition of cinematic conventions and mystery fiction techniques into the *screenlife* mise en scène of specific films in chapters 2 and 3. However, in terms of style, it is difficult to pinpoint exactly what a director has imposed (other than the deviation from the *screenmovie* manifesto in *Searching*) versus Bekmambetov's influence as producer. As well, the style, especially the animation of each application, is also influenced by the motion graphics editor in these films, so the authorship conversation could spark a debate about who is actually responsible for specific creative choices in this new format. Therefore, the similarities and differences in mise en scène between the three *screenlife* films will be addressed in the following chapters without putting too much emphasis on authorship or at least naming who is responsible for a specific technique that translates to a stylistic choice.

prior to *Unfriended* did not respect these three principles as reframings within the computer screen were quite common. Reframings have been typically used to create a close-up like effect within a specific part of the screen such as a framing around a face in an image. The use of ellipses and non-diegetic music are also quite prevalent in *screenlife* films made prior to *Unfriended*. The essence of Bekmambetov's rules seems to be inspired by the idea that the spectator and the protagonist will share a similar perspective throughout the duration of the film. They will both look at and hear the same images from the computer screen in real time and its associated sounds. One could interpret this notion of the spectator observing a representation of the same computer screen pixels and associated sounds as the protagonist as an attempt to offer the purest version of a representation of a screen recording to the spectator. This concept of the *screenmovie* that respects Bekmambetov's interpretation of unity of place, time and sound is an important reference point for identifying the characteristics of other *screenlife* films because it establishes a style that appears to be an unedited and unmanipulated form because of its insistence on the representation of an uninterrupted screen recording that is strictly limited to the entirety of the pixels displayed on the screen and the sounds emitted from the computer. This reference point, articulated in Bekmambetov's manifesto, makes it possible to discuss other iterations of the *screenlife* format such as *Searching* which do no respect the three principles or unities; yet they can still be categorized as *screenlife* films because at their core they are stories representing computer screen recordings displaying video call interfaces as the primary mode of communication between characters.

The first use of this term "screenmovie" referring to what would later be renamed *screenlife* appears to be April 22, 2015, when Bekmambetov published his "screenmovie" manifesto on the *MovieMaker* website (Bekmambetov 2015, para. 1-16). It would be about three years later when he started using the term "Screen Life" to refer to what he had previously called a *screenmovie* after he produced *Search* in 2018 which would be later renamed *Searching*. "Today, the Screen Life format is a reality that is interesting to watch. The under-25 generation does not remember life without the internet, which leaves space for stories about the screen life of people. Such a format might become a new cinema language" (Bekmambetov cited by Satubaldina 2018, para. 5). This use of "Screen Life" by Bekmambetov was published on February 4, 2018, but a few

months later in an *IndieWire* article on August 1, 2018, Bekmembetov is quoted, "When you try Screenlife, it's like a drug." (Bekmambetov cited by Kohn 2018, para. 2). Here, the two words “screen” and “life” are combined into one word “Screenlife” to describe the feature fiction films Bekmambetov is referring to. Bekmambetov had declared in 2015 in his manifesto for the "screenmovie" that this film format must respect the unity of space, time and sound, but his 2018 produced feature *Searching* uses reframings of the screen, ellipses, non-diegetic music and screens of characters other than the protagonist’s, so all three rules of his original manifesto were no longer respected. Then perhaps it is no coincidence that since *Searching* made $75.5 million USD at the box office on an $880,000 USD estimated budget (IMDb Searching, 2018) in 2018 that Bekmambetov no longer uses the term "screenmovie" to describe this format because breaking the core rules of his *screenmovie* manifesto turned out to be very profitable. As well, since *Searching*, it appears that Bekmambetov no longer refers to this manifesto that had been linked to *Unfriended*. Today, it seems as though he only uses the term "screenlife" to classify this format of films that he has been producing such as *Unfriended*, *Unfriended: Dark Web*, *Searching* and *Profile* (2018), a film he also directed.

On August 17, 2021, the *Wikipedia* webpage dedicated to defining narrative films (fiction and documentary, short and feature films) based on screen recordings switched to using the term “Screenlife” to describe this format. Prior to this date, this page had been titled "Computer screen film,” a site that has been in development since November 17, 2018. However, it seems that with the popularity of films produced by Bekmambetov, the term "Screenlife" has become the term the contributors to this *Wikipedia* page would like to use to describe this format. This means that films released well before *Unfriended* such as *Thomas est amoureux* (2000) and *The Collingswood Story* (2002), films based on screen recordings which show communication between characters using videophone technologies on much simpler screen interfaces are also categorized as *screenlife*. This is an example of the widening of the definition of what is considered to be *screenlife* because these films dating back to 2000 and 2002 do not employ the graphical user interfaces (GUIs) associated with *macOS* and *Windows* used in the Bekmambetov *screenlife* films produced since 2014.

"Desktop film" has also been used to describe this film format based on screen recordings. However, the origins of this term could be associated with the "desktop documentary" used by Kevin B. Lee to describe the format of his documentary *Transformers: The Premake* in 2014 ('Filmscalpel | Desktop Documentary' n.d., para. 1). This film is a screen recording of a collection of 355 *YouTube* videos shown on the desktop of a *Macintosh* computer displaying footage filmed primarily on smartphones by citizens observing the filming of Michael Bay's *Transformers Age of Extinction* (2014). This *desktop documentary* format does not centre its narrative around video calls like the fictional *screenlife* films do such as *Unfriended*, it is rather a documentary shown on a computer screen that transitions between different *YouTube* videos showing different citizen produced camera phone footage during the production of this fourth *Transformers* film. Before getting too sidetracked into this desktop documentary, a non-fiction film representing a screen recording, one could use the terms desktop movie, desktop film, computer screen film, and computer screen movie to describe films representing screen recordings regardless of whether or not they are fiction, documentary or experimental. However, in terms of popular culture today, *screenlife* film, *screenlife* movie, or just the term *screenlife* seem to be the more common terms used to describe this format, especially when talking about fiction films that use this format.

In returning to Bekmambetov's role in the evolution of the *screenlife* fiction film, his involvement apparently began in 2012 when he was directing *Abraham Lincoln: Vampire Hunter* (2012), a traditionally shot film (Bekmambetov 2021, para. 4). According to him, his inspiration for this format came during a virtual meeting on *Skype* with his colleague Olga Kharina. She had apparently activated screen sharing on her computer during the video call, so that he could look at her computer screen to see a poster for a new film. Immediately, Bekmambetov noticed that Kharina was not only in communication with him.

> I talked to one Olga, but saw several Olgas at once: one was talking to me and taking notes, another discussed flights with her mother on a messaging app and ordered her tickets, and a third Olga told her friend that she would be late for her birthday party because I was calling. In addition, I could read the friend's response, in which she stated her feelings about our conversation quite succinctly. I saw all this, and did not know how to tell her that I was inside her personal space that was not intended to be seen. And then I caught myself thinking that everything we think, everything we feel is on our screens when no one sees them (Bekmambetov 2021, para. 4).

Bekmambetov observed his colleague Kharina participating in a multilayered virtual reality existing exclusively on her single computer screen. Within this screen space, he witnessed his friend multitasking between applications that gave her the means to communicate with two other people in distinctly separate locations while taking notes during her *Skype* meeting with him. Olga's computer screen provided a space where she maintained several activities simultaneously through individual applications displayed within corresponding virtual windows giving her the ability to alternate between each one in order to maintain each conversation. Olga's digital life on her computer screen also demonstrates that she had been blending her private and professional worlds within the same screen space. What a person, such as Olga, can achieve today in front of a computer screen in both private and professional lives seems to be closer and closer to what one can accomplish in the physical, material world. In terms of the personal and private life online, a person can now make new friendships, meet new lovers on a number of applications like *Facebook*, *Tinder* and *Bumble*. Once a friendship or romance is established, a person can maintain their relationships within a variety of social networks such as *Instagram*, *Twitter* and *YouTube*. Whether alone or while communicating with others, a user can also engage with many types of media presenting information and entertainment such as news websites, television channels, movies, video games, music, books, radio on their screen. In terms of the professional life, several applications offer a person the ability to do their tasks and other activities related to work such as communicating, travelling, calculating, converting, buying and selling. For the criminal, which is relevant to the mystery fiction element in *screenlife* films, there are also illegal activities that one can participate in such as spying, harassing, threatening, blackmailing, bribing and stealing. For at least the past twenty years, a person has been able to live out this type of criminal life in front of a screen through applications that make illegal activities such as felonious communication and nefarious activities possible. For genre films, notably crime and mystery, which each of the three *screenlife* films is grounded within, the digital criminal or internet bad guy becomes the subject of an investigation or the object of an unresolved mystery. These mysteries are typically centred around trying to figure out which character is responsible for an illegal online act such as identity theft, espionage, cyberbullying or cyberstalking.

These *screenlife* worlds – private, professional and criminal – are contained within the fixed grids of pixels that represent the information on the computer screen. The representation of pixels on a computer display screen implies a rather unique relationship in the context of the history of cinema technologies. Traditionally shot films typically have one stage of filming, the camera capturing an impression of the physical world in individual shots that are edited into a sequence and then projected onto a screen. This is in contrast to the process of production for a *screenlife* film which typically implicates three stages of creative image making. The first stage is the production of individual media such as video, photo or text that will eventually be displayed on the computer screen. The second stage of filming implicates the organization or placement of these already created media objects within the screen, typically within virtual windows. The third stage is primarily concerned with the organization of individual virtual windows within the screen space in relation to other virtual windows. Thus, a *screenlife* film undergoes what appears to be three stages of image creation within three defined boundaries. These three stages merge together onto one screen that typically represents the protagonist's computer screen. This screen, which represents a screen recording is what is projected onscreen to the spectator. Emily Wei offers an explanation for this unique relationship between the screen recording, the protagonist, the spectator and the projection screen.

> The key is the way screenlife films, as stories told through screens onscreen, merge the virtual computer screen and the physical screen of the cinema. The screen, in this case, becomes the computer screen the protagonist is looking at, while the spectator is placed in the position of the protagonist thanks to the semi-first-person perspective of the camera. I call it a semi-first-person perspective as the spectator only sees the computer screen itself, but not the environment around it that should also be within the vision of the protagonist. The exclusion of what is outside the frame allows the two screens to merge perfectly together, blurring the boundaries between the two worlds. Hence, the fictional space of the film extends beyond the frame and into the actual space the spectator is in as it does in VR, where "the two spaces — the real, physical space and the virtual, simulated space — coincide" (Manovich 97) (Wei 2018, para. 3).

Wei's concept of a "semi-first-person perspective of the camera" is pertinent when one considers that the viewer shares almost the same relative physical position in front of the screen as the protagonist who is implied to be in front of the screen. The viewer does not exist in the diegetic space, so he or she cannot see what is outside the frame of the screen, nor can he or she manipulate the interface in front of him. The spectator is frozen, sharing the screen perspective

of a character without any ability to interact with it, thus serving a role more affiliated with a passenger than a driver. This concept of the "semi-first-person perspective of the camera" is well illustrated in *Unfriended* which displays a continuous representation of the entire screen of the protagonist without an ellipsis. The spectator is looking at the same things the protagonist can see on the computer screen, but he or she cannot see beyond the pixels that define this frame, as articulated by Wei.

The other relationship to the screen that is also unique to the spectator, which Wei suggests, is that in a certain way the screen is like a digital video camera because all of the digital information used to illuminate the pixels which make up the images on the screen is recorded one frame at a time, then stored in a hard drive. This notion of the screen as a digital camera for the *screenlife* film does not operate in the same physical way that a traditional camera with a lens records light projected onto a surface from a single perspective. The screen recording is composed of images representing different perspectives that have already been encoded into a digital format before being transposed into a visual form onto the screen. This means that this *screen camera* films from a digital perspective that can only be observed from within a computer. It is a perspective that in its raw data form cannot be observed by the human eye primarily because the data assigned to each pixel that is displayed on the screen is too small, too abstract and moves too fast for humans to interpret as moving images. As well, humans cannot physically position themselves to be within the computer to see this data. This is the difference between the digital world versus the physical or material world. When looking through the eyepiece of a traditional camera, one can typically see the image that will be produced from the physical world because the light reflected into the lens of a camera is visible to the human eye. In contrast to this, the small electronic signals that represent the digital data, the 1s and 0s that enter the screen to define the colour and brightness of each pixel, cannot be seen with the naked eye. The diegesis that the spectator sees in a *screenlife* film is in actuality a series of small electrical charges that represent 1s and 0s rather than reflected light representing different wavelengths in the tangible, physical world. It is the pixels that transpose the electrical pulses, the 1s and 0s, the digital information, into coloured light of varying intensities for both the protagonist and the spectator. Because the protagonist and the spectator are not looking at the same pixels, they are effectively not looking

at exactly the same image. Thus, technically speaking, one could conclude that the screen recording that represents a *screenlife* film does not exactly represent what the character in the diegesis actually sees. It is the digital information before it is transposed onto the character's screen. Therefore, a *screenlife* film is a very similar representation of what is displayed on a character's screen, but because of differences in how pixels on specific computer monitors perform the transposition of digital data into the analogue forms of light and colour, the spectator will always view something slightly different.

Technological advances making *screenlife* films possible

When comparing a *screenlife* film to a traditionally shot fiction film, the most apparent visual difference between the two is the diegetic world that each of them is created within. Typically, a traditionally shot fiction film is constructed using images filmed by a professional production camera that has captured impressions of the physical world, whereas in *screenlife* films, the diegesis recorded is limited to what happens on the screen of a computer and sometimes of a tablet or smartphone. This world that is comprised of pixels of the computer screen is the convergence of several important technological advances in the past 50 years, most notably the graphical user interface (GUI). Since the 1980s, personal computers such as *Macintosh* computers and others using *Microsoft Windows* display their information from applications primarily within the virtual windows on the screen. These virtual windows are one of the main features of the computer's GUI. GUIs had been invented to display more than just text within a single frame on a screen.

> Typical GUIs involve the use of windows, icons, menus, and pointing devices. The windows can contain control objects such as dialogue boxes, slider bars, radio buttons, check boxes, and pick lists, as well as textual or graphical information. The objects forming the interface display have attributes such as the ability to be resized, moved around the display, shrunk down to an icon, or given different colours (Butterfield et al. 2016, graphical user interface).

The three *screenlife* films make use of many of these features – "windows, icons, menus, and pointing devices" – within the computers' GUI as storytelling tools. One of the most important features of most modern GUIs not mentioned in this definition is the fact that virtual windows can overlap. Overlapping windows are one of the main features that distinguish GUI images from

traditional split screen images in films. Traditional split screen sequences typically dedicate specific sections of the entire film frame to be occupied by moving images within smaller frames that do not overlap with other moving images within other smaller frames in the larger film frame. While GUIs have many technical features such as "dialogue boxes, slider bars, radio buttons, check boxes, and pick lists," it is the graphical information or individual media such as the text, photos and videos embedded within virtual windows that have become the central storytelling units in *screenlife* films. The technological advancements that allow for textual and graphical information to be displayed within virtual windows play an important role in transposing certain cinematic and storytelling conventions into the GUI environments represented in the *screenlife* films. The importance of the evolution of virtual windows since the 1970s which represent a shift away from simple text display within a single frame toward multiple types of graphical information being shown within multiple overlapping virtual windows on computer screens has been accentuated by Anne Friedberg.

> In the rapid set of technological changes that led to the advent of the personal computer in the early 1980s, the acquisition of a display screen as the visual interface with a computing system mechanism and the switch from alphanumeric "command lines" to a screen with icons and images were the two key developments that brought the computer closer to the other predominant forms of visual imaging.[85] Add an Internet-enabled World Wide Web to this graphic-display screen, and the computer window opened itself to convergences with the cinema and television screen[86] (Friedberg 2006, 221-222).

Friedberg highlights the evolution of the computer screen interface from exclusively showing text to eventually displaying icons and images as being a significant turning point for the personal computer. This turning point forms the diegesis for the *screenlife* film. These films only show images that exist on computer displays (and sometimes on tablet and smartphone displays) of the characters in these films. Friedberg also emphasizes something else that is essential to the *screenlife* film, the role of the virtual window in relation to the internet. Displaying images from the World Wide Web on a personal computer screen marks a critical departure away from accessing information exclusively from a computer's own internal hard drive toward an entirely new network of external hard drives, that make up the internet, that give users an exponentially larger amount of information to access, primarily from websites. This information includes text, photos and videos that are inevitably displayed within a virtual window, a browser, on the

personal computer screen. These media (videos, photos, text) are similar to those that have been used in traditional fiction films, but what makes them unique in *screenlife* films is that each of these media is typically displayed simultaneously amongst other images within a virtual window (Friedberg 2006, 243). As well, most individual media displayed within a virtual window is modular (Manovich 2001, 31). For example, the video, photo or text within a website that is eventually shown in a browser's virtual window can be added or removed relatively easily with a few HTML commands (Manovich 2001, 31). The modularity of images (video, photo) and texts in a webpage (or any other virtual window displaying an application's information) is also a quality that defines images shown within GUIs in *screenlife* films when compared to the images in traditional films. *Screenlife* films allow for an unlimited number of combinations of media types (video, photo, text) that can be instantly deleted or added. As well, these individual media objects can often be quickly repositioned and reformed into different shapes and sizes within a single virtual window. This is in contrast to objects in the physical world filmed by a traditional film or video camera. Objects within traditionally filmed images are constrained in a different way because their relative dimensions and position to other objects within the same space are fixed once they have been filmed or photographed. As well, the space being filmed limits what types of objects can physically exist in this space. In contrast to the physical world, the relative size, placement and movement of digital images within a virtual window – defined by its two-dimensional space within the computer screen – is not fixed. The ability to resize, reposition and add or remove digital objects within a virtual window gives them a certain flexibility, a certain modular characteristic that does not exist in the physical world. Manovich emphasizes this modular quality of digital objects within the virtual windows of websites.

> The World Wide Web as a whole is also completely modular. It consists of numerous Web pages, each in turn consisting of separate media elements. Every element can always be accessed on its own. Normally we think of elements belonging to their corresponding Web sites, but this is just a convention, reinforced by commercial Web browsers (Manovich 2001, 31).

While multiple modular digital objects or images can be displayed in one virtual window, multiple virtual windows can also be shown on the computer screen. This is another feature of GUIs on personal computer displays that has changed the way images can be represented on a screen, especially when compared to traditional fiction films which typically only show one image, one

space and time, onscreen at a time. And as mentioned, the tradition of split-screen images of narrative cinema has typically not displayed multiple images in an overlapping way like virtual windows do. An important quality of this overlapping by virtual windows is that they increase the overall perceived space that can be represented on the screen because of what is not shown is presumed to exist, thus increasing what can be assumed to exist within the frame (Friedberg 2006, 229). The computer screen therefore becomes a different kind of space because it can represent more space than is shown.

As highlighted by Friedberg, the personal computer display screen offers users access to images, texts and sounds from other computers that make up the internet. This access to the World Wide Web offers users the opportunity to share their own images, texts and sounds online, effectively making it possible for other users having a similar computer display interface and internet connection to view them, provided their government is not restricting their access to certain websites. Social networks are one of the results of this evolution of sharing of information between people online, especially for those who like to communicate with others from a distance using photos, video, text and sounds. Video calls and text messaging are yet another advancement in the evolution of the transmission of images and sounds over the internet. The very core of *Screenlife* films reflect this trend toward online communication that is based not only on the publication of digital media objects (videos, photos, texts) on social media sites such as *Facebook* and *YouTube*, but equally, if not more importantly, on the real-time audio-visual and textual communication over the internet using applications such as *Skype* for video calls and *Messages* for instant text messaging.

It is difficult to pinpoint the exact date that social networks started to become pertinent in popular culture in North America, but around 2003 some of the first social networks such as *Friendster* and *MySpace* allowed users to share images and text on these sites from a personal account which operated like a personal webpage. Within these early forms of social media, videos could be posted onto them after being recorded, edited and compressed. The quality of these video files were typically compromised with pixilation and digital noise on the images which made them appear less sharp, therefore making it more difficult to observe fine details on the face, especially if there was a lot of movement within the frame. Beginning in the early 2010s, with

significant improvements in video compression technology and increased internet bandwidth accessibility at a lower cost for consumers, real-time video and audio became much more common in homes and offices. This evolution enabled most video call conversations between people to have an improved image quality that was good, but not at the resolution associated with high-definition video. Faces appeared less mushy, but again with a certain amount movement within the frame, video images could still contain a significant amount of pixilation or noise. This shift toward more and more video calling in people's day-to-day lives because of their improvements in image quality is reflected in *screenlife* films after 2010. However, films such as *Thomas est amoureux* (2000) and *The Collingswood Story* (2002) had been centred around conversations between characters using video calls well before these technologies became widespread and easily accessible in Canada and the United States. The video calls in these two films represent telecommunication technologies that were not available on a wide scale to North American consumers when these two films were released in 2000 and 2002 primarily because the video quality in the video calls of these films appear to have little pixilation and a higher resolution than would have likely been possible with a 56K dial up modem, the common technology used to access the internet from a personal computer in the early 2000s. Dial up internet access used telephone lines as the primarily conduit of communication between users. These networks had a much lower bandwidth than the cable networks have that would eventually be used for high-speed internet which paved the way for improvements in video call quality. Video call technologies, notably the webcam and video compression algorithms, available in the early 2000s would also evolve bringing significant improvements to the image quality in the proceeding 10 to 15 years. Once the quality and cost of video calling became more attractive to users, it became a much more common cultural practice in Canada and the United States through applications such as *Skype* and *FaceTime*. Thus, it was probably inevitable that films would eventually reflect these technological advancements in society that had changed interpersonal communication, especially during the early 2010s. In 2014, *Unfriended* became one of the first full-length *screenlife* films to do this. The video call quality is good, but there is definitely pixilation throughout much of the imagery that one does not necessarily associate with this technology today in 2022. *Unfriended* (2014) and *Searching* (2018) are two *screenlife* films that represent the evolution of the

improvements in image quality of video calls between the time each of these films was released. The video calls in *Unfriended* are more pixilated which echo the aesthetic of this medium in 2014 (fig. 8), whereas those shown in *Searching* appear to have higher resolution images without as much pixilation (fig. 9).

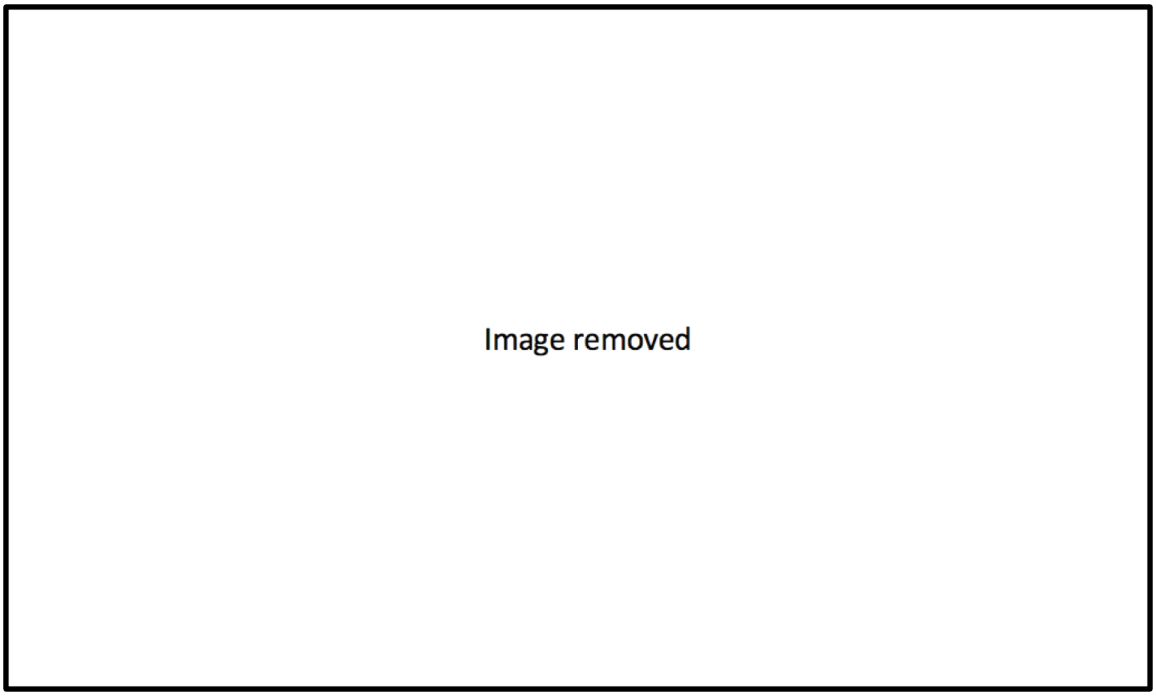

Figure 8. – Frame from the film *Unfriended* (Leo Gabriadze, 2014) at 6 min 56 s. A representation of the video call quality in 2014 that displays pixilation. ©Bazelevs Production.

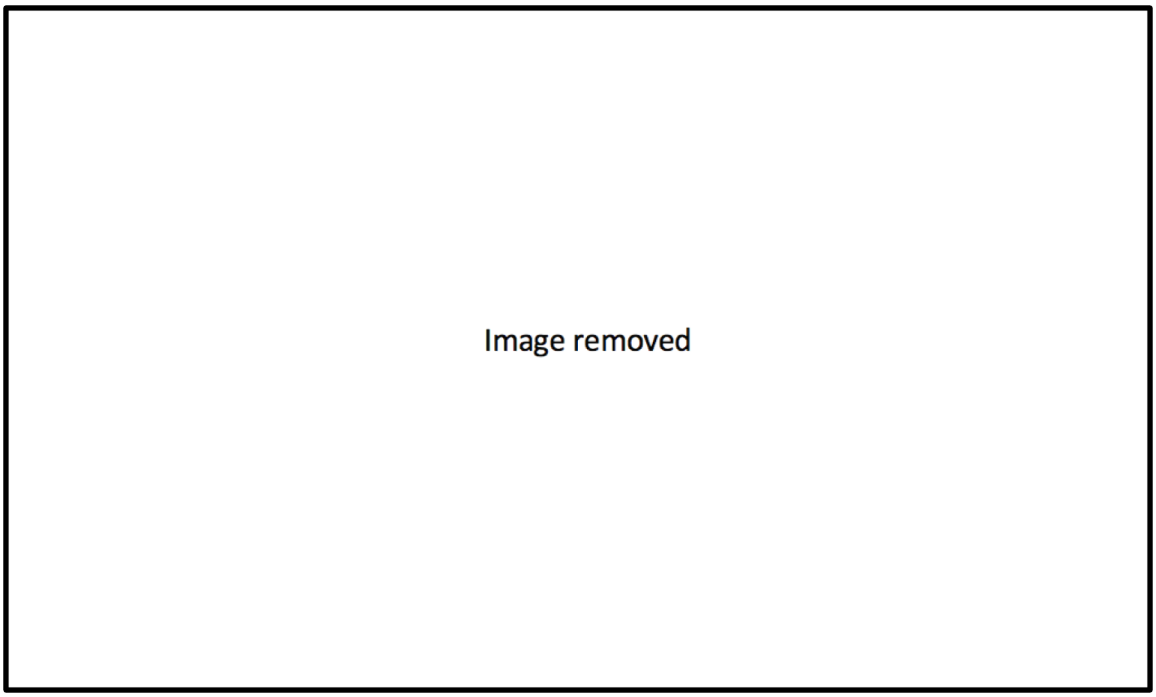

Figure 9. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 32 min 30 s. A representation of the video call quality in 2018 showing almost no pixilation. ©Screen Gems.

Between 2014 and 2018, these two films demonstrate how much the overall perception of the image quality of video calls had changed over this relatively short period of four years. During the time that the quality of video calls significantly improved since the mid 2000s, text conversations on applications such as *Messages* and *Facebook Messenger* had also become a much more important aspect of interpersonal communication culture that is also reflected in these *screenlife* films between 2014 and 2018.

As well, during the past 15 years, social networks such as *YouTube* and *Facebook* have been and still are primarily focused on the publication of pre-recorded images (video, photo) and text. The sharing of personal visual media on these types of social networks exploded in the mid-2000s. Users uploaded, as they still do today, all types of video, photo and text to these networks to share with their friends, family or community groups. The result of this phenomenon has also been that social networks have become virtual spaces for many people to construct on an online identity using digital media (video, photo, text). One of the results of these new digital online cultural spaces is that the images and texts used to create a profile or an identity can create a

portrait of an individual that appears to be significantly different from their life in the physical world. This construction of an alternate or false identity is a recurrent theme in the three *screenlife* films. This theme is part of a larger digital life or existence that many people live, especially for those who are in front of their screens for much of the day. While instant messaging, audio and video calling applications are often associated with communication between family and friends, they have become much more integrated into work culture. The result is that the computer, tablet or smartphone screen has become the same space for leisure as it is for work (Albuquerque 2018, 17). The private life and the working world had traditionally been distinct spaces, but with the increased popularity of communication and social media applications, work and leisure have merged onto one space, one interface, the computer screen. Paula Albuquerque uses the term "mediasphere" coined by Steven Shaviro to describe this world where lives can exist almost exclusively in front of and within the pixels of the screen because it not only gives each user access to their commonly used social networks, but also to applications used for their employment.

> The pervasiveness of smartphones, tablets, and laptops to which people have become attached and completely dependent upon for work and entertainment now define people's actual environment.[10] For example, beyond online business meetings, people nowadays routinely communicate with friends and family across the globe through Facetime, Messenger, WhatsApp, and other chat systems. This results in personal relations that become mediated to the point that they acquire an existence outside of the material world. (Albuquerque 2018, 17)

This existence outside of the material world is what is captured in *screenlife* films. They capture the essence of the onscreen lives of the characters, most notably their presence on the internet and particularly the difficulty to perceive the true identity of certain characters who have constructed online identities that do not resemble their physical appearance or professional and social position they have upheld within their physical world, their community outside of the computer screen. Each of these *screenlife* films has taken advantage of the fact that an online identity can be deceiving because the images associated with a person on the internet do not necessarily represent them in ways that make it easy to identify them. This ability to easily deceive others with constructed identities in this digital world makes it possible to create mystery stories that are built around this deception. Each of the three *screenlife* films has mystery elements

within the plots that are built around not knowing the true identities of certain characters that only appear online. These are individuals who often hide behind avatars created from digital images of others or those that bear no resemblance to them. The creation of a false online identity by a subject, according to Sherry Turkle, is not difficult in the digital environment of the internet. She suggests that part of the allure could be that it offers an opportunity for someone to live a life that is not possible in the physical world.

> Sherry Turkle's studies of online identities demonstrate that the digital subject can handle multiple personalities and identities easily, "cycling-through." As she says, online avatars are used to "shift gender, age, race, and class. The effort has been to create richly rendered virtual selves through which one could experiment with identity by playing out parallel lives in constructed worlds"[58] (Daly 2010, 94).

Generally speaking, in the three *screenlife* films, video calls make it more challenging for certain characters to hide their identities because the most common cultural practice for these types of interpersonal calls between two people or in small groups is to show one's face. This in contrast to photos and texts which can be used to construct a false identity more easily and in a more convincing way because the cultural customs associated with texting and photo sharing on social media do not require individuals to identify themselves in the same way as a video call. However, sometimes pre-recorded videos as well as speech in the audio track of a video can be recorded in such a way that makes it difficult to identify who is in the images (especially if a face is blurred or not visible) or who is speaking on the audio track (especially if the speech is recorded in a noisy environment and/or the face of the person speaking is not visible). For *screenlife* films, this approach aimed at making identification difficult can also serve to mask the identity of certain characters, especially to maintain the mystery element which is important in the mystery fiction genre. While each of the three *screenlife* films has taken advantage of the fact that it is often difficult to know the true identity of certain characters associated with certain images on the internet, these images, in certain cases, leave traces or clues that suggest who might be connected to them. Therefore, within each of the mysteries in the three *screenlife* films, the interpretation of whom created certain images and who is and who is not being represented within them become important questions to answer. Detecting and interpreting the true meaning behind images becomes an important skill for those trying to solve the mystery – which is often an amateur detective played by the protagonist (as well as the spectator should they decide to

participate in clue detection to solve the mystery) – because the truth is often difficult to interpret correctly once it is mediated into a digital image, notably photos and text and placed within the computer screen's interfaces (GUIs).

While the correct interpretation of certain images is important in solving the mysteries in the three *screenlife* films, understanding the way that images are organized within the GUIs to tell the story is also pertinent. For example, in the three *screenlife* films, the majority of the face-to-face communication and action between characters is filmed by the webcam on each character's computer and presented within the virtual window for a video call application such as *Skype* or *FaceTime*. Without communication by video call via webcam, face-to-face interactions between characters in front of their computers would not be possible unless two or more characters are speaking to each other in front of one webcam on the same computer. This is not too common in the three *screenlife* films, characters usually speak to each other through their own webcams from a distance using a video call. However, just because a specific character is connected to a video call, does not mean he or she is always giving the character who they are talking to their undivided attention. He or she could be distracted with other tasks on their computer. During video calls in *screenlife* films, it is quite common that the protagonist or a specific character is not only engaged with another character or characters displayed in the video call application virtual window on their screen, but is also clicking on and looking at other websites, social networks and applications to find information, often clues that can help them find a solution to the mystery they are investigating or the problem they are trying to solve. Daniel Miller and Jolynna Sinanan describe this specific multitasking phenomenon implicating webcam communication and other computer applications through the concept of "polymedia" to emphasize that communication via webcam is usually done within a context where the user is also preoccupied with other applications such as *Twitter* and *WhatsApp* simultaneously (Albuquerque 2018, 18).

> Polymedia also represents an essential point with respect to a book on webcam, which otherwise would constitute an artificial extraction of this one particular media from the context in which it is always a decision to use Skype as against, or in combination with, other media. No one just uses Skype. We need to re-engage webcam within its wider media ecology (Slater and Tacchi , 2004), which also differs from region to region (Miller and Sinanan 2014, 136).

This state of being engaged in a "polymedia" mode centred around webcam communication within a "mediasphere" that, in the three *screenlife* films, is often comprised of multiple social media applications is important to observe because it suggests a distracted state – a split focus between images from the webcam and other applications in virtual windows – that the protagonists are often caught in. This concept of "polymedia" helps to better classify the types of images represented in the representations of screen recordings of the three *screenlife* films because the “media ecology” in the diegesis of these films reflect the observations by Miller and Sinanan that emphasize that a video call is typically surrounded by other media in other virtual windows all linked to the actions and divided attention of the person in front of their computer screen engaged in the video call. *Polymedia* could also possibly explain why certain spectators can follow the story in each of these three *screenlife* films with relative ease despite simultaneously displayed imagery because those who are familiar with multitasking involving multiple social media applications surrounding a video call virtual window on a computer screen are likely to recognize this mode of communication or one that is similar in the *screenlife* films. However, one must not forget that while this *polymedia* mode of communication may be familiar to the digital literate spectator, the role various applications serve in the *screenlife* film plots are typically related to the protagonist’s main objective, as amateur detective, which is to solve a mystery. The video call application virtual window and surrounding applications such as social media and text messengers displayed on the computer screen connects this amateur detective character to other characters that are implicated in the investigation or questioned as part of it.

This organization of images within separate virtual windows also opens up another question about the uniqueness as well as the standardization of how images in *screenlife* films are organized. Images such as text, photo and video organized within a virtual window surrounded by other virtual windows embedding their own set of images suggests that there are three levels of staging or mise en scène within a computer screen:

1. How the contents or objects within a frame (video, photo) or text zone are organized.
2. How these frames and zones are laid out within a virtual window.

3. How the ensemble of virtual windows are sized, positioned and overlapped relative to each other on the screen.

The concept of polymedia is pertinent to the division of the mise en scène into these three levels because it suggests a possible hierarchy amongst virtual windows which positions the virtual window showing the video call, the live webcam images, as the hub or central reference point to the multitasking on the computer screen that is often related to finding information about someone or something. The video images of the webcam in video call applications in *screenlife* films are of vital importance to telling the story, notably mystery fiction, because they show the faces of the characters which visually show who the characters are and how they are behaving emotionally, acting and reacting, during important scenes that could reveal guilt or incite suspicion. In the three *screenlife* films, the virtual windows that surround the video call virtual window typically show what the protagonist is either looking at, interpreting, or in the midst of clicking on in their quest to find out more information about another character that may or may not be a suspect. While webcam images are not always present within the visible diegesis of the three *screenlife* films, they are onscreen for the majority of each of the films and play an essential role in transposing traditional cinematographic conventions such as the shot reverse-shot into the GUI screen space.

The evolution of fictional narrative *screenlife* films

If one accepts that the essential element of a fictional narrative *screenlife* film is that it tells a story that represents a digital screen recording of online interpersonal communication, the first *screenlife* film is likely *Thomas est amoureux* (Pierre-Paul Renders, 2000). At its very core, like every other fictional narrative *screenlife* film, *Thomas est amoureux* represents a screen recording of interpersonal communication between the main character Thomas Thomas[2] and the people he interacts within on his video phone screen. What is unique about this film in relation to other *screenlife* films is that the interface is much simpler than others which have been inspired by computer screens displaying the *Microsoft Windows* and *Apple* GUI interfaces. The onscreen

[2] The protagonist's first and last name are the same, Thomas Thomas.

interface for *Thomas est amoureux* is, for the most part, only the video frames that come from the videophone within the network that Thomas is connected to (fig. 10). Sometimes a small video frame will be displayed in the upper left corner of his screen to show that there is another video call ringing (fig. 11). That being said, the majority of the time the spectator is only looking at one frame on the screen that Thomas is looking at. This screen only shows the video that represents the images from the videophone that Thomas is talking to. This means that for most of the film, the viewer cannot see Thomas's face.

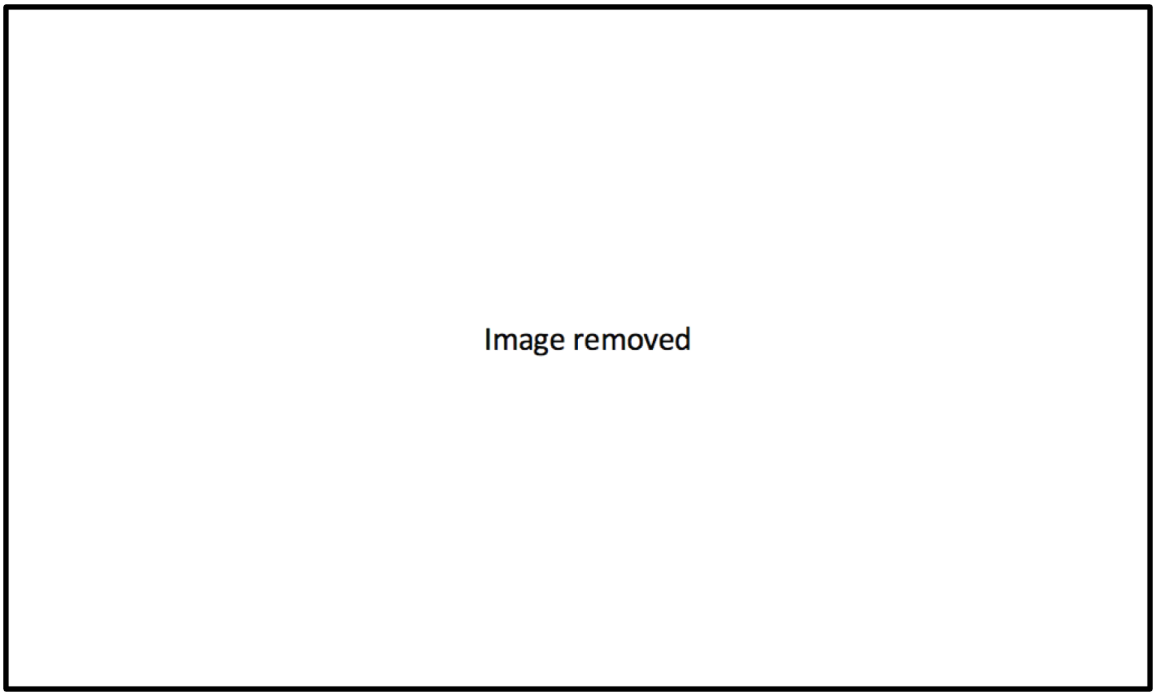

Figure 10. – Frame from the film *Thomas est amoureux* (Pierre-Paul Renders, 2000) at 25 min 50 s. The video call interface displays video from one videophone camera. ©eOne Films.

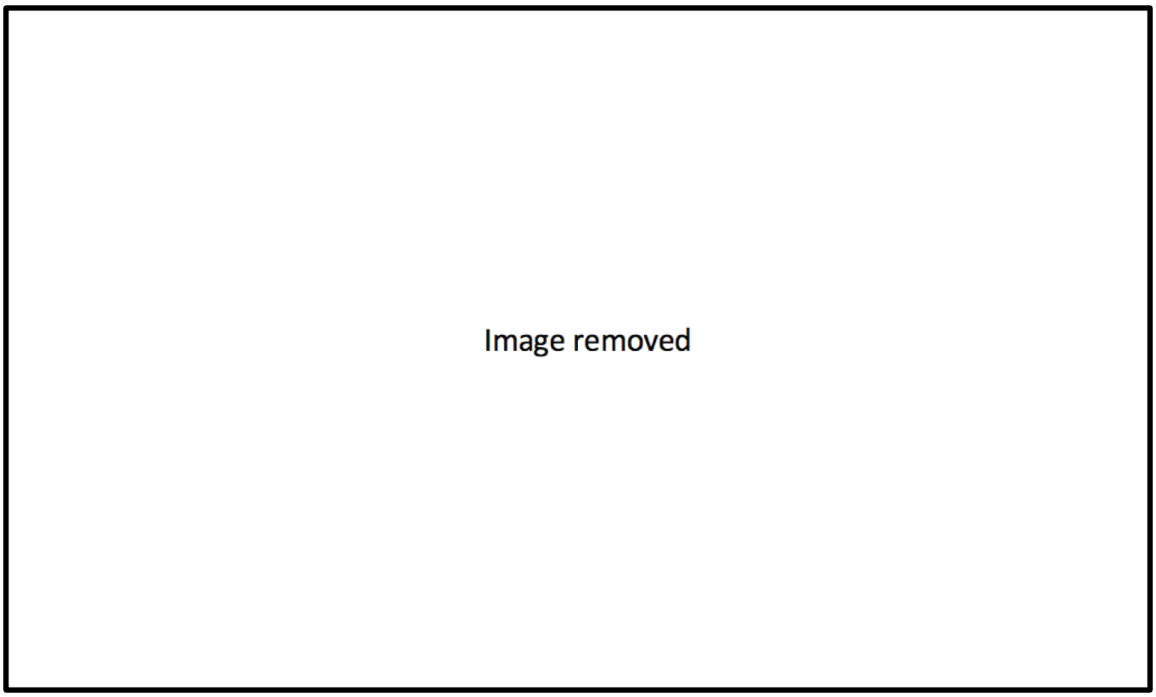

Figure 11. – Frame from the film *Thomas est* amoureux (Pierre-Paul Renders, 2000) at 16 min 24 s. The video call interface displays the video from two videophone cameras. ©eOne Films.

The majority of other *screenlife* films show the protagonist's face regularly on the screen of his or her computer in a separate video frame adjacent to one showing the person they are talking to. These video frames are positioned within a virtual window for a video call application such as *Skype* or *FaceTime*. However, in *Thomas est amoureux*, the screen recording only shows the video coming from other videophones. There is also no identifiable application such as *Skype* or *FaceTime* being used. It appears to be a videophone that is specific to the fictional world that Thomas exists within that is part of a fictional network and interface that exists in a diegetic world outside of the one existing in 2000, the year the film was released. In 2000, in North America and Europe, the internet speeds, the bandwidth provided by service providers and the video compression technologies available to the general public at the time would not have been sufficient to make video calls with the quality and sharpness depicted in this film. Perhaps this can be justified because the diegesis represents an alternate reality, a world existing within a science fiction that is not associated with Europe in 2000. Regardless, *Thomas est amoureux* can be classified as a *screenlife* film because it represents a digital screen recording of a protagonist's

screen used as an interface to communicate over a network with other characters using similar interfaces that display video.[3]

Within the constraints of classifying fictional narrative *screenlife* films as representations of screen recordings – that at their base display audio-visual communication between characters over a network that use some form of screen interface for the characters to communicate through – the second feature *screenlife* film to be released is *The Collingswood Story* (2002).[4] This film is also unique in relation to most of the other fictional narrative *screenlife* films because the video call interface used to communicate is also fictional and it is not using a representation of a GUI of an operating system existing at the time it was released. Regardless, this film is still based on representations of recordings of the computer screens of the characters that engage in audio-visual communication from a distance. Each of the characters' screens displays a graphical user interface that shows the video from the videophone of the person they are talking to. This computer screen interface appears to be inspired by the GUI for the *Microsoft Windows* operating system at the time, but in this film, there is very little action occurring outside of the virtual window displaying the video from the videophone, so the use of its GUI is very limited (fig. 12).

[3] *Thomas est amoureux* is unique in relation to the other *screenlife* films because it is a science fiction film that does not use a video call interface that existed in the technological context that it was made (2000). Whereas, the other *screenlife* films are trying to represent video call applications that would have been used at the time they were produced. Thus, *Thomas est amoureux* could be excluded from the *screenlife* genre, but since it is based on the representation of a screen recording centred around video calls, it has been included.

[4] *Denise calls up* (Hal Salwen, 1995) is a feature film that predates *The Collingswood Story* (2002), but it is important to note in the evolution of the *screenlife* genre because it is based on a group of friends staying in touch by telephone and fax while working in front of their computers. While this film does not use video calls and it is not a representation of a screen recording, it is based on a group of people who primarily communicate using networked communication from a distance which is also a characteristic of *screenlife* films.

Figure 12. – Frame from the film *The Collingswood Story* (Michael Costanza, 2002). No significant action outside of the videophone virtual window. Reproduced with the permission of ©Cinerebel Films.

As well, because each interface only displays the video of other videophones, the film intercuts between the display interfaces of the different characters in order to show the faces of each of the characters, most notably the protagonist who can be seen speaking and reacting on the computer screens of other characters. In addition to the alternation between screens, there are also moments where only a portion of the screen is displayed because it has been reframed (fig. 13).

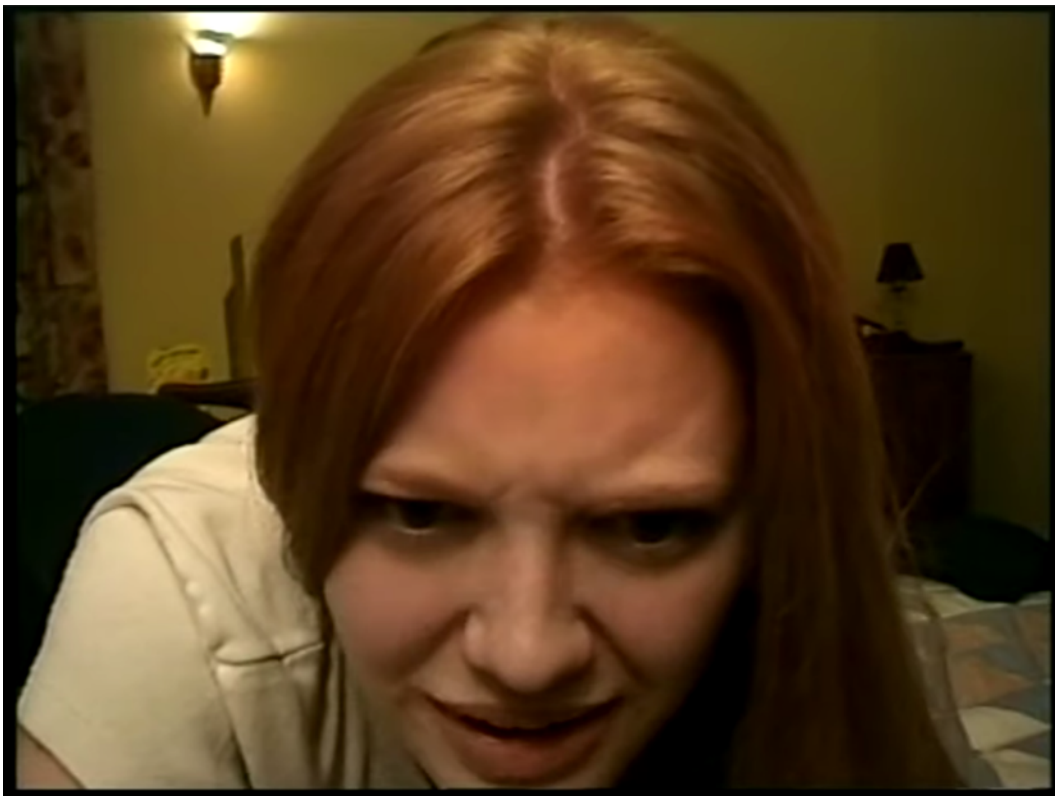

Figure 13. – Frame from the film *The Collingswood Story* (Michael Costanza, 2002). Reframing the video within the videophone virtual window. Reproduced with the permission of ©Cinerebel Films.

This occurs most notably when the reframing is fixed exclusively around the video frame displaying the video in the video call virtual window. *The Collingswood Story* also has several ellipses which means that there are many breaks in time, so the spectator does not watch a representation of a continuous screen recording. While this film can be classified as a *screenlife* film, it clearly does not meet the constraints of space and time that Bekmambetov declared in his manifesto for the *screenmovie* more than a decade later.

In the years following the release of *The Collingswood Story* (2002), there are other examples of *screenlife* films such as *The Sick Thing That Happened to Emily When She Was Younger* (2012), one of the short films within the compilation of horror films in V/H/S (2012). Much like *The Collingswood Story* and *Thomas est amoureux*, this film is also constructed around video calls without much else occurring outside of these virtual windows on the computer screen (fig. 14). It

would not be until *Noah* (2013) that a film would resemble what a *screenlife* film looks like today (fig. 15).

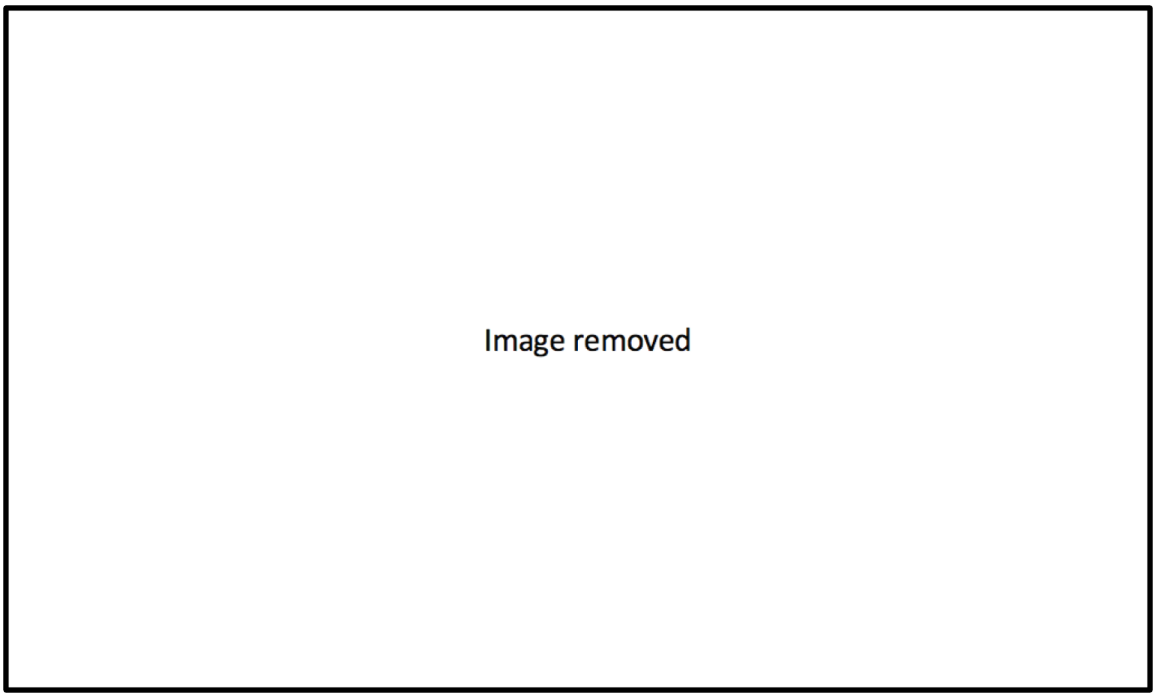

Figure 14. – Frame from the short film *The Sick Thing That Happened to Emily When She Was Younger* (Joe Swanberg, 2012) within the anthology film *V/H/S* (2012) at 1 h 22 min 23 s. No significant action outside of the video call virtual window. ©Bloody Disgusting.

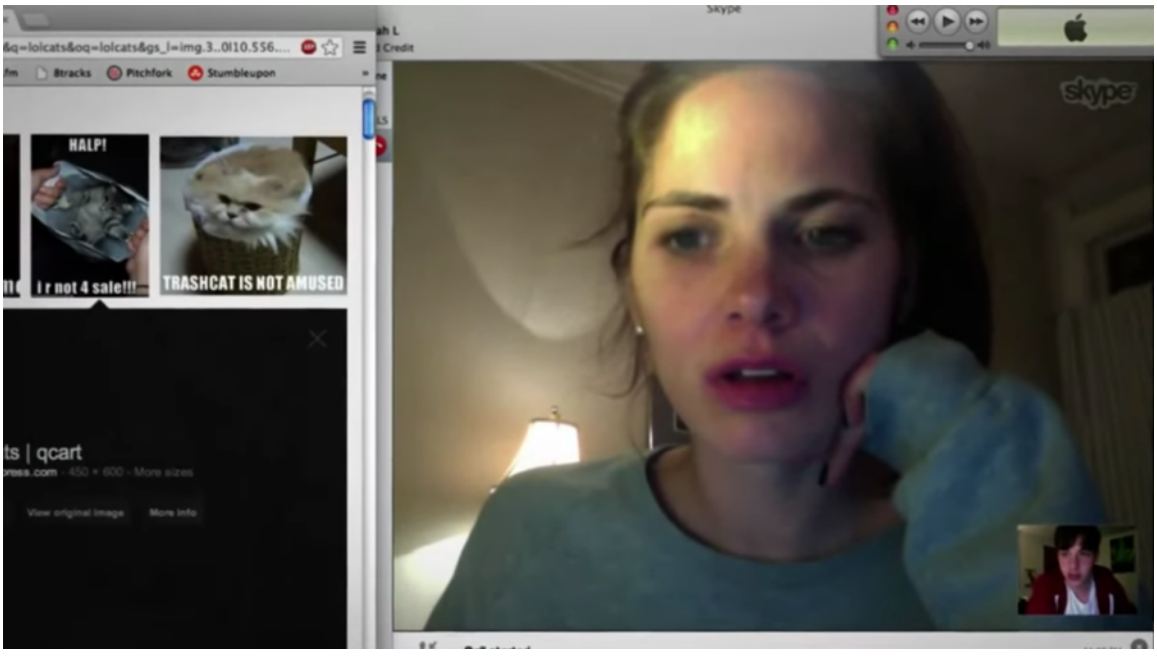

Figure 15. – Frame from the short film *Noah* (Walter Woodman, Patrick Cederberg, 2013) at 1 min 28 s. One of the first *screenlife* films to simultaneously position the video call virtual window in relation to other virtual windows. Reproduced with the permission of Walter Woodman.

This 17-minute short film is a representation of a screen recording that not only includes video call applications such as *Skype* and *Chatroulette*, it also displays applications for text messages in *Facebook* and *iMessage* as well as videos within *YouPorn* and photos displayed within *Facebook* virtual windows. These additional applications reveal the multitasking nature of Noah's life on his computer. He even plays a pre-recorded sound file, Paul McCartney's song *Ram On* on *iTunes* (fig. 16).

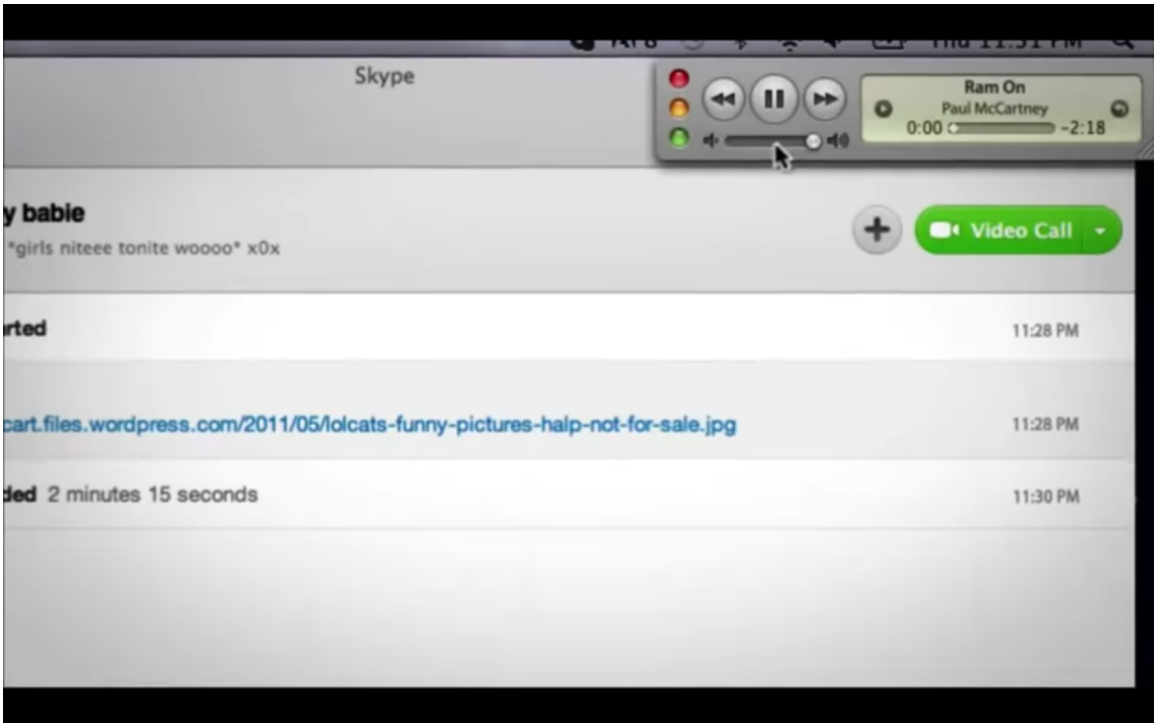

Figure 16. – Frame from the short film *Noah* (Walter Woodman, Patrick Cederberg, 2013) at 3 min 49 s. An example of the *iTunes* virtual window displaying a song within the GUI. Reproduced with the permission of Walter Woodman.

In this film, the cursor is also quite active in clicking hyperlinks and drop-down menus on websites which represent a major shift toward using the GUIs for more than just displaying video call virtual windows as had been the case in most of the prior *screenlife* films. The most stylistic element of

this film, that is not replicated in the same frantic way in other *screenlife* films, are the very quick zoom ins to highlight details on the screen of a specific webpage in close-up, then the ensuing quick zoom outs to reveal other actions occurring within the same screen.

After *Noah*, *Unfriended* was released in 2014. It is a *screenlife* film that continues the approach used in *Noah* of showing the protagonist's actions, multitasking, within a much wider variety of applications than just video calls. This film, like *Noah*, shows a representation of a screen recording of the protagonist's *MacBook* screen, but it is unlike previous *screenlife* films because it shows the entire screen without any reframings, without ellipses, and without non-diegetic music (fig. 17).

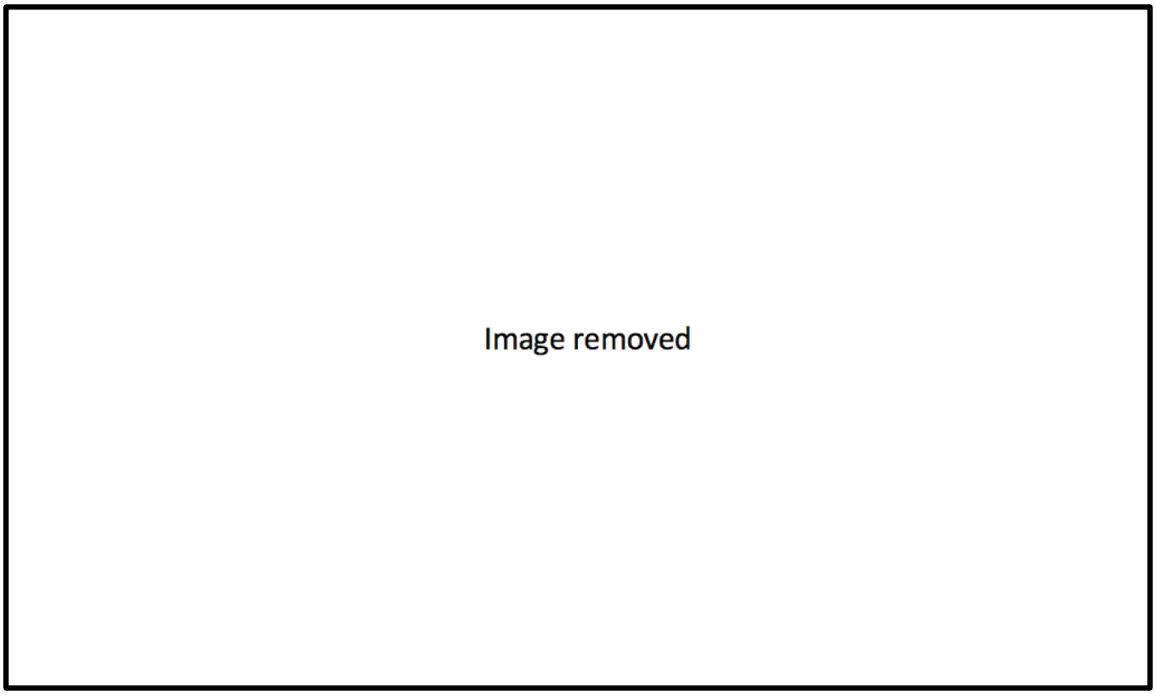

Figure 17. – Frame from the film *Unfriended* (Leo Gabriadze, 2014) at 21 min 01 s. *Screenlife* film without reframings, ellipses or non-diegetic music. ©Bazelevs Production.

This is the film that Bekmambetov used as his example for his manifesto for the "screenmovie." *Unfriended* respects the rules of the *screenmovie* manifesto until the final shot which is filmed by a traditional production camera (most likely video) because it does not represent a screen recording, it shows the physical world. Bekmambetov jumps outside of the screen space with this final shot, but it is justified because it finally reveals who had been hiding behind a computer

interface while stalking the main characters of the film. The sequel to *Unfriended*, *Unfriended: Dark Web* (2018) also respects the main principles of Bekmambetov's *screenmovie* manifesto which include unity of space, time and sound (fig. 18).

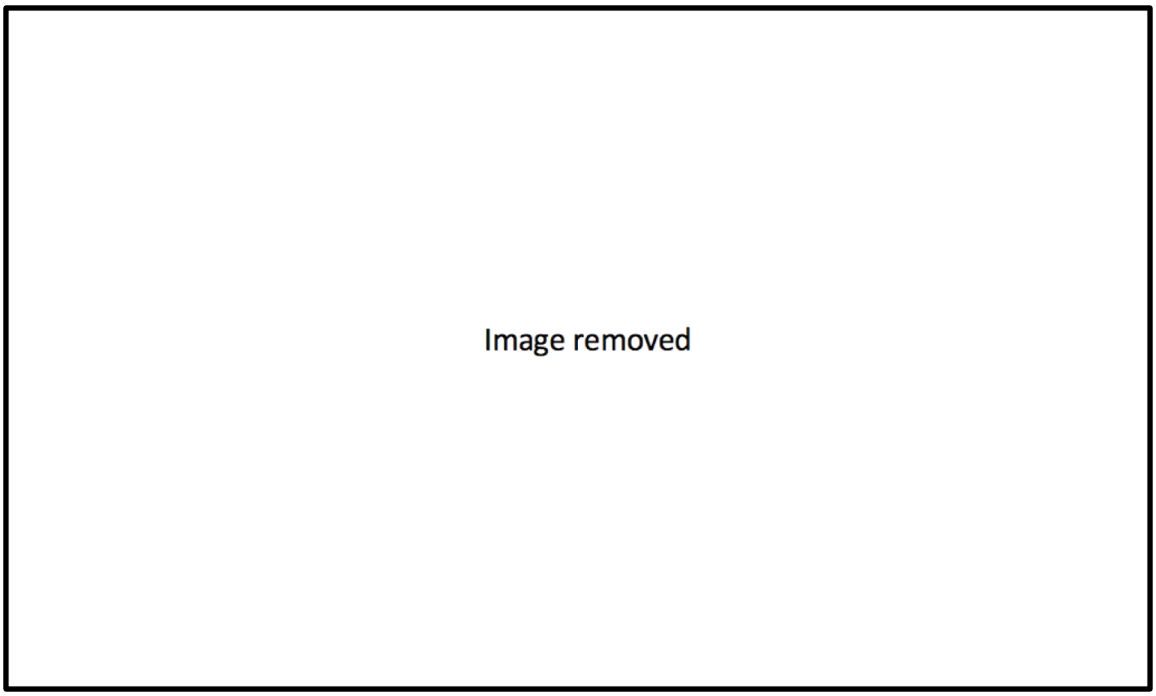

Figure 18. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 29 min 43 s. *Screenlife* film respecting the main principles of Bekmambetov's *screenmovie* manifesto: the unity of space, time and sound. ©Bazelevs Production.

However, there is one very brief reframing of the screen which breaks the unity of space principal. This is done to emphasize the killing of AJ. As well, like in *Unfriended*, the final shot is also filmed by a production camera to reveal the physical space where the underground organization operates, basically the control centre for the group that had been terrorizing the protagonist Matias and his friends. This physical space reveals a character in front of several computer screen interfaces used to spy on the computers of the group of friends in their twenties. This shot does not reveal any of the antagonists true identities, but it does suggest that the only way to really see them is from a perspective outside of the screen space, one that is taken from within the physical world.

Also released in 2018, *Searching* marks a break away from Bekmambetov's *screenmovie* manifesto because it takes full advantage of reframings of the screen to produce close-up like effects (fig. 19), the use of ellipses to tell the story of a missing girl over several days, and the addition of non-diegetic music to heighten emotions during certain dramatic moments. The film also employs many zoom ins and zoom outs within the frame for dramatic effect, but they are done with more subtly than those in *Noah*.

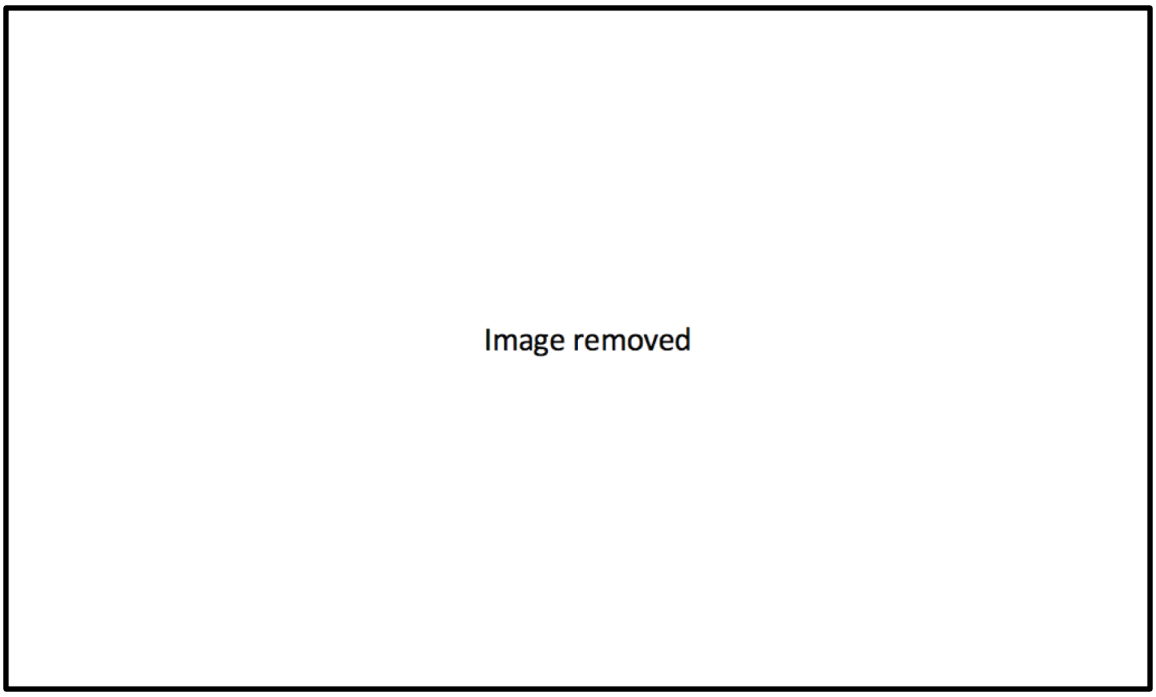

Figure 19. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 32 min 34 s. *Screenlife* film with reframings, ellipses and non-diegetic music. ©Screen Gems.

It is these three films produced by Bekmambetov, *Unfriended*, *Unfriended: Dark Web* and *Searching*, that will be analyzed because they are the three *screenlife* films that have not only defined the format in popular culture today, but are also three films that use similar *macOS* interfaces to tell stories in similar and different ways using its GUIs and individual media to transpose certain cinematic conventions. These GUIs also provide a new environment for the mystery fiction genre as it forces the protagonist, who acts as an amateur detective character, to conduct an investigation by searching for clues that are simultaneously displayed with other media in the same screen space. Like many traditional mystery fiction plots, the hope is that the

protagonist can piece together a solution, but in this format it is done by observing, interacting with and juxtaposing the simultaneously displayed mystery elements.

A protagonist's or amateur detective's investigation would also not be possible without the ability to jump from one space and time on the internet to another very quickly by clicking on hyperlinks, using a search engine, or by typing an internet address into a browser. Hyperlinks and search engines give the protagonist access to many types of videos, photos and texts that serve as archives on the internet which have the potential to display clues and red herrings. These online archives are most notably observed on social networks like *Facebook*, *Twitter* and *YouTube*. With this possibility of showing the character moving very quickly from one archive to another through the use of the GUI interfaces and internet access, this mode of virtual travel offers another way to tell a story where a protagonist must search multiple locations to find something. Couple this ability to move quickly between webpages and the fact that since around the mid-2000s it had become more and more common for individuals to communicate in real time with video, it is in hindsight not too surprising that each of the three *screenlife* films shows scenes involving a character, typically the protagonist, either contacting people through video calls to ask them questions regarding an unresolved problem or searching for information on social networks, news sites and other personal online accounts that contain pertinent information related to the solution of a mystery or an unanswered question. This theme of searching on the internet for something important started in *Thomas est amoureux* which shows Thomas talking to several women via videophone with the hope of eventually finding an intimate connection with a woman from a distance. *The Collingswood Story* shows Johnny alternating between video calls with different characters to find out more information about the mysterious house his friend is living in. *Noah* shows Noah obsessively searching for communications between his girlfriend and another teenager on *Facebook*. *Unfriended* shows Blaire investigating *Facebook Messenger* messages she received from a friend's account after she had committed suicide. *Unfriended: Dark Web* shows Matias searching for information about a kidnapped teenager on a news site. *Searching* shows David investigating several social media accounts – *Facebook*, *Instagram* and *Tumblr* – belonging to his missing daughter for information that may be relevant to her disappearance. The ease with which a character can click on any social media account or website

to search for clues in videos, photos and text as part of an investigation shows why the *screenlife* format works well for telling mysteries or stories where a character has to search for something. The three *screenlife* films analyzed in this study are produced by Timur Bekmambetov and he has highlighted that data exists online that reveals traces of the past, clue-like information, that not only shows the good and the bad, but possibly more importantly for mystery stories, it could suggest the criminal.

> On the other hand, a person can always be reminded of their every mistake online, their every crime and their every weakness. The slogan of our screenmovie, *Unfriended*—perhaps the first real screenmovie in history—is "Online, your memories last forever." But so do your mistakes, and this is no accident (Bekmambetov 2015, para. 10).

This observation that memories remain online is made somewhat tangible because videos, photos and texts published on social networks and other websites have the potential to remain stored on the hard drives linked to the internet for an indefinite amount of time. The term "memories" that Bekmambetov uses can represent many things on social networks such as conversations between friends in *Messages*, videos filmed and posted on *YouTube* and photos shared on *Instagram*. "Memories" can also suggest the much less public, much more private, almost secret, information such as banking transactions, intimate photos or videos, and interpersonal communication. These types of "memories" are stored digitally and take form visually in video, photo and text on the screen as well as aurally through speech, music and natural sound within the audio tracks.

Diegetic images in *screenlife* films

Another important aspect of video, photo and text in *screenlife* films that contrasts with the same media used in traditionally shot films is that the individual media in *screenlife* films are produced by its characters' physical manipulation of the digital media creation devices within the diegesis such as cameras on smartphones as well as the keyboards, trackpads and webcams on computers.[5] The physical manipulation of these devices is typically defined by the hand gestures

[5] Diegetic imagery is not new in *screenlife* films. *Found footage* horror and science fiction films such as *The Blair Witch Project* (Daniel Myrick and Eduardo Sánchez, 1999) and *Cloverfield* (Matt Reeves, 2008) are based on the

that operate a camera, trackpad or keyboard or the relative placement of the webcam on a computer to a character. These movements, gestures and placements of digital devices play a significant role in producing the images in these films. The characters' manipulation of these devices within the diegesis of a *screenlife* film results in video and still photography that often has an amateur aesthetic as opposed to the professionally framed and lit images in a traditionally shot film. This amateur aesthetic found in the images of *screenlife* films can, for example, change the way that certain clues are represented within their individual media. Video images can appear shaky and not well lit which can not only give certain images a certain realism, but more importantly, in the context of telling a mystery story, certain clues can be rendered more difficult to interpret because identities are either camouflaged in the shadows or the frame moves too quickly to identify specific characters of interest.

Text is also an image produced by characters in the diegesis who type onto their keyboard connected to their computer. Text is different from video and photography in terms of its formal aesthetics because the visual shape of each letter is fixed by the constraints of the typeface. The visual form within videos and photos have certain technical constraints, but these types of images have much more latitude in terms of the forms that can be produced within the frame. For text, that has not had its typeface manipulated from its standardized form, there is usually no visual difference in the way that each individual letter of a typeface appears whether it is typed by a professional or an amateur. What can appear amateur is how the text is typed, how the words and phrases are constructed. In *screenlife* films, much of the text is used for communication between characters using text messaging applications or social media such as *Facebook* and *Twitter*. Whereas, typed text in traditional films is typically reserved for titles, intertitles, subtitles or other onscreen titles that are all produced by professionals existing outside of the diegesis who are part of a post-production team. In *screenlife* films, text used to communicate between characters has become much more prevalent than in traditional films because the *screenlife* world exists exclusively on characters' computer screens, tablets and smartphones where text plays an important role in communication, most notably through instant messaging applications like

representation of footage filmed by characters within the diegesis. The effectiveness of these films rely on a documentary or home movie aesthetic used to tell fictional stories to make them appear more real to the spectator.

Messages and *Facebook Messenger*. Because text in *screenlife* films is used by characters to communicate, which is less common in traditionally shot films, it has become more significant to the plot, especially plots that have mystery elements where clues can be found within text messages both new and old.

The next chapter will describe and analyze how frames (video, photo) and text zones operate within virtual windows in order to transpose certain cinematographic conventions and storytelling traditions into these computer display interfaces, more specifically GUIs, to tell stories within a mise en scène that can be divided into three different spaces or levels. The last chapter will demonstrate how text, photo and video function within the GUIs to present clues and red herrings in unique ways as part of traditional mystery fiction techniques transposed into each of the three *screenlife* films. Throughout each of the following chapters, the question that looms throughout is the critical role that the interfaces, the GUIs, play in presenting, juxtaposing and recontextualizing story information contained in each of the individual media.

Chapter 2: The transposition of narration techniques into the three-level *screenlife* mise en scène

Before embarking on a description and analysis of the "mise en scène" in the three *screenlife* films – *Unfriended*, *Unfriended: Dark Web* and *Searching* – it is important to define what is meant by this often ambiguous term. Adrian Martin, in his book *Mise en scène and film style* (2014), has addressed this ambiguity by stating that, "on the one hand, the terms seems to mean (a little mystically) *everything*, cinema as an expressive art form becoming synonymous with *mise en scène*; on the other hand - as Rohdie so casually remarked in his 2006 survey - *'mise en scène* is nothing very specific'" (Martin 2014, 13). Between meaning "everything" and "nothing very specific," Martin presents an overview of several definitions of mise en scène that includes one of the more classic descriptions by David Bordwell and Kristin Thompson. This definition limits mise en scène to four main technical components within the frame: the set, the costumes and make-up, the lighting, as well as movement and acting (Bordwell et al. 2014, 193). Martin also elaborates on other definitions of mise en scène which have a much wider interpretation such as one by Thomas Elsaesser that not only includes how "each image is arranged (staged) expressively," but also "how diverse images are arranged in relation to each other, thus bringing in editing, overall treatments of the image (such as colour grading, sepia, saturation, etc.) and the large area of special effects, both in the digital and pre-digital eras" (Martin 2014, 16). For the description and analysis of the three *screenlife* films, the term mise en scène is primarily defined by the way that objects and actions are represented within the frame, more specifically how the space within the computer screen is organized using virtual windows to simultaneously represent multiple virtual objects in different forms such as text, photo and video. Thus, this definition implies Bordwell and Thompson's classic interpretation because it is essential to describe and analyze the staging of objects within the frame, but one could also interpret the mise en scène of *screenlife* films to also implicate editing because there are many different types of juxtapositions between individually framed images (video, photo, text) within the larger frame, the screen space, that create new meanings.

Another important consideration in defining the mise en scène in *screenlife* films is the diegesis. Because the diegesis of each *screenlife* films exists in a virtual reality that is significantly defined by the graphical user interface (GUI) within each application's virtual window and the GUI within each computer's operating system – most notably defined by *macOS* for the *MacBook* as well as *Windows XP* and *Ubuntu* for other personal computers – the rules that govern how virtual objects can be organized within these screen spaces differ greatly from those that define physical objects in the physical world. The screen space is flat, defined by pixels, which displays modular structures that can embed and be embedded. The most important modular structures related to storytelling in the three *screenlife* films are governed by a hierarchy built upon frames (video, photo) and text zones representing individual media embedded within virtual windows that can be resized, repositioned and overlapped on the screen. This hierarchy of frames and zones within virtual windows allows images to be organized in a variety of ways which permits the transposition of certain traditional cinematic conventions into the GUIs. For the purpose of this analysis, each of the main modular structures (frames, zones, virtual windows) within the screen space can be deconstructed to decipher how the meaning derived from individual videos, photos and texts shown in combination is the result of each of their unique form and content, but also the juxtapositions that can occur between them within the same screen space. Therefore, the description and analysis of the mise en scène will be primarily concerned with how objects are organized within modular structures to create meaning and to tell the story. The main modular elements of the three *screenlife* films will be broken down into three categories or levels to aid in the description and analysis of the mise en scène:

1. the objects arranged within the frame (video, photo) or text zone
2. the objects (frames and text zones) arranged within the virtual window
3. the objects (virtual windows) arranged within the screen

Each level of mise en scène can be analyzed individually in order to better understand how they operate within all three. This analysis starts with the smallest building blocks in the first level and works its way out to the largest units in the third. The first level of the *screenlife* mise en scène occurs within the frames (video, photo) or text zones. These are the individual blocks of either

video, photo or text that are contained within virtual windows. Each one of these units is created by the characters and their devices within the diegesis of each of the three *screenlife* films. The videos are typically filmed on computer webcams and cellphone cameras of characters, but there are also professional cameras such as security cameras and electronic news gathering (ENG) cameras that are represented within the diegesis of the story. This goes for the photos as well which are mainly selfies taken on cellphone cameras. Professional cameras, such as the digital single-lens reflex camera (DSLR), appear to be represented by certain characters as well. And text is written onscreen, typically in an instant messaging application, between the protagonist and other characters. However, there are also many other types of written documents such as *Google Sheets* and *Microsoft Word* documents. Each of these three main categories of media – video, photo and text – are embedded within their own modular space. For the video and photos, they are contained within frames, whereas text is embedded within a text zone. Each of these frames and zones will be described in further detail later in the chapter, but it is important to remember that each of these blocks (frames, zones) serves as the main narrative units of the storytelling.

How each of the frames and zones are organized within individual virtual windows defines the second level of the *screenlife* mise en scène. At this level, the frames and zones can be juxtaposed between each other to create new meaning. Within a video call virtual window such as *Skype*, there are many configurations of video frames that can change how the story is told based on their relative size and position. Photo frames organized within a *Google Image Search* virtual window can also alter the course of a story, especially when multiple images show important trends or information about a character. And archived text conversations, which show individual messages contained within their own text zone, can easily redirect the plot, especially if a character misinterprets them. Thus, it is important to be aware of this level of mise en scène because frames and zones within individual virtual windows can easily change meaning or alter a story's course when organized in specific ways within this space. This also applies to different combinations of frames and text zones within a virtual window as it is not uncommon to have video, photo and text combined within this same modular space.

The third and final level of the *screenlife* mise en scène primarily implicates the relationship between virtual windows within the entire screen space. The relationships between virtual

windows are greatly defined by the frames and zones internal to each virtual window and their relationship to frames and zones within other virtual windows within the same screen space. However, certain properties of virtual windows can be altered to change how frames and zones in separate virtual windows interact to create meaning. This includes the relative position of the virtual window because it can be placed within any part of the screen space, but it can also be overlapped by other virtual windows. Thus, the relative position of a virtual window can pose certain issues for the interpretation of the frames and zones, especially if they are either obstructed or cropped by another virtual window.

This third level of mise en scène is particularly important because the relationships between the frames and zones in virtual windows allow for certain traditional cinematic conventions such as the subjective point-of-view shot and cross-cut editing to be transposed into this multiple, simultaneous and overlapping GUI environment. As well, other elements within the screen space such as icons and wallpaper that take up the desktop space behind the virtual windows can also have an impact on the story. The hope is that by describing the mise en scène in these three distinct levels, the spectator can better understand how these three *screenlife* films tell stories, especially in relation to the standard sequential format of storytelling in films that shows one shot at a time in a sequence. For some, at first glance, each of these three *screenlife* films could appear as though they are a mishmash of video call applications, internet websites and randomly cobbled together photos and text files. However, if each of the visual elements is interpreted within the proposed three-level *screenlife* mise en scène structure, it is likely easier to understand how well or how poorly these films have been constructed to tell different types of stories. Dividing the mise en scène into three identifiable levels or spaces demonstrates how each individual modular component (frame/zone, virtual window) can function in a simultaneous and overlapping way with other modular components (frame/zone, virtual window) to transpose certain cinematic conventions and storytelling techniques onto the screen space that defines the diegesis of each of these stories. Without this division of the *screenlife* mise en scène into three distinctly defined levels, it is arguably more difficult to understand how the storytelling functions within a *screenlife* film because it would be difficult to differentiate between images within the screen space and to

make juxtapositions between them which are essential in understanding how certain cinematic conventions and storytelling techniques have been transposed onto the computer screen.

Another very important detail that is aided by the division of the *screenlife* mise en scène into three levels it that for each of the frames (video, photo) and text zones – existing within the first level of the mise en scène – there is an associated temporality. There are two main groups of temporalities that become very important to distinguish in each of the three *screenlife* films. For each story, there is the main narrative thread that represents the present moment within the plot for the protagonist. This temporality is referred to as the *récit premier* in French narratology (Genette 2007, 39). The *récit premier* would not become an important classification in *screenlife* films if all of the frames and zones represented on the screen took place in the present moment. However, there are many archival videos, photos and texts that the protagonist watches and reads on the screen. Each of these media was created in a time period before the representation of the screen recording shows the protagonist's speech, action and movements in the present moment of the story. Therefore, in order to differentiate between the frames and text zones that represent the *récit premier* and the ones that do not, one might suppose that these previously created media could be described as *analepses*. The *analepse* is another French narratology term which loosely defined means flashback because it is a representation of another period. The *analepse* has been defined by André Gaudreault and François Jost as an event that occurs before the present moment within the story, but is evoked in the midst of this present time that the main characters find themselves (Gaudreault and Jost 2017, 160). This present time can be referred to as the *récit premier* whose definition has been articulated by Gérard Genette who defines it in relation to the *analepse*. He states that the *récit premier* is the temporal level that serves as a reference point to an anachrony (Genette 2007, 39). An anachrony is a shift in a narrative's temporality away from the *récit premier* which either implicates a temporality in the past or the future. It can be a flashback, also referred to as an *analepse*, or a flash-forward, also known as a *prolepse* (Gaudreault and Jost 2017, 165,175). The problem with categorizing the archival media shown within the present moment as *analepses* is that even though these media objects represent a different temporality, the past, they exist within the present. The protagonist is observing these texts, photos or videos on a computer screen that represents the present

moment. The pixels on this computer screen showing texts, photos and videos evoking the past are illuminated in the present moment. Thus, they are a part of the *récit premier*. Perhaps a better way to categorize images and texts created in the past are by their temporalities. Webcam video that is shown live in the present moment within a *Skype* virtual window, for example, has a temporality that represents the present moment. This is in contrast to any other media that had been produced in the previous seconds, minutes, hours, days, weeks, months or years, such as a photograph or video taken at a prior event. This type of media is one that has a different temporality, one that represents the past. So, one should be aware that individual media objects within a computer screen have a temporality that is either associated with the present or the past. In rare cases, such as in *Searching*, there are *flashbacks* or *analepses*, but during these moments, the entire screen is in the past, the scene is referring to a previous period that action took place within the entire computer screen, thus all of the pixels are evoking the past.

For media with temporalities that are evoking the past, these are typically contained within an archived media file such as a video, photo, text or sound file, or one that contains a combination of these media such as a video file because it also can contain sound, photos and text. The archived media in these films, notably video, can also sometimes be referred to as *found footage* because these three *screenlife* films exist within the traditions of the *found footage* fiction film genre, but there are also many other examples of media in these films that are being accessed either online or off-line by the protagonist on his or her computer that would not necessarily be categorized as *found footage*. The *found footage* genre that individual media within these *screenlife* films are referencing are also different from the avant-garde *found footage* genre that often repurposes archival material in ways that are not associated with the mystery and horror genres that the *found footage* in *screenlife* films are referring to.

First level of the *screenlife* mise en scène: objects arranged within the frame (video, photo) or text zone

Each of the frames (video, photo) and text zones within virtual windows represented in the three *screenlife* films contain images produced by fictional characters and their devices within the diegesis of the story. The video is usually, but not always represented by webcams on laptop

computers. The representations of these types of cameras typically show the communication between characters while using a video call application such as *Skype* or *FaceTime*. Representations of webcams and cellphone cameras are also used to show incidents or events witnessed by characters. Security cameras and Electronic News Gathering (ENG) cameras are represented as well within the diegesis to show an action that one of the main characters would not normally film. The representations of these cameras serve to show important moments such as incidents within public spaces such as an attack at a subway station or newsworthy events such as the announcement of a missing person at a press conference. The choice of the video camera used to represent a scene usually has a purpose that is linked to its user within the narrative in the story. This is important because if a camera's use does not seem justified within the world of its story, it risks appearing forced and not a believable, plausible occurrence within the narrative. This believability and plausibility also apply to the representations of cameras to take photos. Many of the photos are also shown using representations of the same lens on the cellphone and laptop devices used to represent webcam video. Photos are also represented by other amateur digital pocket cameras as well as by professional DSLR cameras. Text is also produced by characters within the diegesis and it can be classified as an image because it is visual. It is primarily the representation of a keyboard that shows a character's gestures when typing text onto the screen, but the representation of the mouse and trackpad can also play a role in the representation of text. In order to better understand how each one of these three media – the video, the photo and the text – operate within their respective frames and zones, it is important to discuss in further detail each of the three media types in terms of how they are produced and how they can have an impact on the meaning of the story.

The most common camera that produces video displayed within a video frame in a virtual window is the webcam which is typically filmed from a centred position within the narrow border along the top edge of a laptop screen. In the three *screenlife* films, most of the webcams are on *MacBook* computers. Each of these webcams contains a very small wide-angle lens that produces images with a deep depth of field due in part to their relatively short focal length and small aperture. This usually results in a video image where most objects within the frame are in focus. When a character is having a video call conversation while speaking from the typical short

distance from the webcam that most people speak from, usually within a meter, the wide-angle lens produces an image that makes this character appear to be relatively larger than much of the background decor within a bedroom, even if it is just a few metres away. The benefit of this wide angle is that just a few metres from the webcam, the entire body of a character can be shown from head to toe within this space. This allows for certain action scenes inside the tight spaces of rooms to be filmed in a wide shot while also preserving the possibility of a close-up or medium shot while the person is having a video call conversation within about a meter of the webcam lens. In a scene in *Unfriended: Dark Web*, the protagonist Matias is having a *Facebook* video call conversation with Amaya. The shot size is a medium shot when she is seen talking to him because of her relatively short distance to the webcam (fig. 20). However, Matias is much closer to his webcam, so his shot size is a close-up in the smaller video frame of the *Facebook* video call. Twelve seconds later in the film, Amaya walks a few metres away from the webcam to enter a room. Within this short distance, she is now filmed in a wide shot (fig. 21).

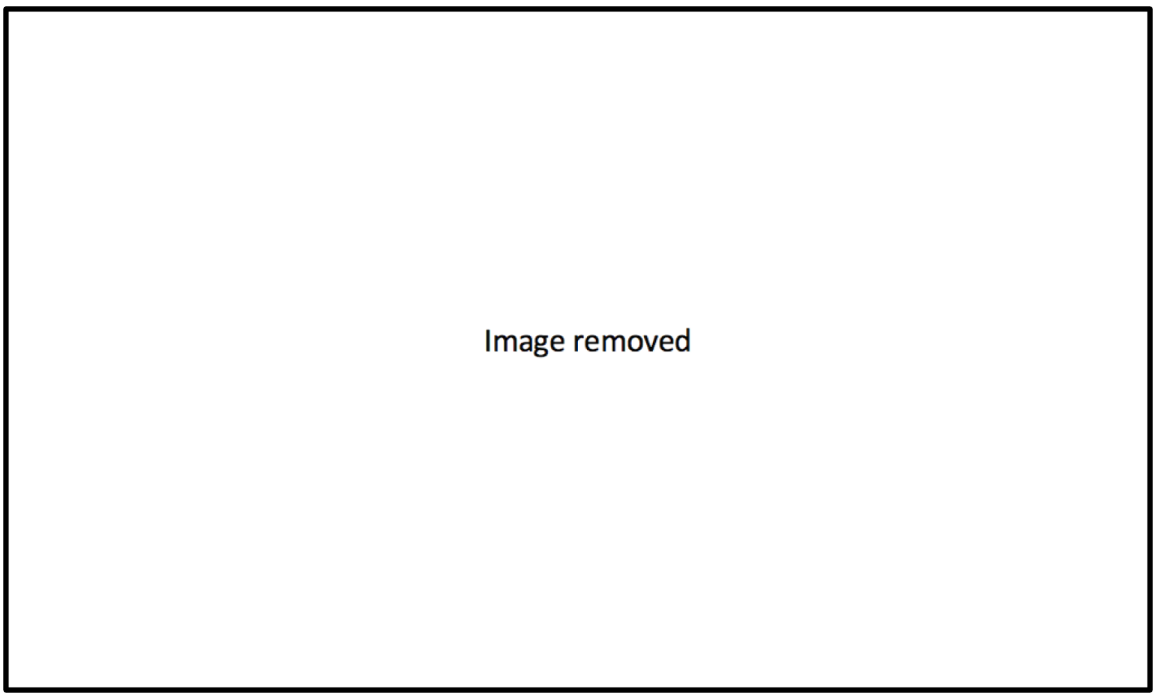

Figure 20. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 42 min 52 s. Medium shot of Amaya. ©Bazelevs Production.

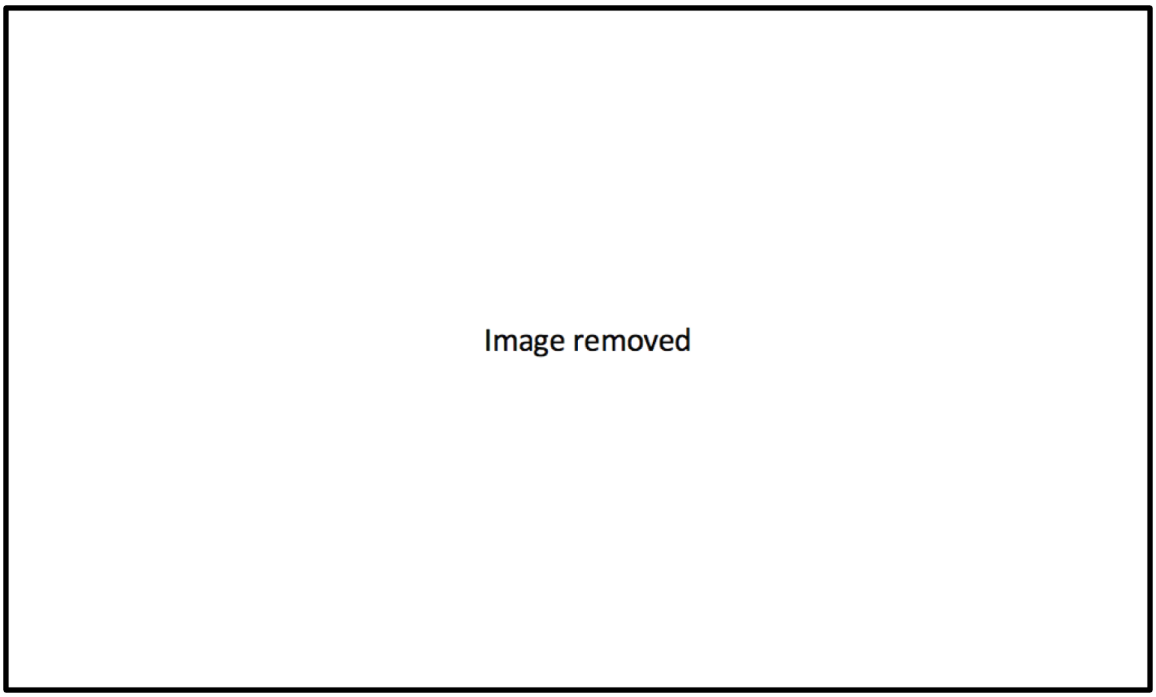

Figure 21. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 43 min 04 s. Wide shot of Amaya. ©Bazelevs Production.

In this example and many others within the three *screenlife* films, it is important to note that the webcam on each laptop does not reposition, nor does it zoom in or out in order to film a close-up, medium or wide shot. The webcam remains fixed, thus it is the characters within the space who can determine the shot size, not a camera crew who would normally set up a new shot on a traditional film set where the production camera is not part of the diegesis. In these *screenlife* films, the camera angle and device must exist within the world of the story; thus camera positions and devices must be plausible and appear as though they are naturally occurring. Therefore, repositioning a camera or its focal length to film a scene from a different angle must be a motivated action by a character within the story.

There are certain moments where a character will change the camera angle, but this typically happens when he or she is filming handheld using the camera on their cellular phone. The cellphone camera is very similar to a webcam in terms of its wide angle and small aperture. *Searching* has several examples of shots where the protagonist David is filming handheld with his

cellphone camera. Within the time and space of one shot early in the film, David is jogging with his wife Pam while filming his face in a close-up with his wife just behind him (fig. 22).

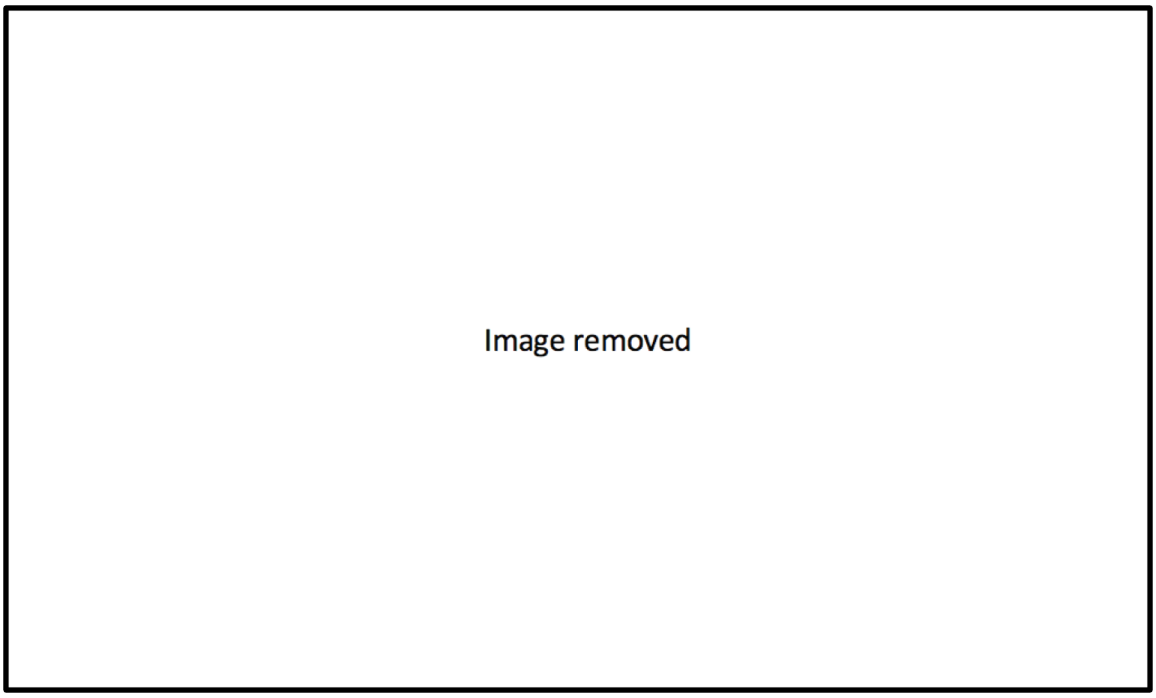

Figure 22. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 4 min 45 s. Close-up shot of David. ©Screen Gems.

She slows down and eventually stops, so David turns to see what has happened behind him. While doing so, he drops his arm carrying the camera which moves it away from his face and toward his wife. The camera is tilted 90 degrees and shows Pam for a brief moment in a newly framed wide shot that is very shaky (fig. 23). This is an example of when a camera is repositioned by a character to show a new angle that reveals an important moment in the story. In this case, it is the moment that shows that Pam's cancer has returned. The repositioning of the camera is justified because it happens in a natural way that is reflected in the shakiness of the handheld movements and the 90-degree turn of the camera. This movement implies that David is not trying to film anymore, but the camera is still rolling as he turns quickly to attend to his wife. The frantic gestures of David's hands turn the camera to its side capturing this tragic turning point.

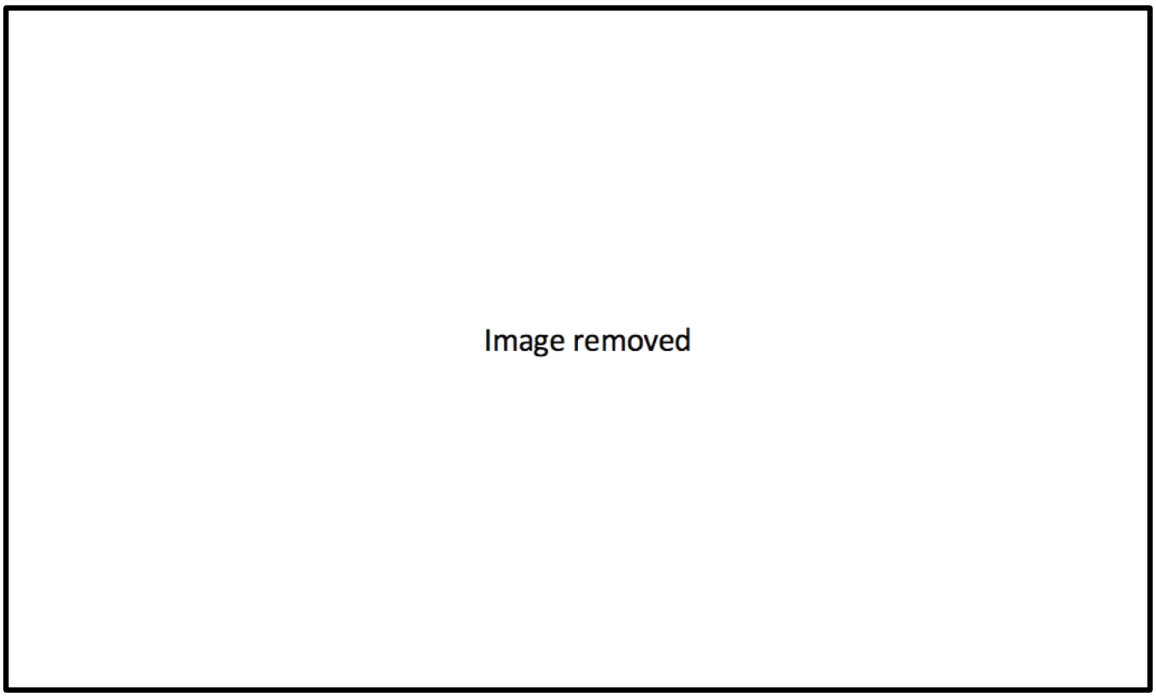

Figure 23. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 4 min 50 s. Wide shot of Pam. ©Screen Gems.

Another major element that affects the images from webcams, especially in *Unfriended*, is the generation of pixilation onto representations of streaming video in video calls such as *Skype* to imitate network lagging. The quality of video streamed on the internet has improved greatly since the release of *Unfriended* in 2014 which is perhaps the reason why there are fewer digital noise artifacts on the video call images in *Searching* and *Unfriended: Dark Web* that were both released in 2018. The pixilation in *Unfriended* is quite significant as it adds another layer of expression for a film that portrays certain horror genre elements involving a group of teenagers being attacked by a mysterious figure. One of these genre elements includes showing a character's reaction to a horrific situation such as witnessing a murder or undergoing physical or psychological terror. When the group of friends in *Unfriended* is being terrorized by the mysterious *Skype* account, Blaire is pleading to Adam to read a message he just received from this antagonistic character. Her face is completely distorted from the pixilation, the representation of lagging creates the appearance of two extra sets of eyes on her face (fig. 24). While the lagging is supposed to be the

result of the internet connection within the diegesis, the multiplication of deformed eyes within a mushy pixilated distortion of the protagonist's face makes the scene feel even more unsettling.

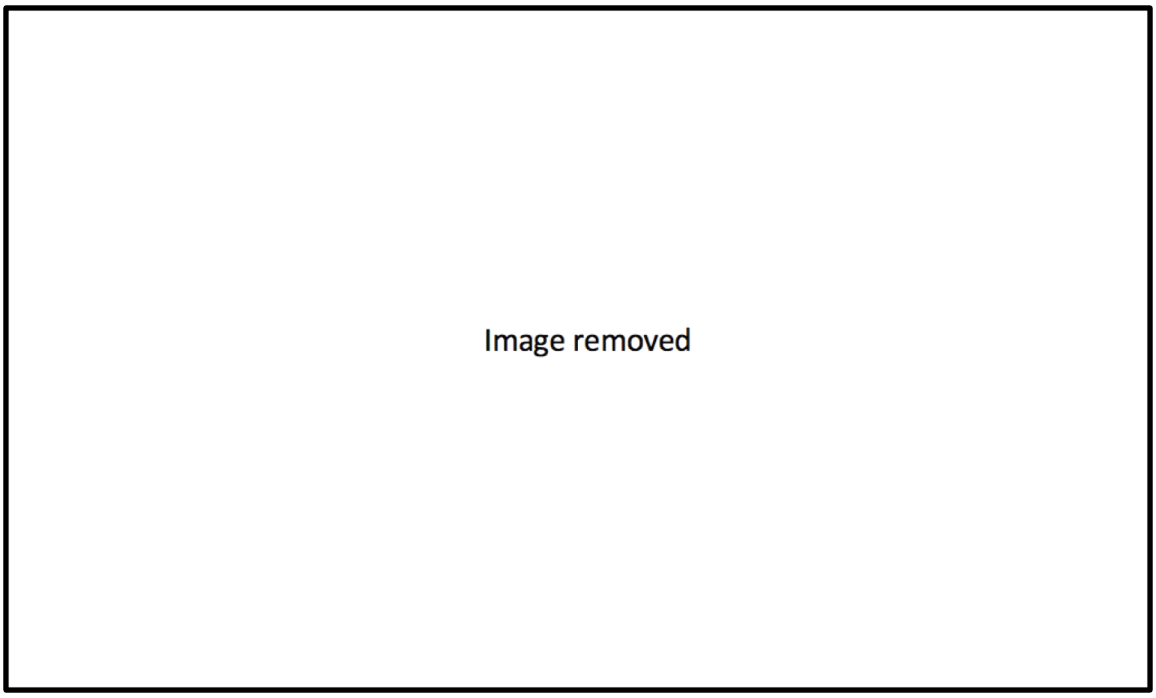

Figure 24. – Frame from the film *Unfriended* (Leo Gabriadze, 2014) at 1 h 02 min 22 s. Pixilation on Blaire's face creates an unsettling image. ©Bazelevs Production.

Another scene involving this lagging effect shows the character Jess with her mouth superimposed onto her face (fig. 25). This happens after Jess witnesses Adam being forced to shoot himself in the face with a gun. The horror, but also the anger felt by Jess is expressed in this image as it shows the mouth on her forehead morphing into another image of her face. At this moment, Jess begins to express her rage toward Blaire who gave the mysterious figure the cue to force Adam to kill himself.

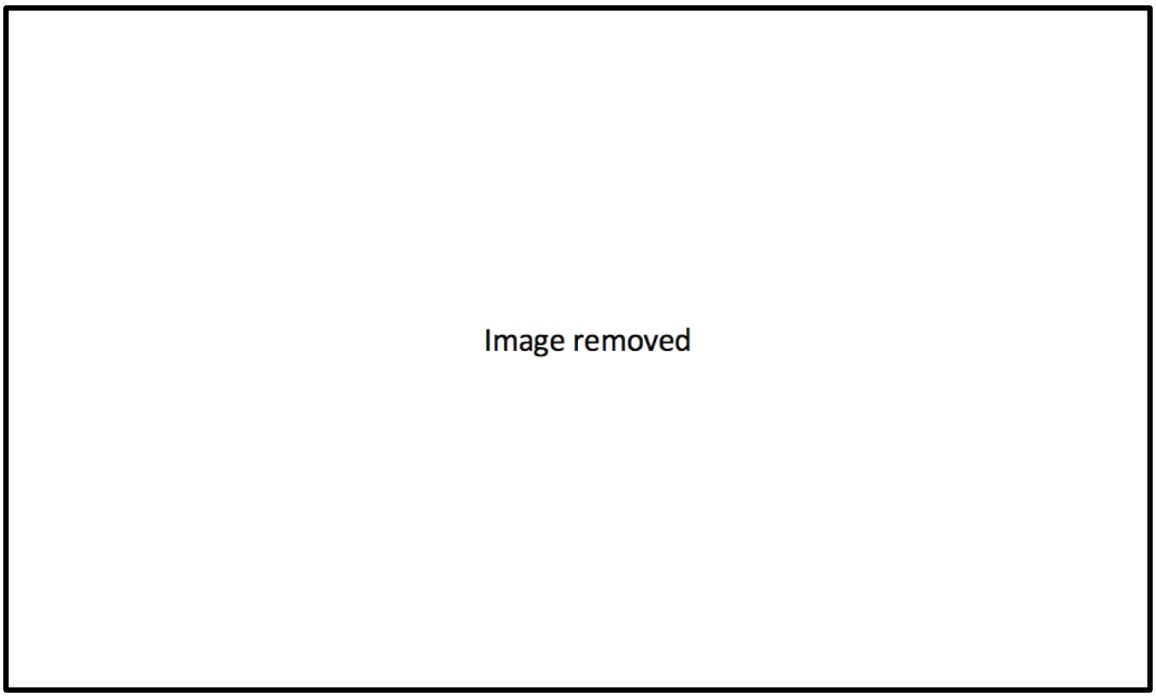

Figure 25. – Frame from the film *Unfriended* (Leo Gabriadze, 2014) at 1 h 04 min 51 s. The representation of network lagging on Jess's face amplifies the representation of her emotional state. ©Bazelevs Production.

While the webcam is the most common camera used by characters in the *screenlife* films to capture video, security cameras and electronic news gathering (ENG) cameras also exists and are represented within the diegesis of these films to show certain events. The security cameras in these films have similar optical qualities as the webcams because they also have wide-angle lenses with a deep depth of field. The main function of a security camera is to show an action within a large space in wide shots, whereas the webcam is normally used for face-to-face communication with close-up and medium shots of characters positioned in front of their webcams. Two examples of security camera shots exist within the same *Skype* virtual window in *Unfriended: Dark Web* (fig. 26). The first shows the character Nari standing on the platform of a subway station.

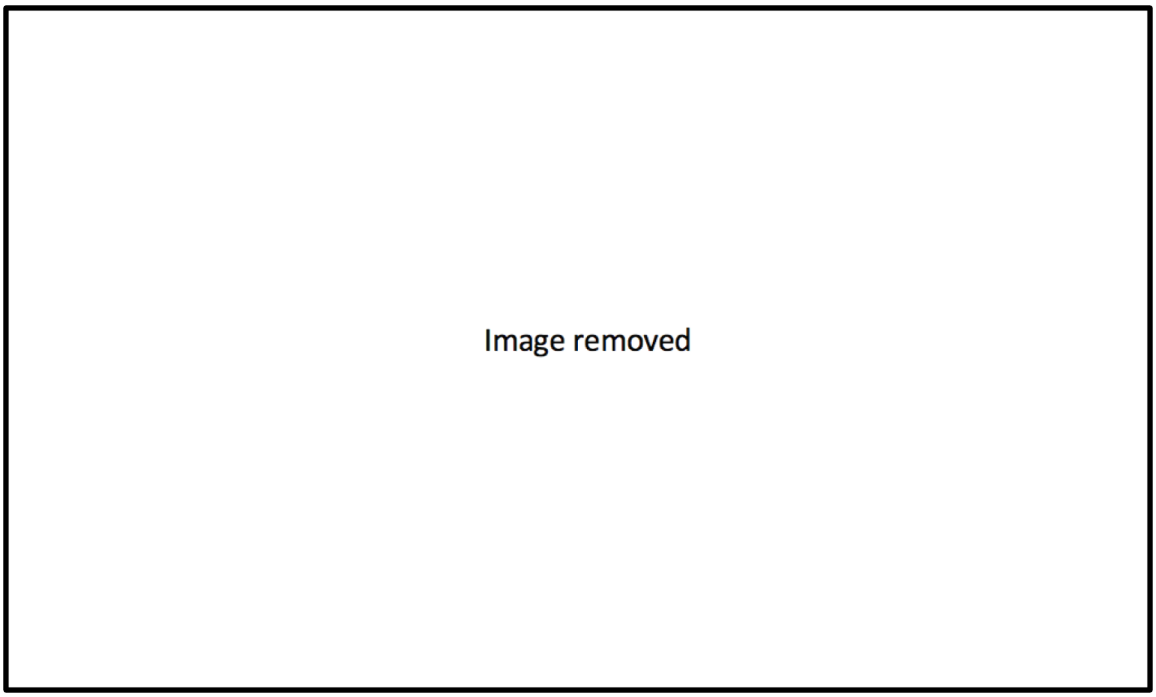

Figure 26. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 1 h 15 min 38 s. Two security cameras from high angles are used to show action. ©Bazelevs Company.

The other security camera shows Serena's mother in a hospital bed. Both cameras have wide angles filmed from high angles. The video from each of these cameras shown in the video frames of the *Skype* virtual window show each of these characters being killed. The wide shots from the security cameras show the entire incidents as they happen within their setting. The bodies of the victims are shown from head to toe and the cause of their death is the result of actions from other subjects and objects within the frame. Had these murders been filmed from the camera on a cellphone within these spaces, they might not have been able to show the causes of deaths as clearly as the security cameras were able to. The security cameras are in a fixed position from a high angle which can capture the events of an incident fairly clearly because they show much of the physical space of the ground level where people are located. Like the webcams, these security cameras also exist as plausible video sources within the diegesis of the story.

Another video source is the electronic news gathering (ENG) camera. These cameras are used by television news crews within the diegesis to film press conferences in *Searching*. These cameras are particularly unique in relation to the webcam and security camera because they have zoom

lenses which have a much wider range of focal lengths. For the press conference, the camera is positioned not nearly as close as a webcam is to the subject. This means that the zoom lens is recalibrated to a longer focal length to film subjects which changes the relationship between the people being filmed and their background. Objects a few metres behind the subjects appear relatively smaller, but not nearly as small or seemingly as far away as with the webcam. An example of this is shown in one of the press conferences in *Searching* which shows Detective Vick speaking at the podium with three other people standing behind her (fig. 27). The representation of the ENG camera appears to be positioned several metres from the podium. A representation of a longer focal length on its zoom lens appears to be used, so the relative size of people behind Vick does not seem to be that much smaller than her. This is in contrast to the representation of the wide-angle webcam lens placed directly in front of Vick when she speaks to her son in her office at home. In this shot, he is just a few metres behind Vick, but he seems much smaller than her, much further away (fig. 28).

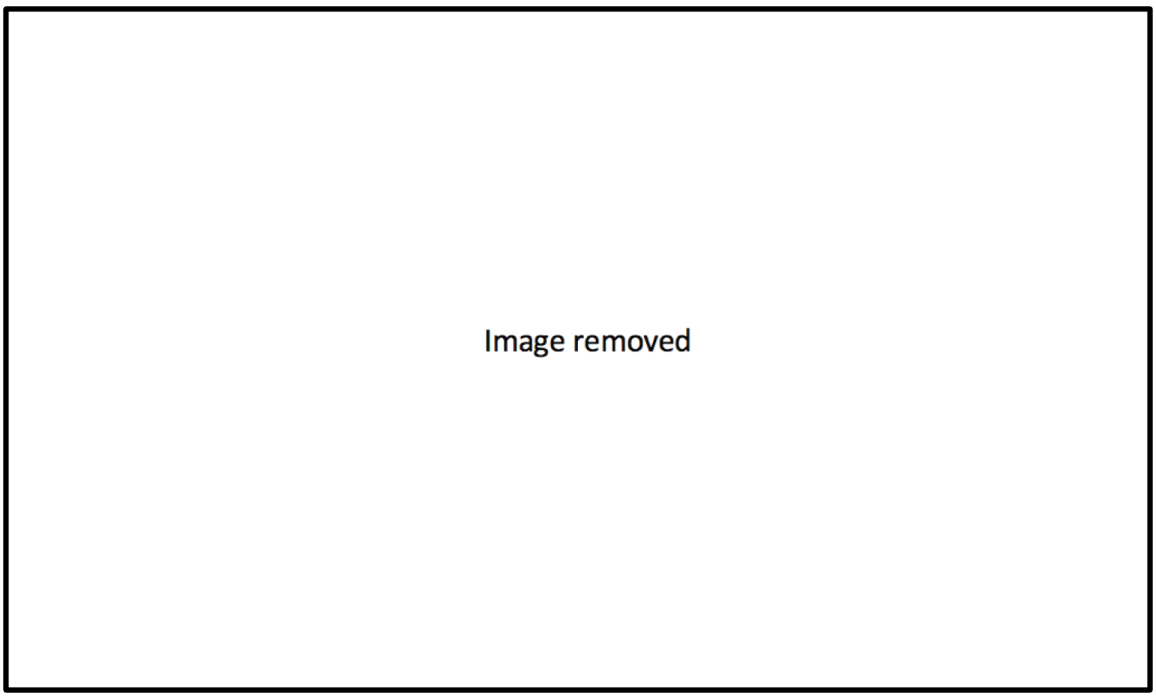

Figure 27. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 1 h 14 min 39 s. The representation of a longer focal length filmed from an ENG video camera within the diegesis. ©Screen Gems.

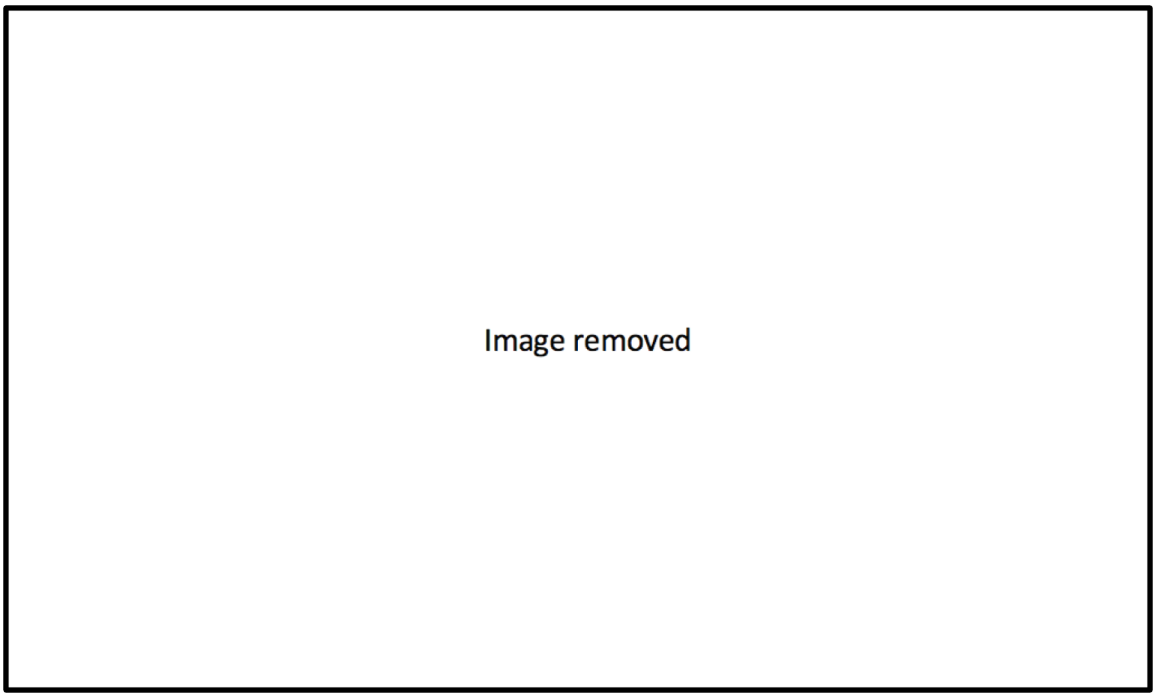

Figure 28. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 1 h 00 min 26 s. The representation of a wide-angle webcam lens within the diegesis. ©Screen Gems.

While the overwhelming majority of video in the three *screenlife* films is filmed by characters within the diegesis of the story and shown on their computer screens, the two *Unfriended* films use a production camera to film the last shot of each of these films. These are the only shots that do not appear on the screen of a computer, tablet or cellphone. In *Unfriended*, the final shot reveals the physical appearance and identity of the mysterious person behind the social media accounts that had been terrorizing and eventually killing the group of teenagers (fig. 29). This is filmed with a professional production camera that exists outside of the screen space. It is a very quick and effective shot that takes the spectator into the real physical world for the first time in the last shot. The same convention is applied to the last shot in *Unfriended: Dark Web* (fig. 30). This shot slowly reveals the headquarters of the organization that has baited the group of friends into their deadly game. However, in this shot, the identity of those involved is not revealed, they remain a mystery. The production camera shows what had been at the centre of the deadly attack on the group of friends. This shot, along with the last shot in the first *Unfriended* film, makes it

possible to show who is behind the screen, the antagonists who successfully hid their identities online.

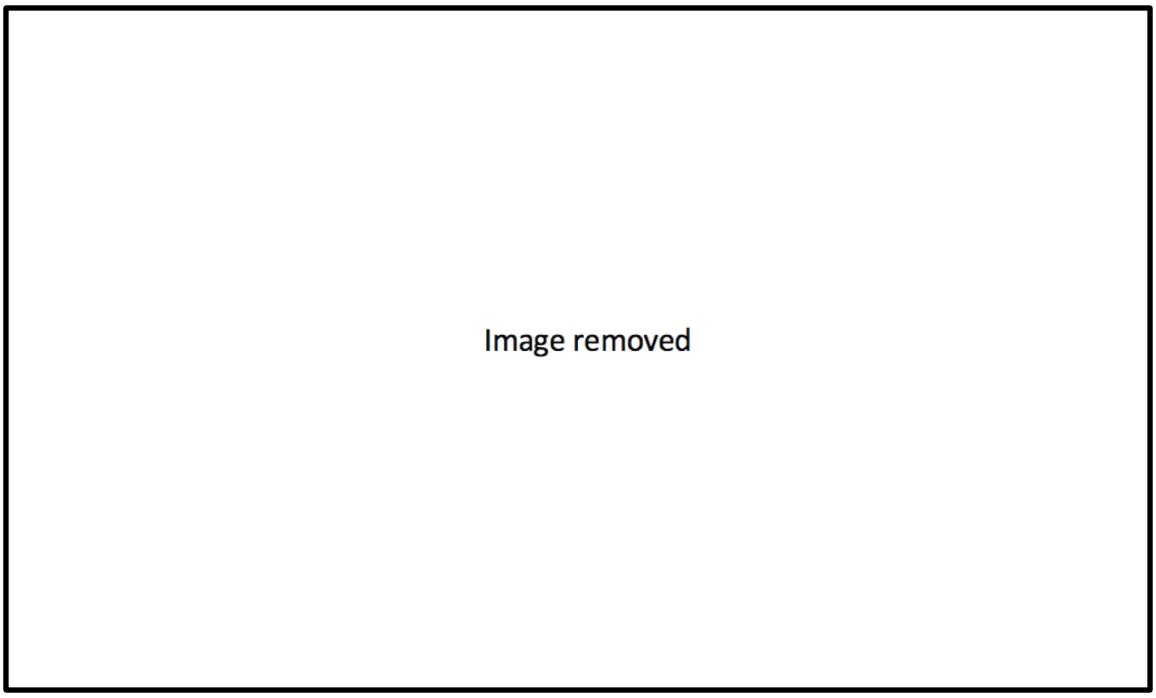

Figure 29. – Frame from the film *Unfriended* (Leo Gabriadze, 2014) at 1 h 16 min 37 s. The one shot in this film that is not a representation of a screen recording. ©Bazelevs Company.

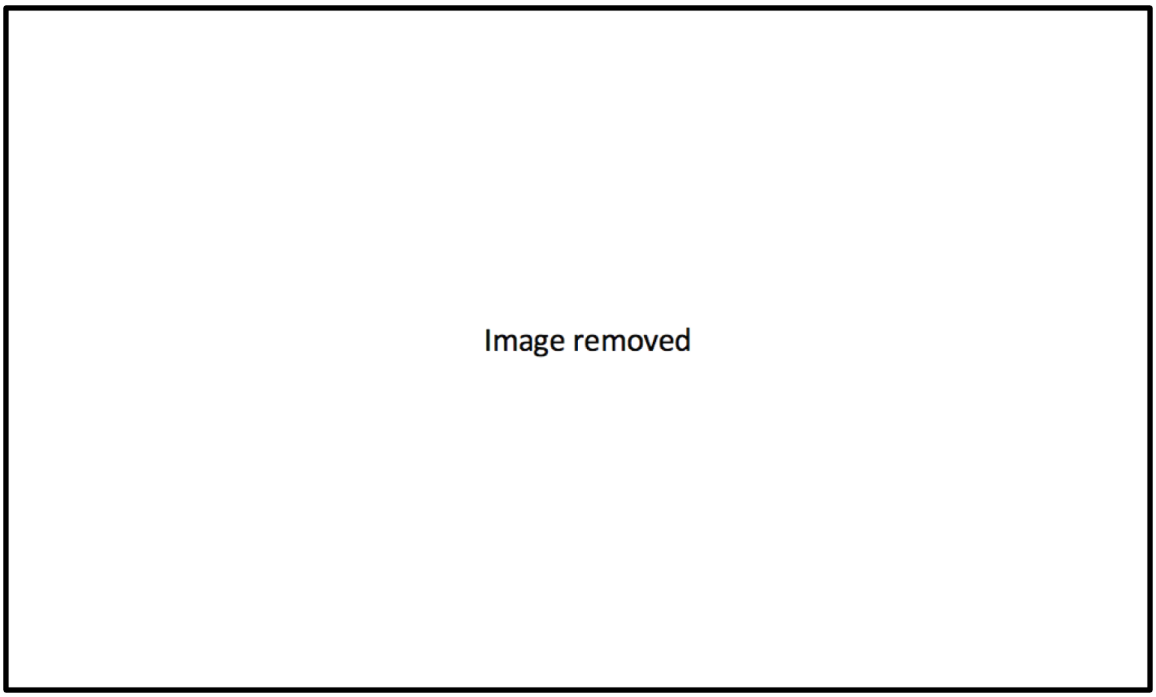

Figure 30. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 1 h 29 min 06 s. The one shot in this film that is not a representation of a screen recording. ©Bazelevs Company.

While video is the most common form of imagery shown within the frames of a virtual window, the photo also serves an important role within this space. Photos, in the three screenlife films, are typically images that have been taken in the past, so they often have an archival or *found footage* quality. These types of photos have temporalities that represent previous incidents or moments that have been recently uncovered or viewed for the first time by a character. Whereas, as mentioned earlier, the frames that show streaming video from video calls usually represent a temporality evoking the present moment within the main plot. Photos come from different devices much like video. The most common is the photo taken with a cellphone camera. These cameras capture selfies such as the one taken by Adam when he was having an affair with Blaire in *Unfriended* (fig. 31). The camera on the cellphone, much like the webcam, has a wide angle and small aperture, so the images reflect similar optical qualities as the webcam.

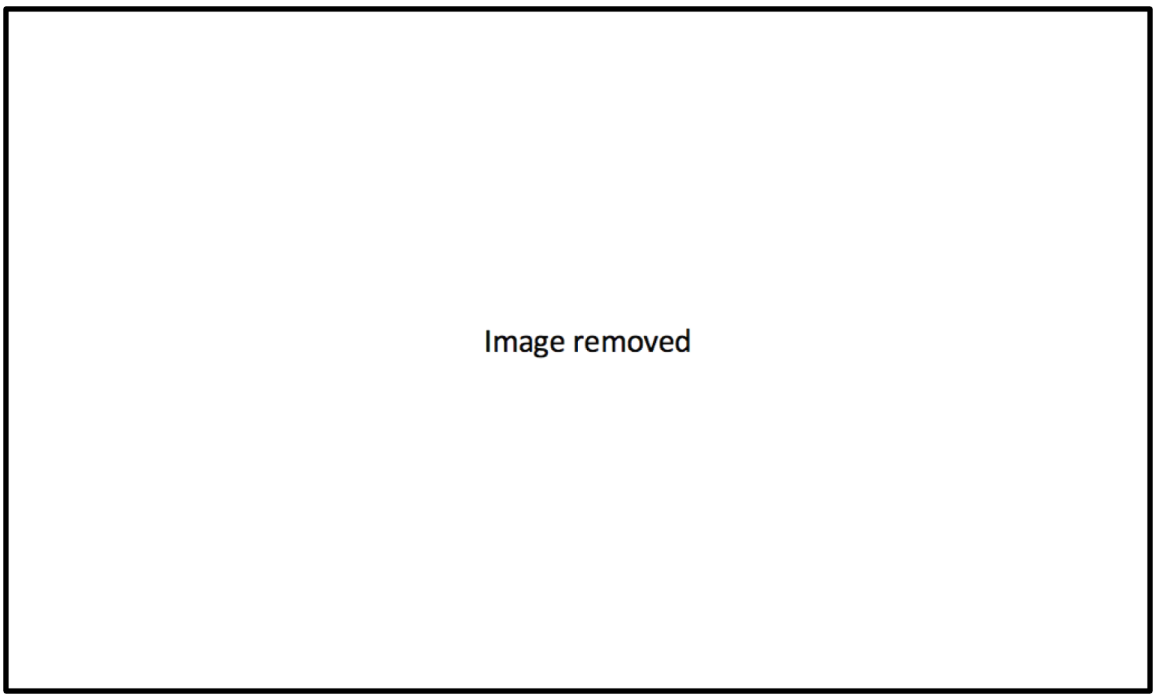

Figure 31. – Frame from the film *Unfriended* (Leo Gabriadze, 2014) at 38 min 14 s. The representation of a selfie taken on a cellphone camera with a wide-angle lens and small aperture. ©Bazelevs Company.

Selfies are not the only types of photos taken with the cellphone camera. It is common for characters to have taken photos of other people or objects. In *Searching*, David takes a photo of his garbage can which later reveals to himself that Margot had left her laptop on the table just above the garbage (fig. 32).

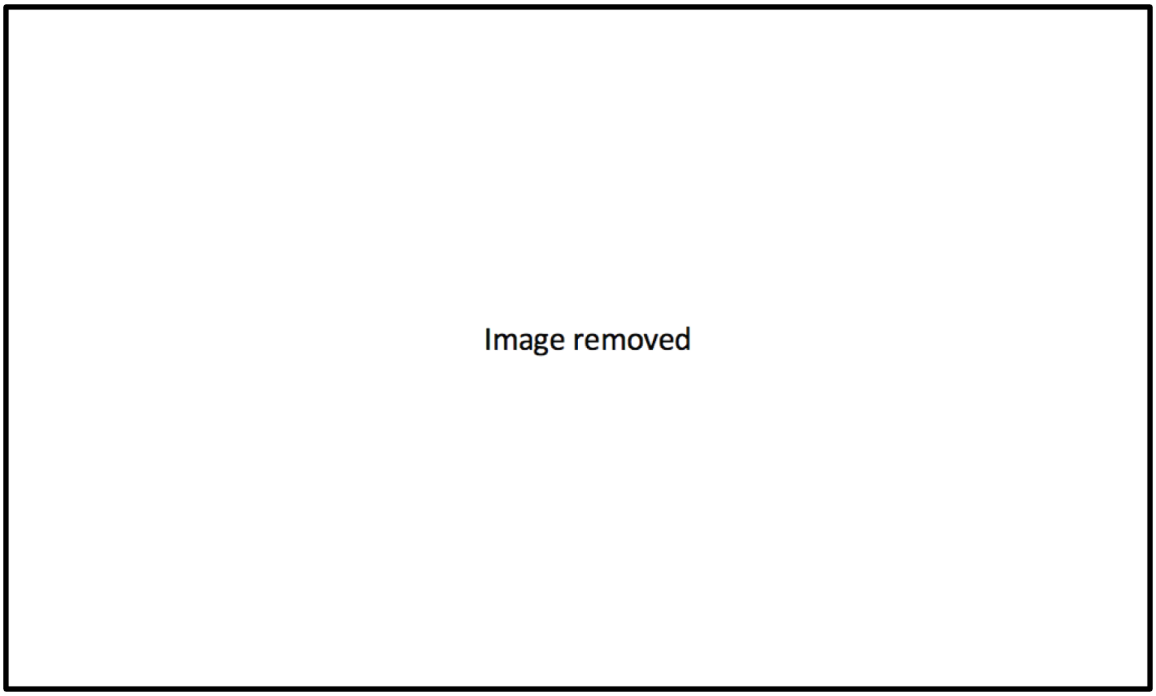

Figure 32. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 14 min 59 s. A photo taken by David on his cellphone camera. ©Screen Gems.

Other amateur photos are also included in *Searching* such as on news websites taken by characters that are not even mentioned in the story. There is a photo of a missing hiker on the *ABC-7* news website which serves as evidence that a 56-year-old man could survive in the wilderness for nine days (fig. 33). This is an important piece of information because it supports the idea later on in the film that Margot could still be alive, especially since it had been raining. *Searching* also includes representations of professional photographs. As the ENG video cameras revealed, professional images can exist within these stories. In *Searching*, the desktop photo of mountains on David's MacBook appears to be a professional photograph (fig. 34). Much like the video, photos can be professional as long as they have been produced within the world of the story.

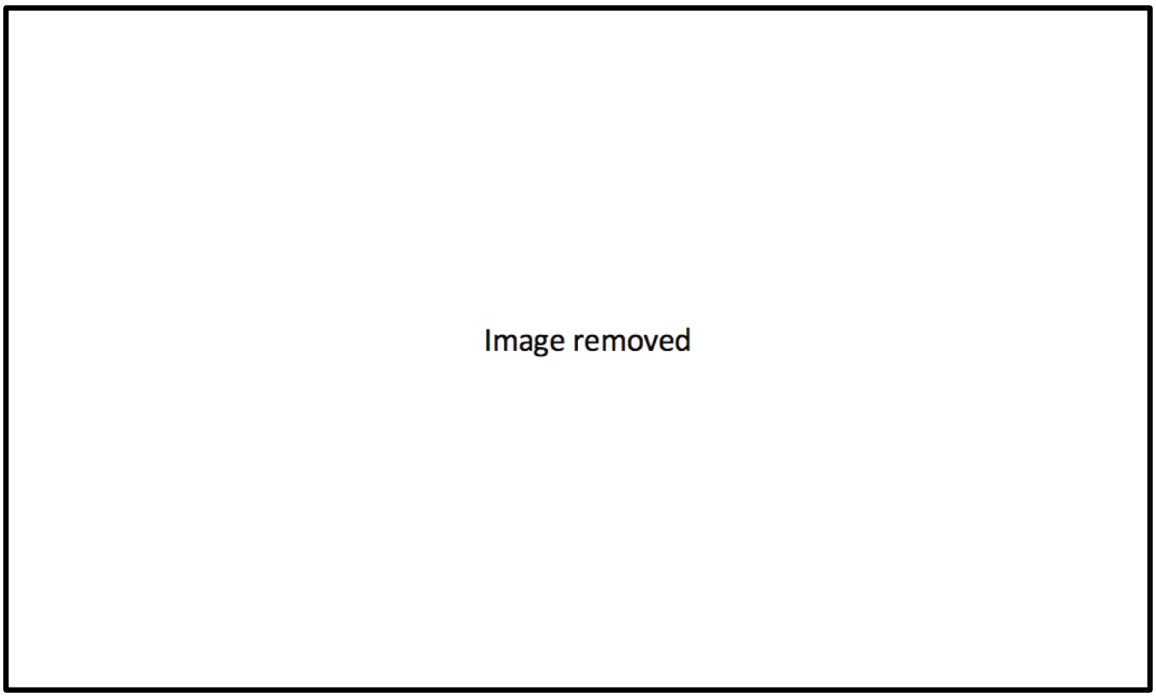

Figure 33. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 9 min 01 s. The representation of an amateur photograph of a hiker taken on a digital camera within the diegesis. ©Screen Gems.

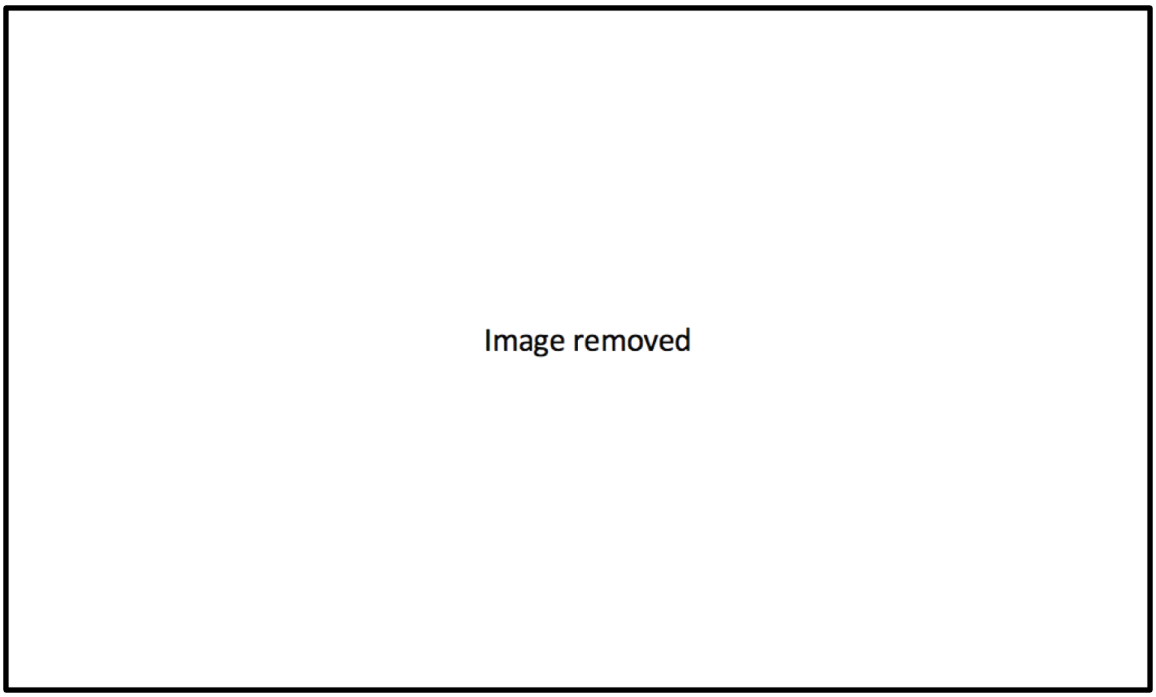

Figure 34. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 24 min 08 s. The representation of a professional photograph that exists within the diegesis. ©Screen Gems.

After videos and photos, the third form of expression that is framed within virtual windows are text zones. Simply put, text zones are any region within a virtual window that contains text. The text could be one word or several paragraphs. Each text zone is defined by the space that text is written within. There are two main types of text zones that are each linked to a temporality that is either associated with the present or the past. The text zones that are a part of the present are the text messages sent as part of current ongoing conversations within instant messaging applications. When characters are sending each other messages in real time within these applications, the messages are contained within text zones presenting a temporality evoking the present because they are being sent as part of a dialogue in the present moment of the story. In *Unfriended*, a text message conversation on the instant messenger within *Skype* between Blaire and Mitch reveals their quick back and forth dialogue. Blaire asks Mitch why he is not responding to her, so he quickly writes, “sorry - got a weird message…” Blaire types, “from who?” Mitch replies, “laura barns.” (fig. 35).

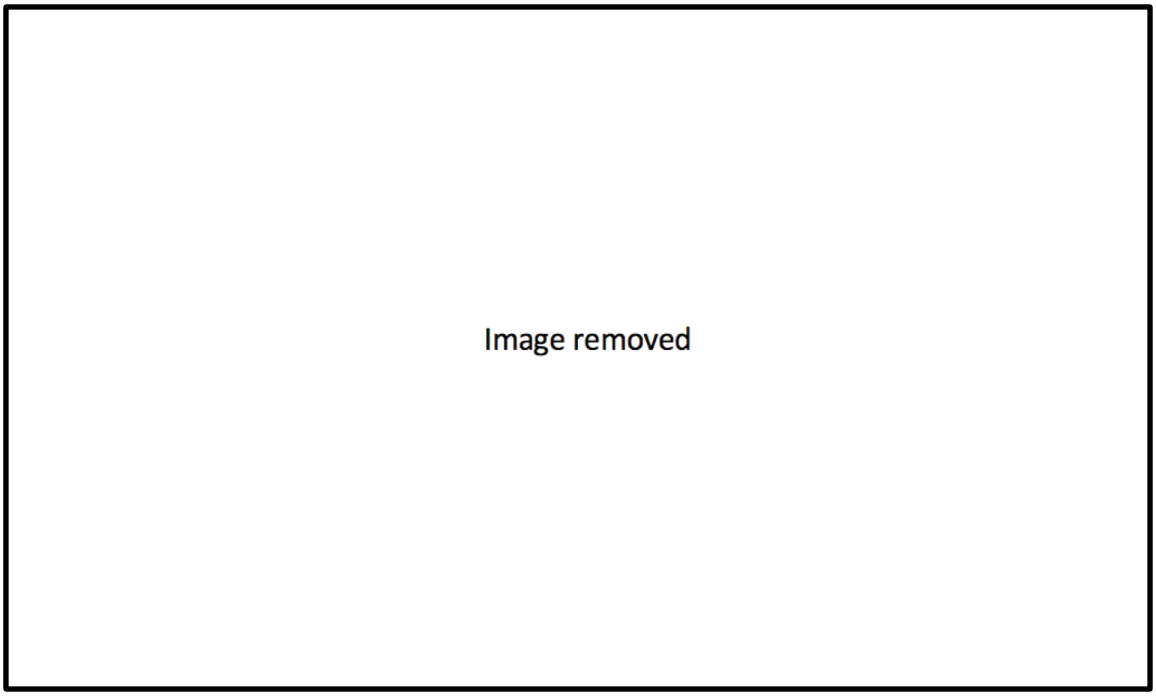

Figure 35. – Frame from the film *Unfriended* (Leo Gabriadze, 2014) at 10 min 38 s. An example of text evoking the present. ©Bazelevs Company.

This rapid exchange is just one of many examples of dialogue that would normally be spoken in person or on a phone in a traditional film. As this example also demonstrates, grammatical and punctuation errors exist in some of the texts. These errors are quite common throughout the *screenlife* films by characters in their teens and twenties who want to quickly communicate while performing other tasks or simultaneously talk to other friends or family in a video call such as *Skype* which requires speech. Therefore, text messaging becomes part of a type of multitasking that takes advantage of textual communication while verbal communication is occurring within another virtual window (accompanied by a microphone and speakers/headphones on the same computer) representing a video call. It should also be noted that notifications are also part of instant messaging and temporalities that represent the present in that they are often what alert the user to a message while also showing some, if not all of it. Rather than appearing within a larger virtual window that displays the conversation, the notification only shows text within a smaller, narrower virtual window. An example of this is in *Searching* when David receives *Gmail* notifications from Detective Vick about the latest information concerning his missing daughter which indicates she is neither at a local hospital or at one of the local jails (fig. 36).

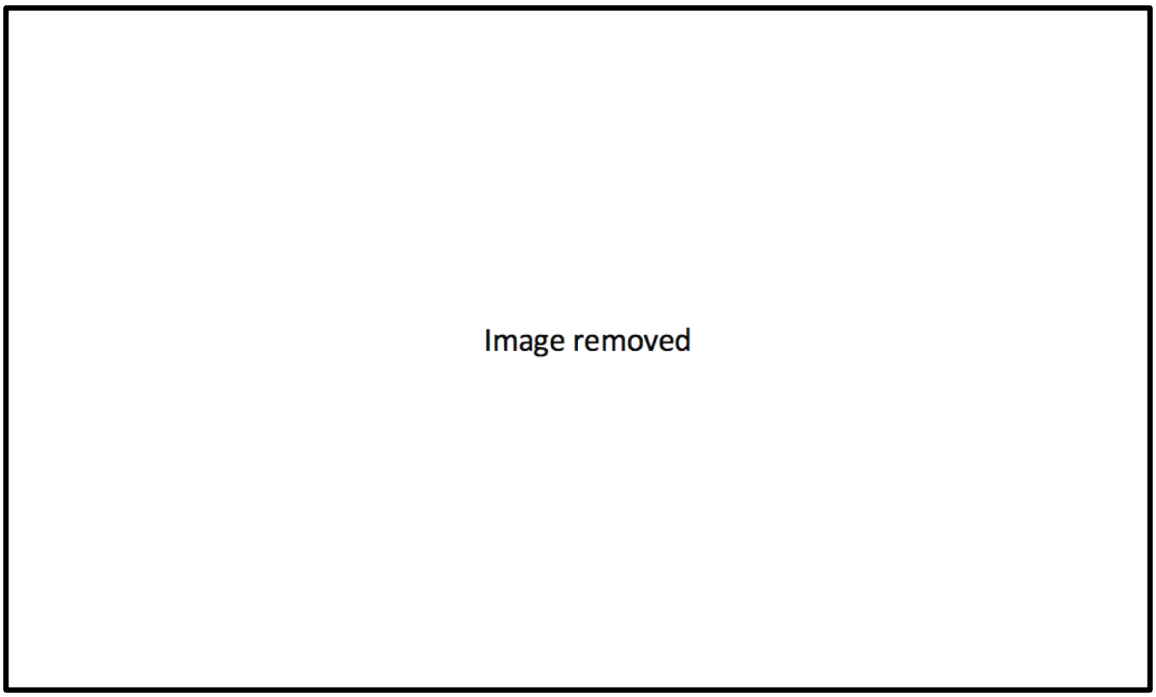

Figure 36. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 31 min 19 s. Text in a notification evoking the present. ©Screen Gems.

Text zones associated within the *present temporality* also show messages being typed, most commonly within instant messaging applications such as *Messages* or *Facebook Messenger*. The way that a character types a message often expresses or reveals an emotional state. Sometimes a character will type very fast because there is a panic feeling such as in *Searching* when David starts to frantically write a message to Margot because he thinks that she skipped school for a camping trip and had been using the money for her piano lessons to do other things (fig. 37). There are also slower moments that suggest a certain amount of reflection, such as when David takes a moment to pause after writing, “Mom would be too” (fig. 38).

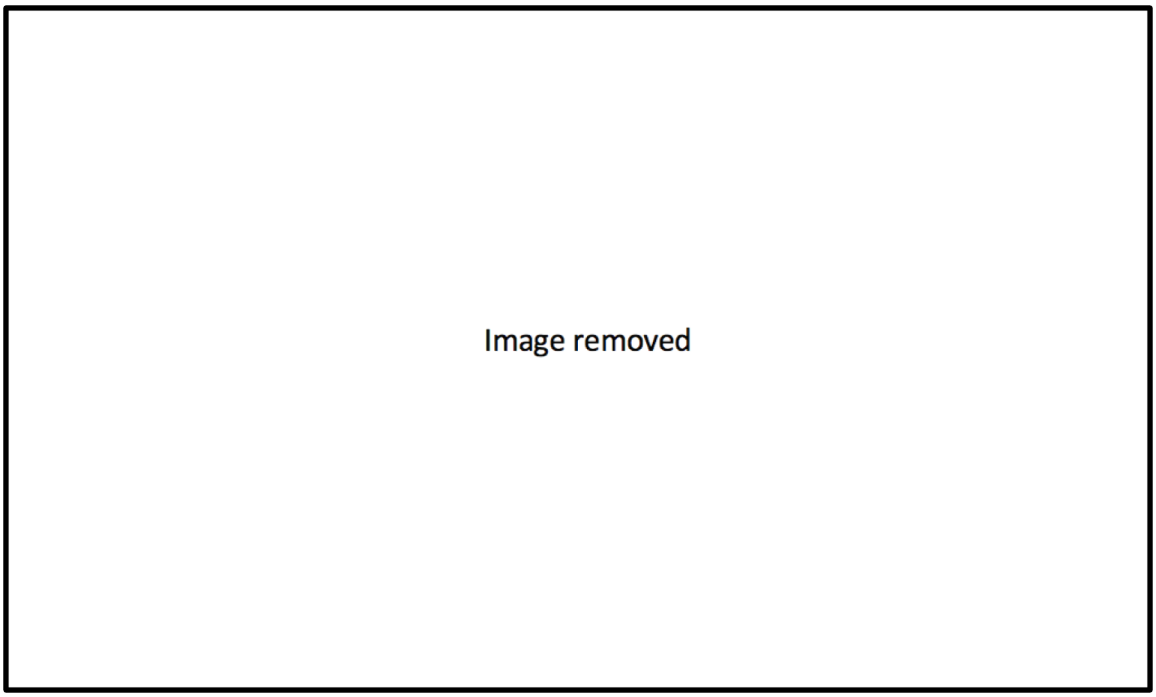

Figure 37. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 22 min 52 s. David typing a long message frantically reveals his emotional state. ©Screen Gems.

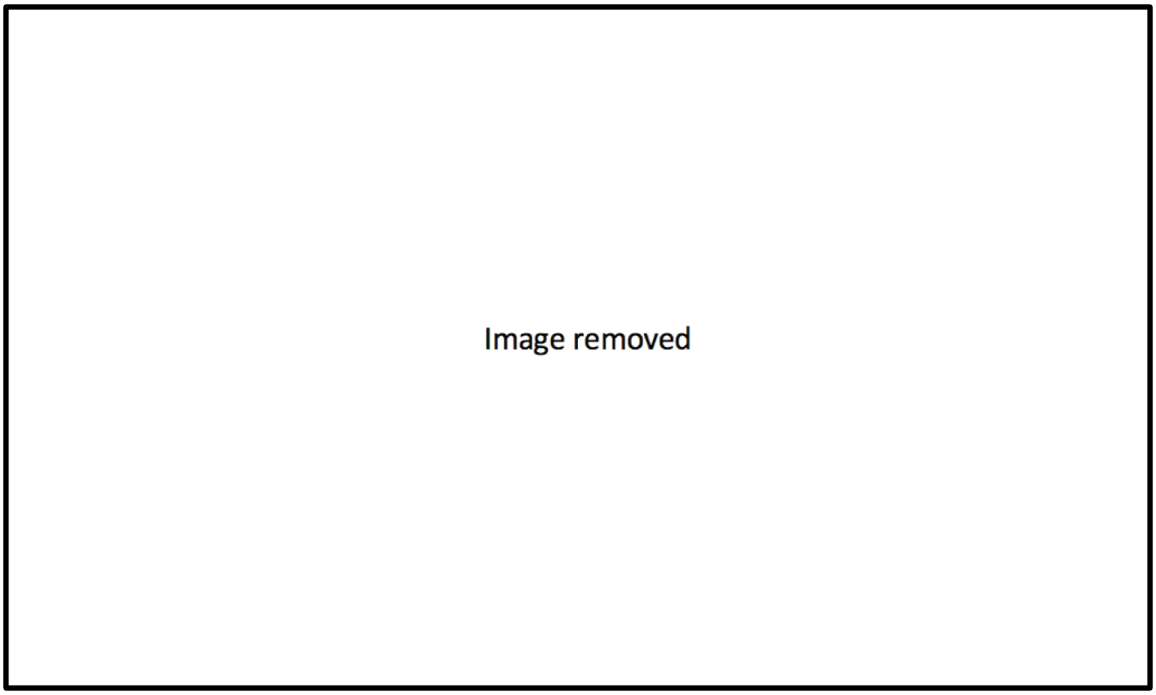

Figure 38. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 8 min 35 s. David pauses after typing which suggests a moment of reflection. ©Screen Gems.

David realizes he is not comfortable sending his daughter this message that refers to her deceased mother, so he decides to delete it. This example demonstrates a common trope in these films. The protagonist starts typing, then he or she hesitates and eventually deletes some words or an entire message because of their fear or anxiety about sharing or expressing this information. This effect gives the spectator access into what a protagonist is possibly thinking or feeling but is hiding from others. It is an effect that could also be achieved through a monologue or voice over, but is different because it is textual and visual, not verbal and aural. Another interesting example of this is in *Unfriended* when Blaire types, but then repeatedly deletes certain messages to be sent to Mitch that seem to indicate that Laura Barns had been sexually abused by her uncle (fig. 39). The partially written messages never fully disclose the truth about Laura's past, but Blaire's typing rhythm that is broken by the deletion effectively expresses the difficulty she has sharing the dark past of her former friend. Showing what does not want to be shared with others implies a unique relationship with the spectator because he or she can observe the personal information or intimate thoughts of the character in front of the computer screen that he or she is watching.

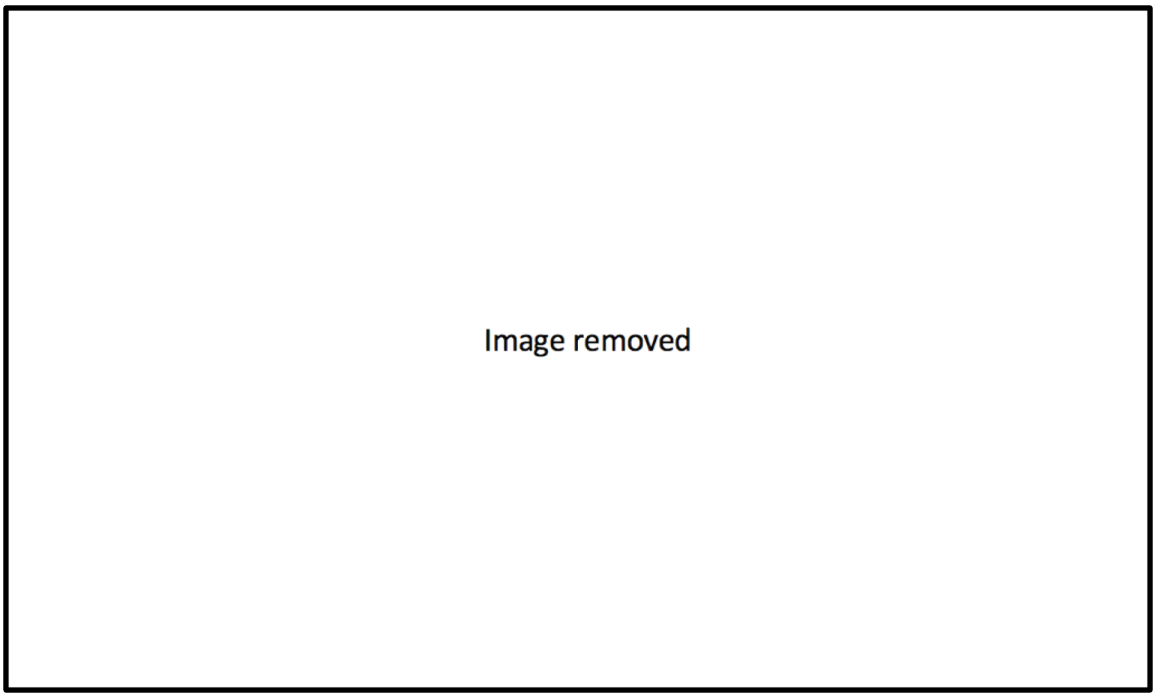

Figure 39. – Frame from the film *Unfriended* (Leo Gabriadze, 2014) at 31 min 51 s. Blaire repeatedly deletes certain phrases which indicates that she is not comfortable sharing certain sensitive information. ©Bazelevs Company.

While keyboard gestures can suggest thoughts and emotions, mouse and trackpad movements are often used by the protagonist to draw attention to certain texts on the screen. For example, the arrow or cursor that is controlled by the mouse can emphasize certain specific text zones that are important to the plot. This occurs in *Unfriended* when the cursor, which is represented by a pointing finger, is showing that the "Unfriend" hypertext is semitransparent which indicates that it is not functioning properly (fig. 40). This is one of a series of technical glitches that indicate that someone has been hacking Laura Barns' social media accounts in order to terrorize Blaire and her group of friends.

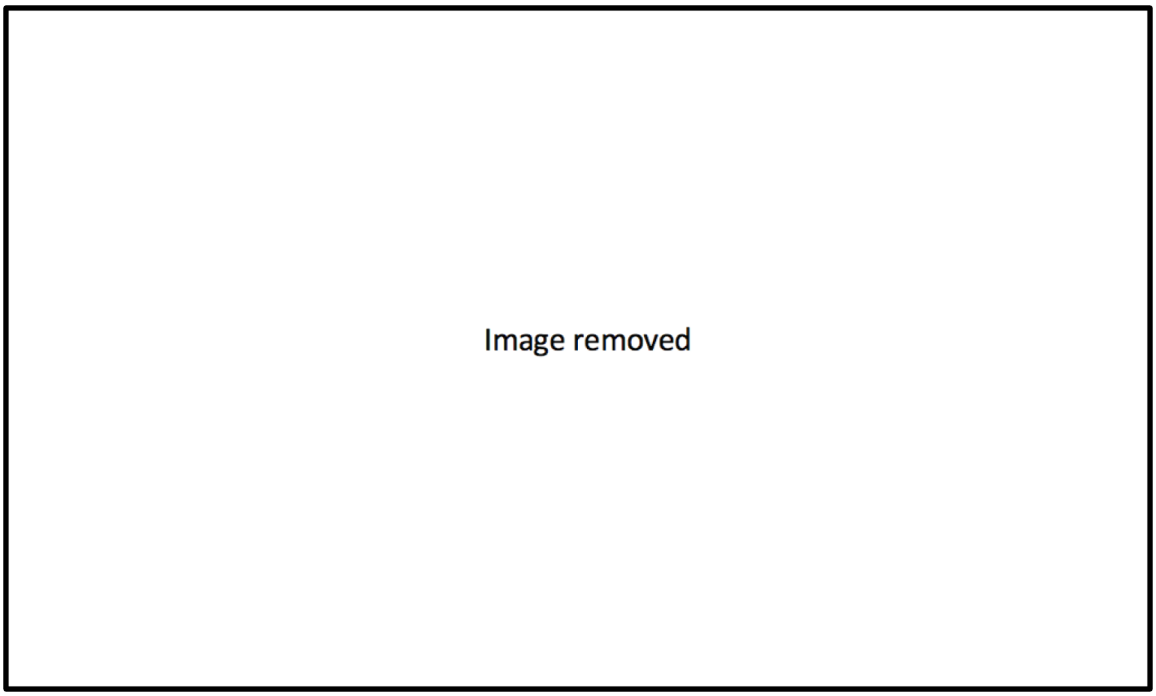

Figure 40. – Frame from the film *Unfriended* (Leo Gabriadze, 2014) at 17 min 25 s. The pointing finger controlled by Blaire using the trackpad on her *MacBook* directs attention toward a part of the screen. ©Bazelevs Company.

In *Searching*, the arrow controlled by the mouse is pointing directly to "SHE'S WITH ME" on a *Facebook* publication that suggests where David's missing daughter might be (fig. 41). This

emphasis that the arrow provides is intended to guide the spectator to these three words that are also capitalized. The cursor controlled by the mouse or trackpad serves not only as a reading tool for the protagonist, but also as a way to manipulate the spectator. It can guide them quickly and efficiently to information that the filmmaker wants them to pay attention to, regardless of whether or not the information is a helpful clue or a red herring that diverts the spectator away from solving the mystery.

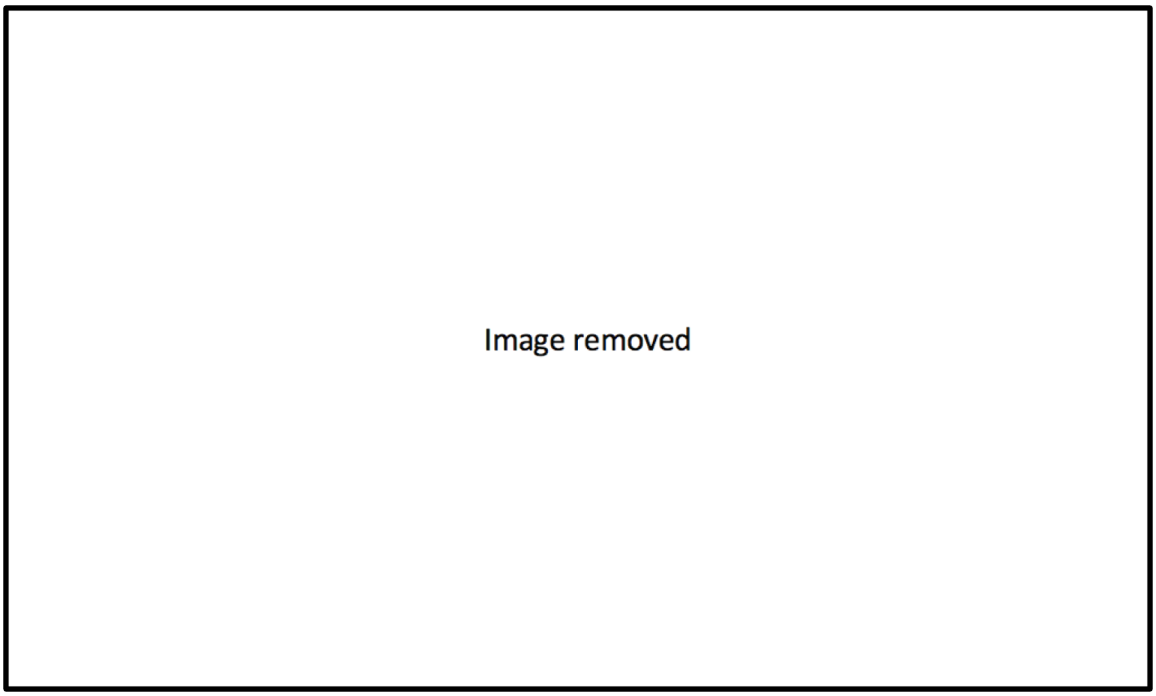

Figure 41. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 58 min 56 s. The arrow controlled by David using the trackpad directs attention toward certain information that could be pertinent or misleading in a mystery story. ©Screen Gems.

The second type of text zone is one that represents archived text. This type of text can be interpreted as having a *past temporality* because it had been written in a previous period than the context it is being shown, the present. This could include a text message within an instant messaging application if the message is being read outside of the initial flow of the conversation that it was originally intended for. Essentially, once a text message has already been typed, sent and read by another character, it can be classified as "archival" material. Text messages typically remain stored on a hard drive linked to an application which can be revisited in the future.

Reading a text message as an archived document, that can also be classified as a *past temporality* because it represents a different period than the present moment in the plot that is being shown on the screen, occurs in *Searching* when David Kim reads a text message conversation between his brother Peter and his daughter Margot several days after the original conversation occurred (fig. 42). Peter writes to Margot, "Last night was fun." Margot responds, "I feel so weird doing this." He replies, "I mean, yeah it is kinda weird…" This text message conversation is read out of the context it was written within which leads David to suspect that his brother had a romantic or sexual relationship with Margot that led to her disappearance. However, it is later revealed that the text conversation was actually referring to Peter and Margot meeting up to smoke marijuana as an opportunity for her to relieve stress.

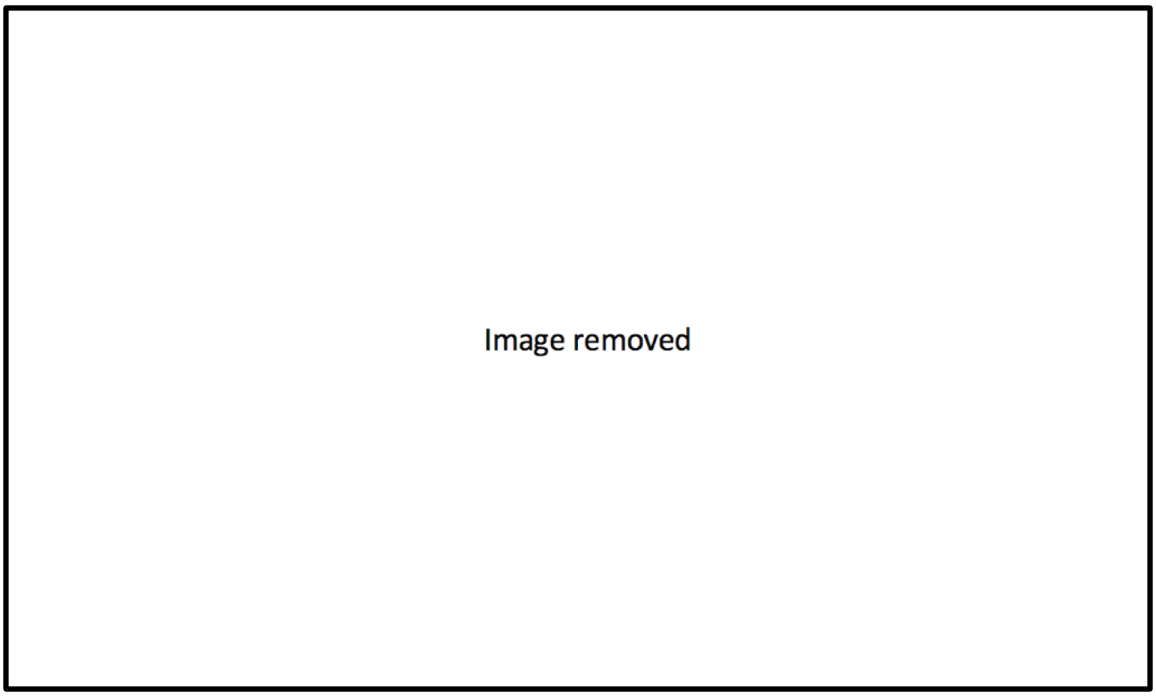

Figure 42. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 1 h 04 min 32 s. An example of ambiguous messages that are read out of context. ©Screen Gems.

Archived texts within a text zone are not limited to old text messages. They can be virtually any type of social media post, internet blog, news website or text document. An example of an archived text in a social media post occurs when the character Derek Ellis in *Searching* publishes "Everyone stop freaking out, SHE'S WITH ME. $ was for her pimp. You know she love dat D lol"

on *Facebook* five hours before David reads it (fig. 43). In this case, the time of the post, which is displayed, is very important because it shows that David did not receive this message instantly after it was published, but that it is read by him five hours after it had been posted which forces him to track this person down immediately.

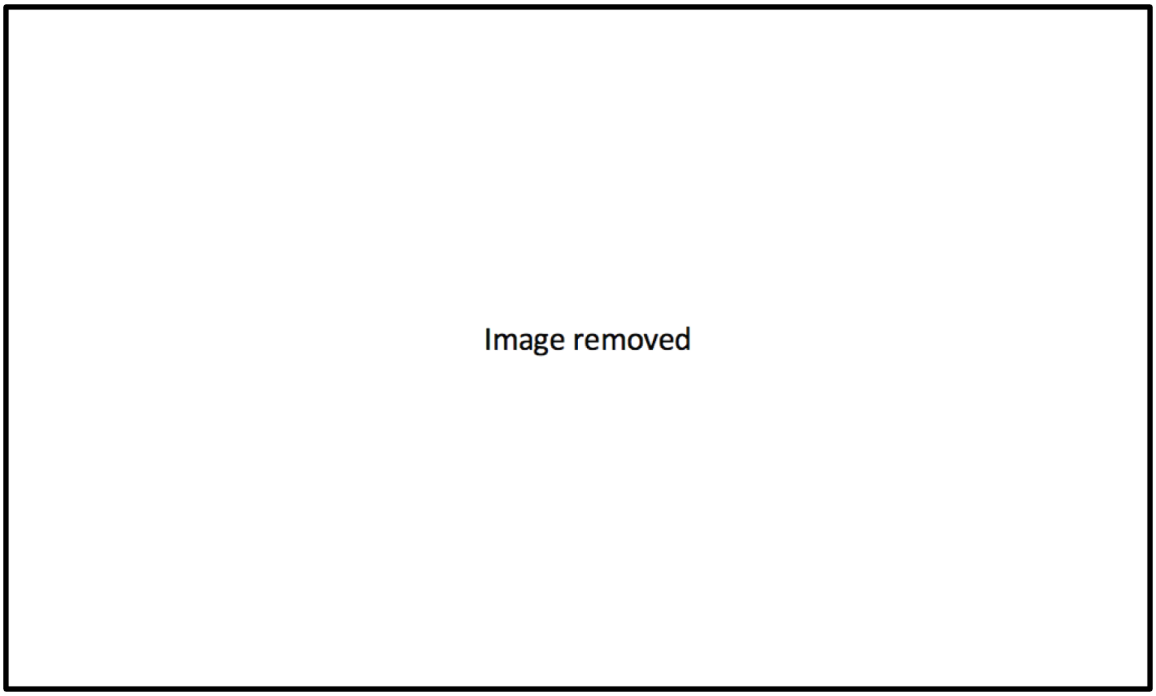

Figure 43. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 58 min 56 s. An example of an archived text within a social media post that had been published five hours prior to the present moment in the diegesis. ©Screen Gems.

Word processing and spreadsheets documents can also be considered as archived texts. In *Searching*, David creates a spreadsheet in *Google Sheets* which contains text summaries of the interviews he conducted with Margot's friends and colleagues (fig. 44). This document serves as an archive because it is a record of David's investigation which allows him to track the last time a specific person saw Margot and where they were the Thursday night that she went missing.

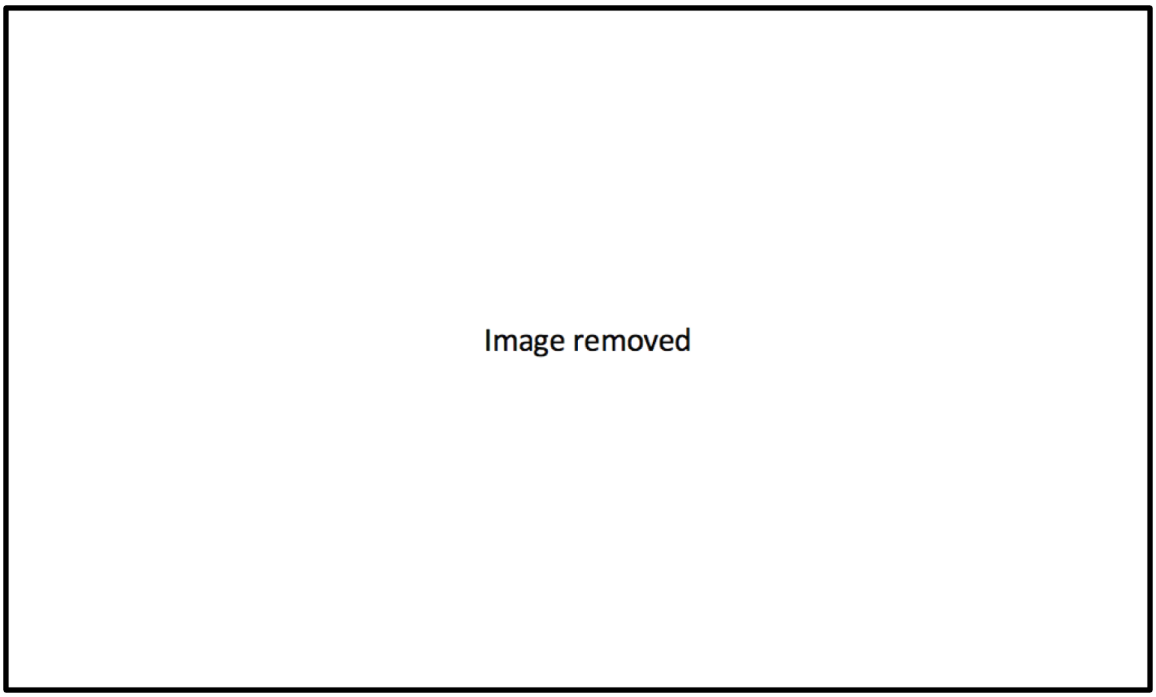

Figure 44. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 30 min 29 s. A *Google Sheets* spreadsheet document containing archived texts. ©Screen Gems.

Second level of the *screenlife* mise en scène: objects (frames and text zones) arranged within the virtual window

This analysis and description of the second level of the mise en scène will illustrate how objects (frames and text zones) are arranged within virtual windows. The previous section dealt with the space within individual containers of story information within virtual windows, the frames and text zones. This section will attempt to explain how these frames and text zones work together to tell the story within the space of an individual virtual window. There are many potential combinations of frames and text zones possible, so to address these seemingly infinite possibilities, the description and analysis will first address juxtapositions amongst frames (video, photo) and zones (text) of the same kind. The conversation will then centre around the juxtapositions between different types of frames and zones within the same virtual window. An important consideration throughout this section is how much the fictional characters within the diegesis are changing the mise en scène within virtual windows using the mouse, keyboard and

webcam in relation to how much the software is actually limiting or imposing a certain visual layout of the objects.

The first type of frame that will be analyzed is the video frame and its relationships between other video frames within video call virtual windows. Perhaps the two most important types of juxtapositions occurring in the video call virtual window – that represent applications such as *Skype*, the *Facebook* video call and *FaceTime* – are the ones that transpose the standard shot reverse-shot and the subjective point-of-view shot film conventions into this space. In analyzing these two processes, it is important to take note of how the video frames are positioned within the virtual window and their relative size to each other. Position and relative size offer many creative ways that video frames can be organized within the video call virtual window, but certain visual layouts are more common than others. The first type of video call virtual widow layout is the application that limits the video call to two devices. This includes applications such as *FaceTime* and the *Facebook* video call. The second type of video call virtual window is the one that allows more than two video frames, more than two devices to be connected. *Skype* is the main application represented in these three *screenlife* films that displays more than just a couple of users within their respective video frames in a single virtual window.

Video calls between two characters (*FaceTime*, *Facebook video call*) replace the standard shot reverse-shot convention. The 180-degree rule is respected because the characters are looking into the screen where they can see the person they are talking to (fig. 45). Just above the screen, the webcam is typically placed in the centre position which is the standard for many laptop computers such as the *MacBook*. This technical limitation places the camera right on the line of action or 180-degree line between the two characters, therefore ensuring that the angles match between shots. However, the characters should be looking at the other person on the screen at some point during the video call conversation in order to establish and then retain the eye line between them because it is essential to establish this in order for this transposed shot reverse-shot like effect to operate effectively.

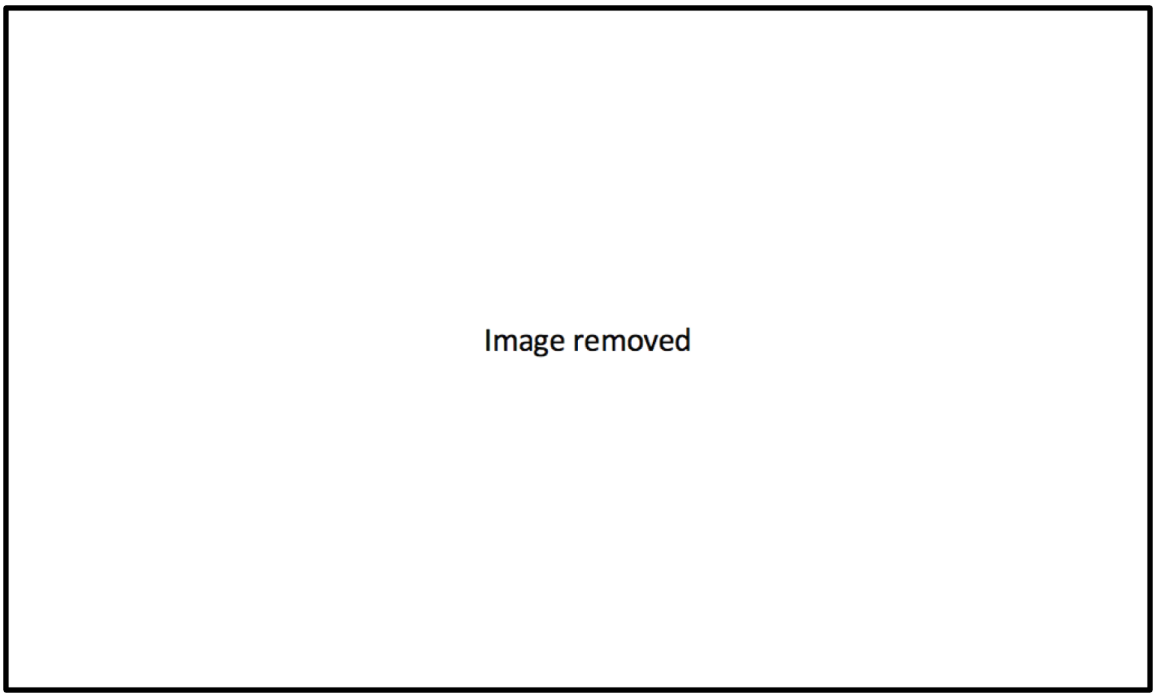

Figure 45. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 32 min 30 s. The transposition of the shot reverse-shot within a *FaceTime* virtual window. ©Screen Gems.

The transposed shot reverse-shot like effect in these *screenlife* films also functions well when the composition of each of the characters within their respective video frames are composed in a similar way. The most common composition which reflects the reality of most video calls is for the character to be centred within the frame. This is relatively unique to *screenlife* films because in conventionally shot films the characters are usually framed in an off-centred composition. As well, the fact that most of these video calls take place in two separate locations means that the conversation shown between the characters in their respective video frames within a virtual window occurs in a virtually created common space which is unlike how most shot reverse-shot filming is represented where characters appear to be face to face in the same physical space.

Another technical element to consider is that while the camera angles for the eye lines are usually matching in *FaceTime* and *Facebook* video calls, the relative size of the frame is not. Typically in the *FaceTime* and the *Facebook* video call there is one frame that takes up the entire space of the virtual window (usually the character in the remote location), while the main character (who is in front of the screen that the spectator is watching, usually the protagonist's) is in a much smaller

frame placed in one of the corners of the larger video frame. An example of this is when David Kim talks to his daughter's classmate in *Searching* (fig. 46).

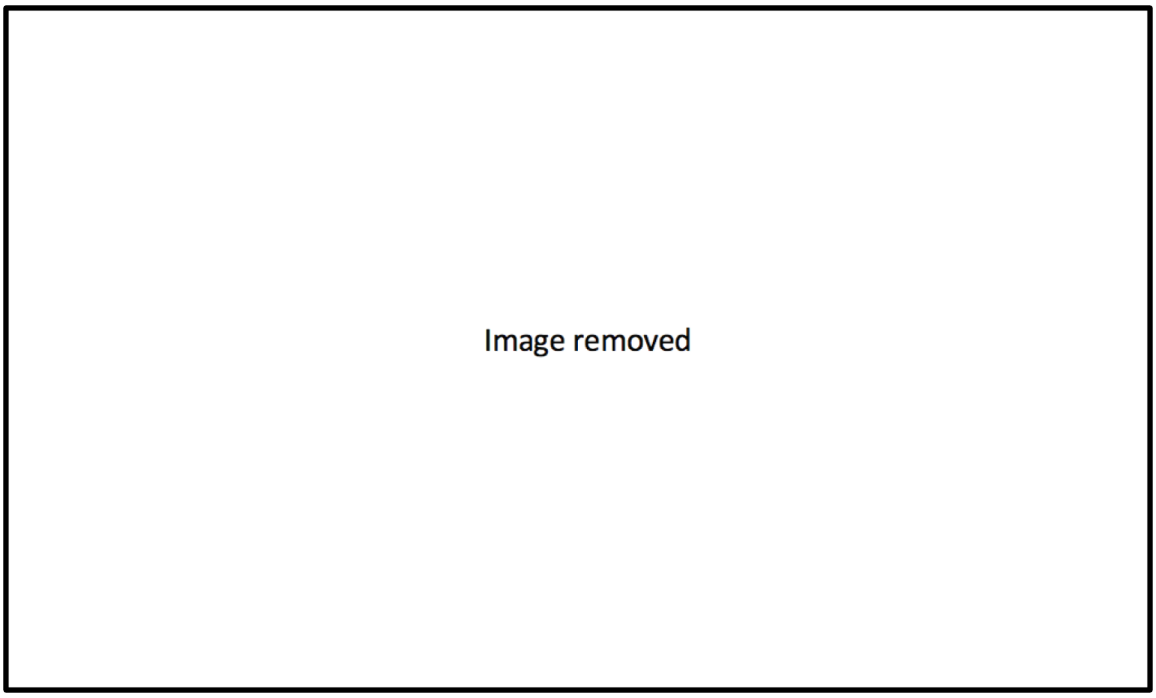

Figure 46. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 32 min 30 s. The character in the larger frame is in the remote location, the character in the smaller frame, David the protagonist, is the person located in front of the screen displayed. ©Screen Gems.

In order to compensate for the much smaller frame, there are often reframings within the screen space that operate like close-ups to make the smaller frame in the video call virtual window appear the same relative size as the larger video frame (fig. 47).

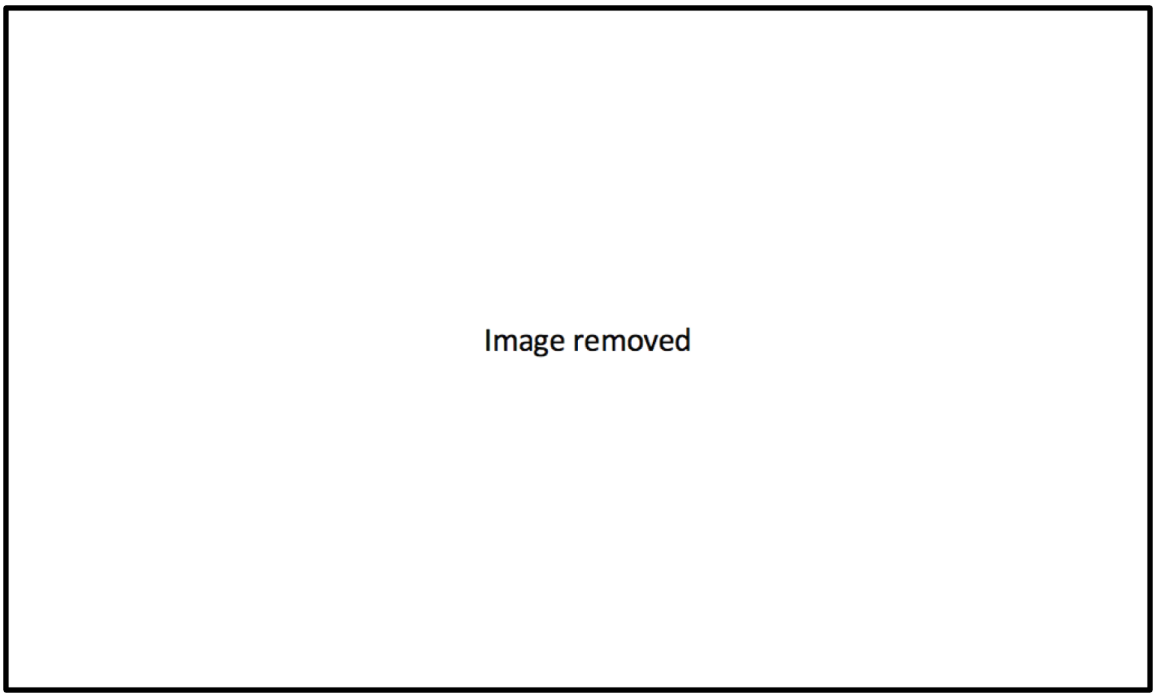

Figure 47. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 32 min 34 s. The smaller video frame in *FaceTime* is reframed which increases its relative size to better imitate the transposition of the shot reverse-shot. ©Screen Gems.

This is done to better replicate the traditional shot reverse-shot cinematic convention where the two shots typically have the same shot size. However, out of the three *screenlife* films analyzed this reframing within the screen space only occurs in *Searching*, whereas the other two films show the entire screen space throughout their duration. So, for example, in *Unfriended: Dark Web* (2018) there is no reframing of the screen, so the smaller video frame always remains much smaller (fig. 48). To get around this problem, the remote character will be switched to the smaller frame, while the character, usually the protagonist, who is in front of the screen the spectator is watching will be shown in the larger video frame (fig. 49). This is not how these applications function normally. The convention for these two-person video call applications typically restricts the remote person to the larger video frame and the person who is using the local device is usually kept within the smaller frame. However, in these *screenlife* films, they alternate frame positions for dramatic reasons, especially if the character in the smaller frame is expressing something

important and their face needs to be amplified in the larger frame to highlight the emotional tone of the scene.

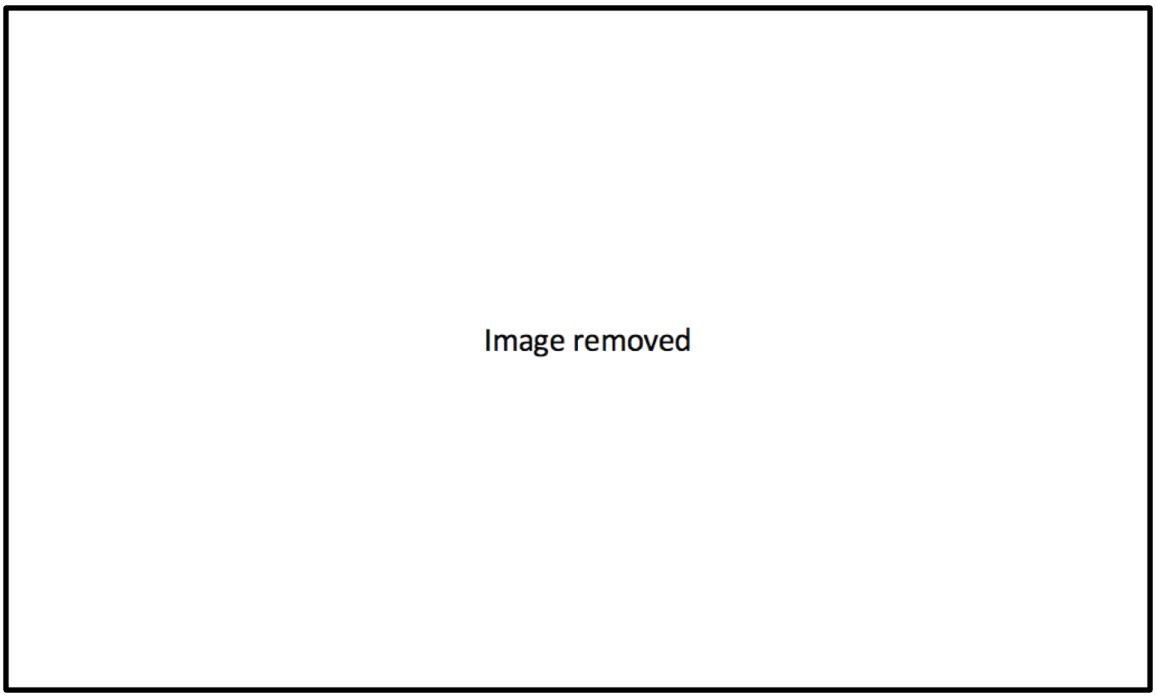

Figure 48. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 23 min 23 s. The smaller video frame in the video call virtual window is not reframed, it remains relatively smaller. ©Bazelevs Company.

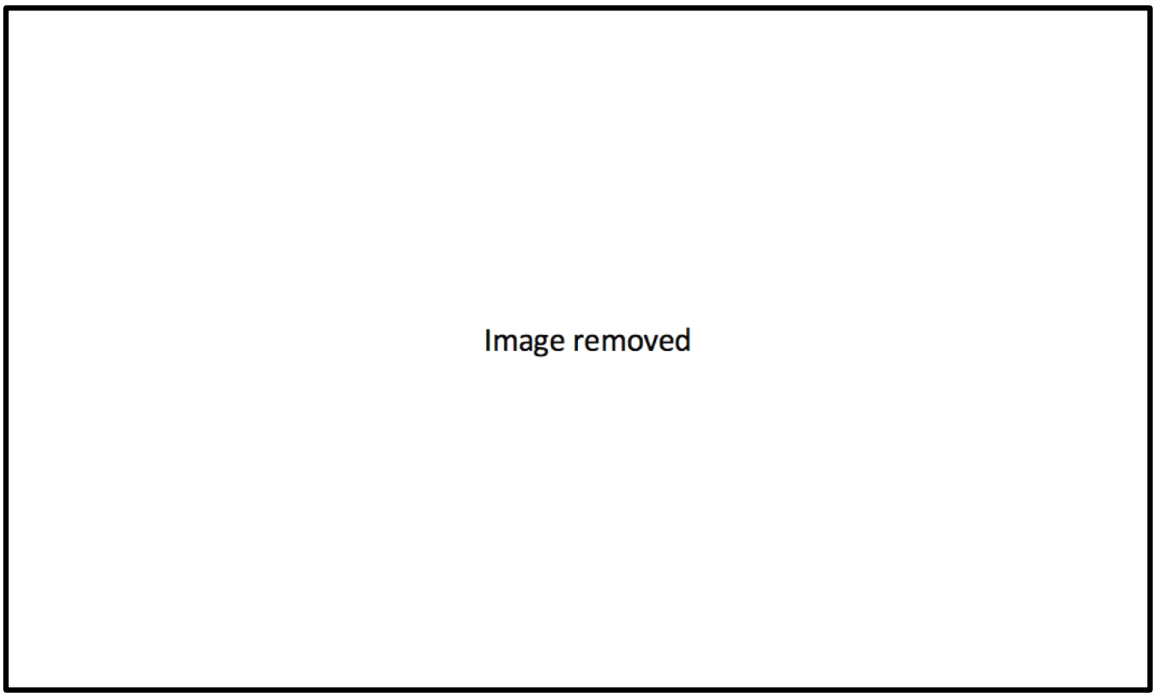

Figure 49. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 23 min 33 s. To imitate the shot reverse-shot, the person in front of the computer is sometimes shown in the larger video frame of the video call virtual window. ©Bazelevs Company.

Calls between groups of more than two characters take place in *Skype* which display a variety of layouts of video frames within its virtual window. These frames do not overlap like in the two-person calls for *FaceTime* and the *Facebook* video call. However, in the two films that use *Skype*, *Unfriended* and *Unfriended: Dark Web*, the relative size between video frames can change. It is often the case that the video frames in the upper row are much larger than those in the bottom row. This is usually done to emphasize or heighten the emotions of the interaction between characters. This occurs in a scene in *Unfriended* when Blaire explains that she was unfaithful to her boyfriend Mitch (fig. 50). Blaire and Mitch take up the two much larger frames, while the much smaller frames on the bottom show the reactions from two of the friends.

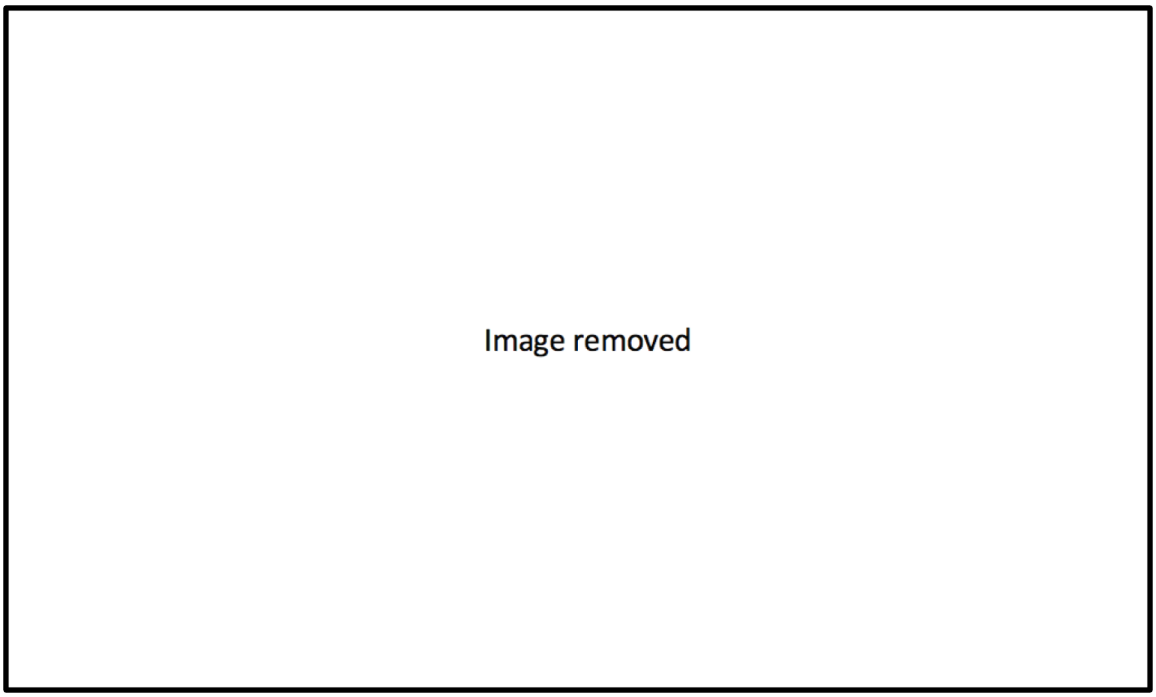

Figure 50. – Frame from the film *Unfriended* (Leo Gabriadze, 2014) at 1 h 04 min 07 s. To emphasize the emotion of the scene, Blaire and Mitch are in the two larger video frames within *Skype*. ©Bazelevs Company.

Dialogue scenes in *Skype* are staged in a similar way to those in *FaceTime* and *Facebook* video calls in that it simulates the shot reverse-shot effect, but rather than limiting the space to two shots transposed onto the screen at the same time, several shots are arranged next to each other within the same virtual window space. What is also worth noting is that the shots can have different aspect ratios. In a scene where AJ explains what can be purchased on the Dark web, his video frame has an aspect ratio closer to 16:9, whereas his friends in the bottom row of four smaller frames are contained within dimensions closer to a 1:1 aspect ratio (fig. 51).

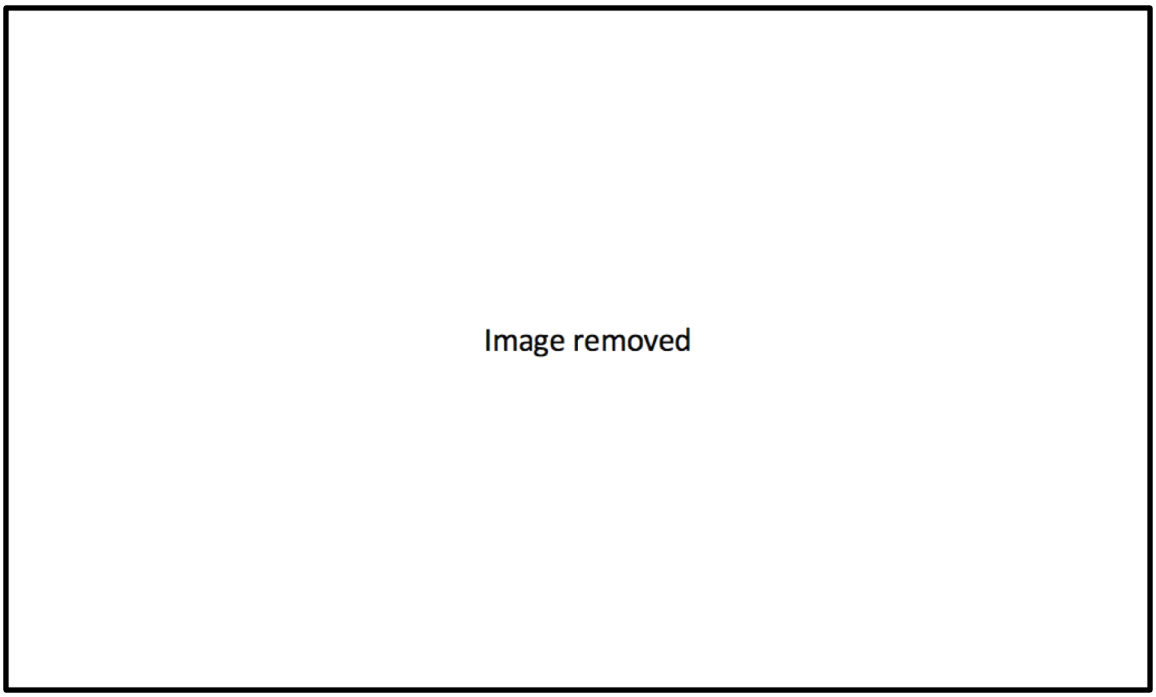

Figure 51. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 29 min 15 s. The aspect ratios of video frames within the *Skype* virtual window can vary, the one on top is closer to 16:9 and the ones on the bottom are closer to 1:1. ©Bazelevs Company.

The visual layout of video frames, their relative size and aspect ratio, within the *Skype* virtual window, it seems, is constructed in a way to emphasize AJ's serious message while keeping the others who listen within much smaller spaces. Within the diegesis of the story, it is not clear if the *Skype* software itself has some kind of artificial intelligence that creates the layout of the video frames in the virtual window, but this is likely the case as the layout of video frames change in real time and it does not appear as though the characters are manually reformatting the layout of video frames on the fly. Regardless, a video frame's relative size, aspect ratio and relative position to other video frames can alter the dramatic impact of certain scenes.

Another phenomenon that occurs between the video frames within the *Skype* virtual window is the transposition of the subjective point-of-view shot into this space in a simultaneous rather than sequential manner, the way this shot is traditionally presented. The subjective point-of-view shot is a cinematic convention that normally occurs when two shots are shown, one after the other, in a linear sequence. The juxtaposition of the two shots implies that a character or

characters shown in one shot are looking at something, an object (or subject), that is shown in the second shot. The second shot is typically filmed from a position meant to represent the point of view of the character or characters who are looking at this object (or subject). In *Skype*, it is not always a close-up or medium shot of a person's face that is shown within a video frame in the virtual window. Sometimes the video frames will show actions involving a character or objects such as the calculator in *Unfriended: Dark Web* (fig. 52).

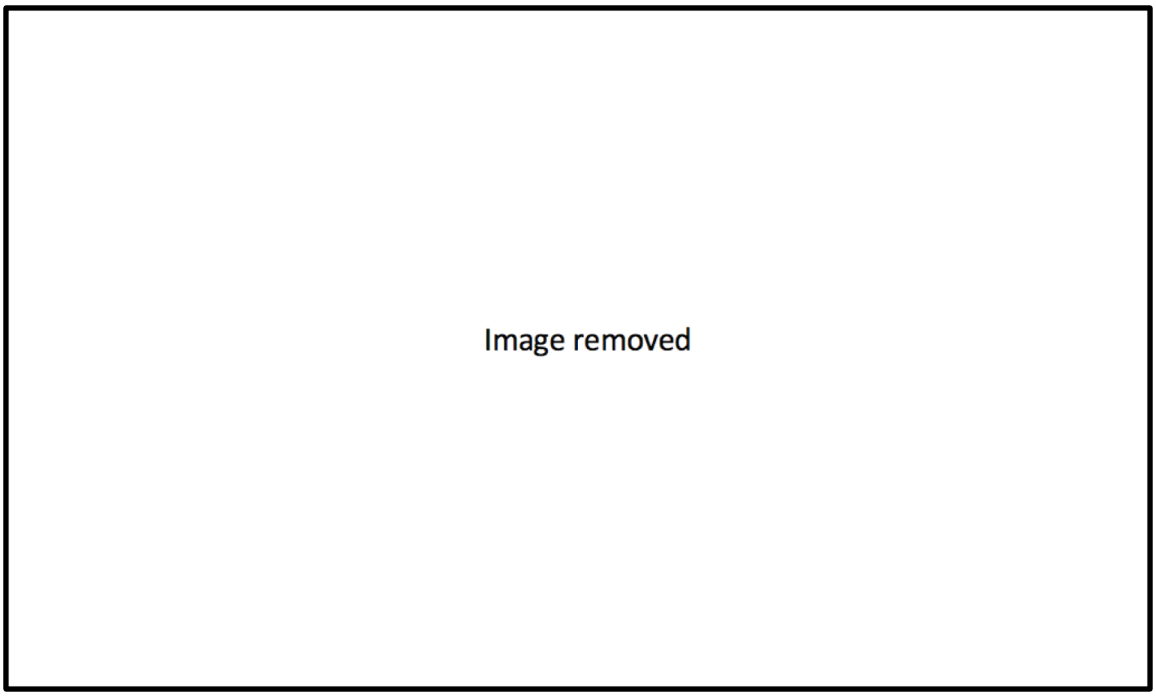

Figure 52. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 33 min 31 s. The calculator in the top left video frame could represent the subjective point-of-view shot. ©Bazelevs Company.

This slight change from person-to-person communication (simulating the shot reverse-shot effect) to showing a person or people looking at an object or an action implies the juxtaposition between shots that is more associated with the subjective point-of-view shot. An example of this cinematic convention being transposed into the *Skype* virtual window is when four of the friends in *Unfriended* are framed in close-ups in separate video frames on the bottom row while in the larger frame in the top row is a medium shot of Ken with his hand in a blender (fig. 53). The friends

are each looking on their screens in horror as Ken is screaming as his hand gets chewed up by the blending blades.

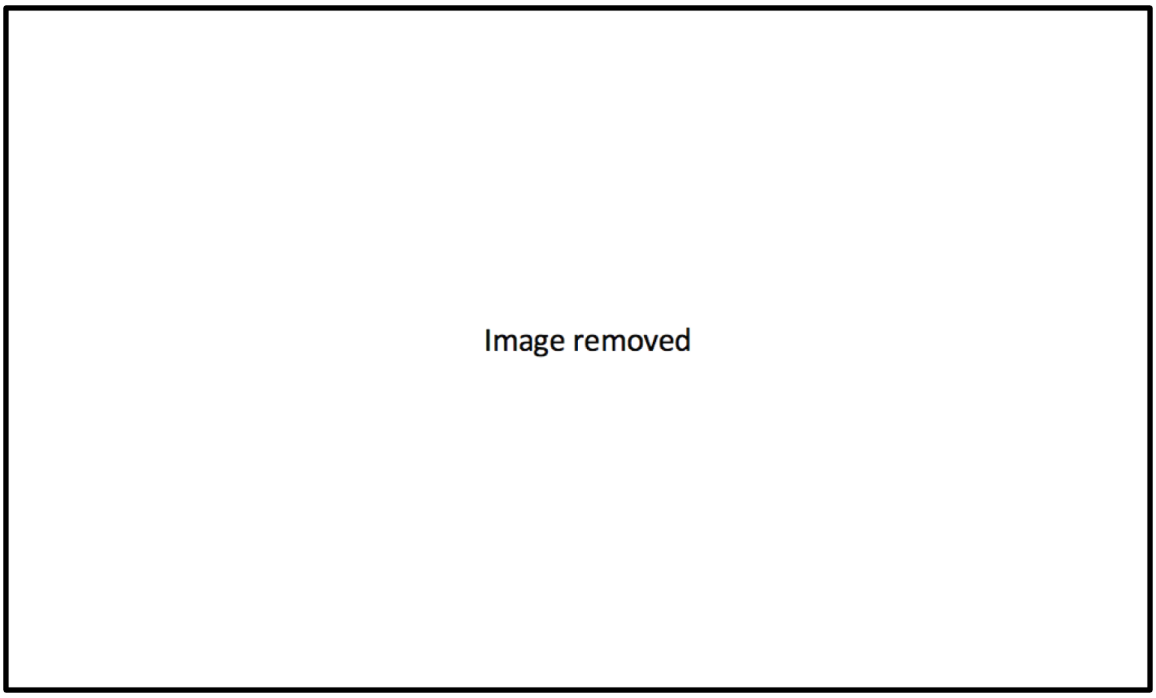

Figure 53. – Frame from the film *Unfriended* (Leo Gabriadze, 2014) at 47 min 33 s. The larger video frame in the top row could represent the subjective point-of-view shot. ©Bazelevs Company.

This scene constructs, with the combination of what is happening in Ken's frame and the other characters' frames, a murder and its witnesses. What makes this combination of shots unique, but also similar to the subjective point-of-view shot, is that when the shots are transposed onto the virtual window, the shots affirm that the people looking (subjects) are in different spaces while looking at something (object/action), which in this example is the assault on Ken. The subjective point-of-view shot, when organized in a frame-by-frame sequential manner as it has traditionally been done, is an attempt to suggest to the spectator that the subject is looking at an object within the same physical space. Edward Branigan has defined the point of view (POV) shot as "a shot in which the camera assumes the position of a subject in order to show us what the subject sees" (Branigan 1984, 103). Branigan argues that a POV shot has six essential elements for it to operate effectively. The three most pertinent elements are imitating the point from where a subject looks at an object, the establishment of the subject's glance toward the object

and the revelation of the object (Branigan 1984, 103). The *screenlife* film transposes the subjective POV shot onto the computer screen in a simultaneous way relatively easily because the webcam typically films the subject head on within a metre of the screen which establishes him or her in a close-up or medium shot. This shot also establishes the subject's glance because he or she is looking into the direction of the webcam, located just above the screen in a centred position, while looking at the computer screen. The point from where a subject looks at an object is established because it is usually filmed from a webcam on another computer that is pointing in the same direction as the subject is looking. Finally, the object is established as long as it is positioned within the frame of the webcam on the other computer that represents the point from where the subject looks. What also aids in constructing the point of view shot (and the object) is that the representation of the screen recording (that is the *screenlife* film) is also the computer screen of a character who is assumed to be looking at this very screen. The representation of the screen recording is thus almost always a representation of the point of view of a character and also the object because it shows what is being looked at. So, when a character is filmed by his or her webcam and projected onto his or her screen during a video call, this shot establishes the subject glancing at the object while the rest of the entire screen represents the point of view shot and the object being looked at. Thus, the shots necessary to construct the traditional point of view sequence are all contained simultaneously within the same film frame.

When the traditional subjective POV shot sequence described by Branigan is transposed into a single virtual window, the subjects (characters) and the object (or action) are occupying the same virtual space which makes this effect possible in a simultaneous rather than sequential manner within one virtual window.[6] However, what must also be taken into consideration is that the layout of the frames within the virtual window is also important. To clarify the object being looked at, placing it within a larger frame size and within a position that is unique in relation to the other frames makes it likely easier for the spectator to follow who is looking and what they are looking at. As well, as mentioned earlier, each of the subjects and the object or action being looked at are all being filmed directly head on. This implies that the subjective point-of-view shot showing the

[6] The transposition of the point of view shot into multiple virtual windows will be described and analyzed in the next section within this chapter that addresses the third level of the *screenlife* mise en scène.

object/action will more or less be filmed from the opposite angle of each of the shots showing each of the character's looking. Showing multiple subjects looking in separate shots simultaneously also suggests that the single subjective point-of view shot is showing the point of view of multiple people at once which is unique because the subjective point of view shot normally shows the point of view from a single perspective. In this case, it is being filmed from one perspective, but it represents multiple perspectives.

Groups of photos also play an important narrative role in the three *screenlife* films. Because all three plots have a mystery element, still images are not always representing what they appear to be at first glance. For example, in *Searching*, a teenage boy uses the image of a woman in her early twenties as his social media profile picture along with her name. Falsifying or masking identity online is a consistent theme throughout these three films. For the protagonist who plays the role of an amateur detective, it requires certain strategies to confirm the real identity of the image of a person on a social network. One of them is using *Google Image Search*. It is used by the protagonist David Kim in *Searching* which helps him to discover other images related to a photo of the young woman his daughter had been supposedly befriending on *YouCast Now*, a fictitious social media site created for the film. David drops the suspicious photo into *Google Image Search* and the results show an array of images of the same woman which helps to reveal her true identity (fig. 54).

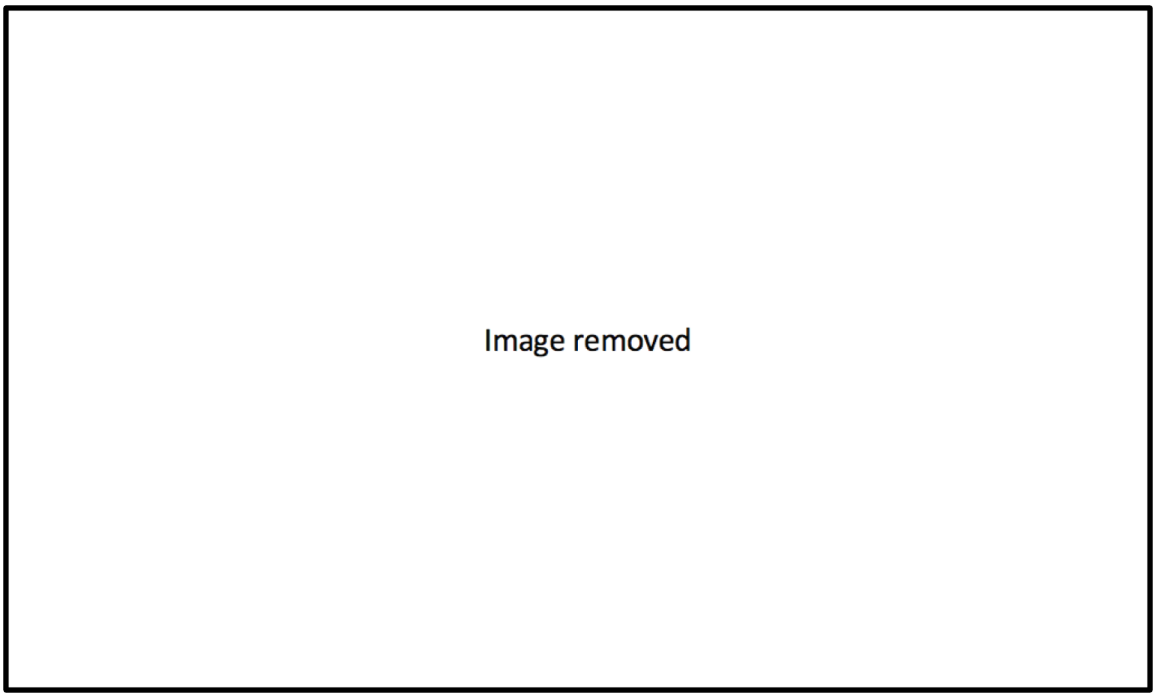

Figure 54. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 1 h 20 min 07 s. The representation of *Google Image Search* results shows multiple images simultaneously that can reveal important information in a mystery story. ©Screen Gems.

These 18 images confirm a major turning point in the story because they strongly suggest that this woman is actually a stock image model, not a struggling waitress with family problems. These images indicate that someone could have used this woman's non-threatening image to create a fake profile in order to initiate an online relationship with David's daughter Margot. Showing the page filled with photos of the woman posing in a variety of occupations in front of a white background with professional lighting clearly indicates that these are images of the same woman in the social media profile that had been communicating with Margot. These photos also indicate that this person does not appear to be the struggling waitress that Margot was led to believe. Instead, it shows someone who has had many photos of them taken in a professional setting that seem consistent with the career of a stock photo model.

Another application that shows groups of photos in various layouts on its webpages is *Facebook*. In *Unfriended* (2014), there is a scene where Blaire is looking at a set of pictures on a *Facebook* page that shows her relationship with Laura Barns (fig. 55). The three photos imply that the two

women had been close friends. One shows Laura with her arms around Blaire, while another reveals them smiling and pressing their hands up against a window. The third one shows them lying casually together on a bed. These three photos were posted by Laura Barns and they effectively show that the two had spent time together, seemed to enjoy each other's company and appeared to be friends. This simple display of three photos is a quick way to show what the relationship between Blaire and Laura appeared to be, but this is social media where appearance does not always depict the truth. However, for the purposes of this scene, the combination of the three images portrays the two as being good friends in multiple settings. This portrayal is important in the attempt to deceive the spectator into thinking that Blaire had always been a good friend to Laura.

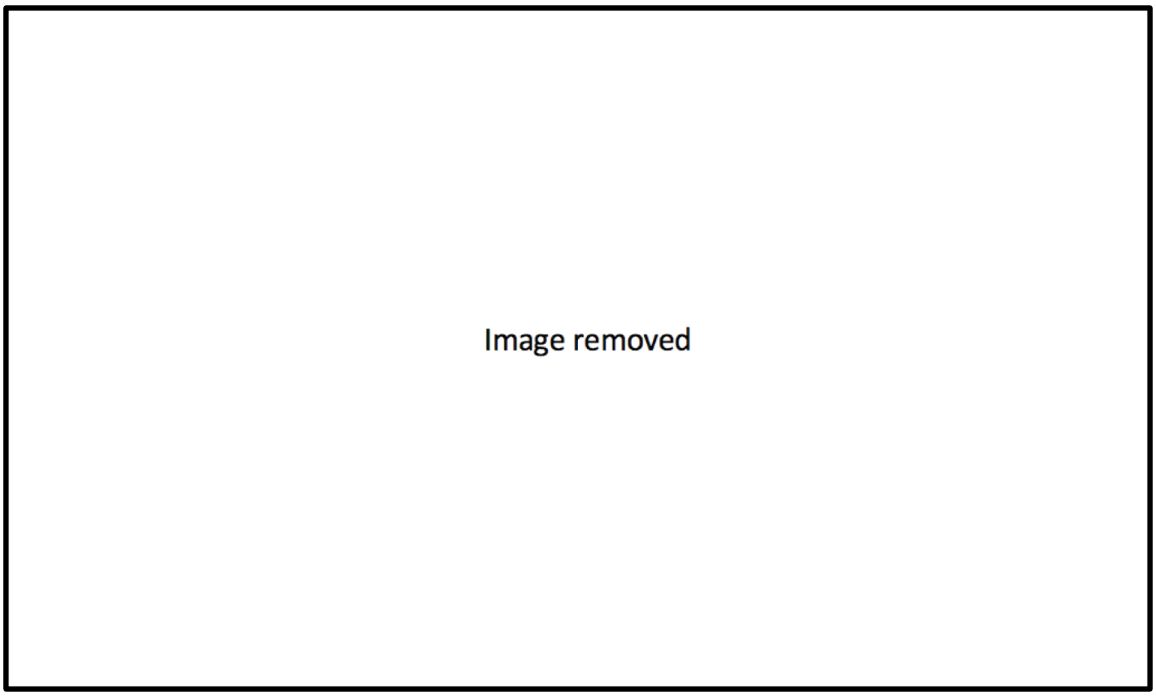

Figure 55. – Frame from the film *Unfriended* (Leo Gabriadze, 2014) at 43 min 59 s. Simultaneously displayed photos in *Facebook* can suggest friendships that are not what they appear to be. ©Bazelevs Company.

Another set of photos on *Facebook*, in *Unfriended: Dark Web* (2018), is created in a way that is meant to provoke the spectator to ask certain questions (fig. 56). The profile and background photos for the *Facebook* user Norah C. IV each show a person, but not their face. The first picture,

in the profile photo frame, is of a man wearing a blue suit with a white shirt holding a cigar in his right hand and a white hat in his left. What is odd about the photo is that it is cropped at the man's neck, so his face is not visible. The other, in the background photo frame, shows the torso of a man in a white housecoat pouring a bottle of champagne into the gas tank of a black Maserati. These two photos together, taking up the most common photo frame positions for the user profile page in *Facebook*, do not show the faces of each of the two subjects in the photos. The *Facebook* profile photo frame is often used to show the user's face and it is not uncommon for the background photo to show the user as well. However, showing the body, but not the face generates a certain amount of curiosity especially since this is the *Facebook* page linked to the owner of the *MacBook* that Matias had stolen. Showing two images side by side in *Facebook* that do not show the face makes the computer that much more mysterious which seems to be the intention of the filmmakers because the identity of the owner of the computer becomes central to the resolution of the mystery.

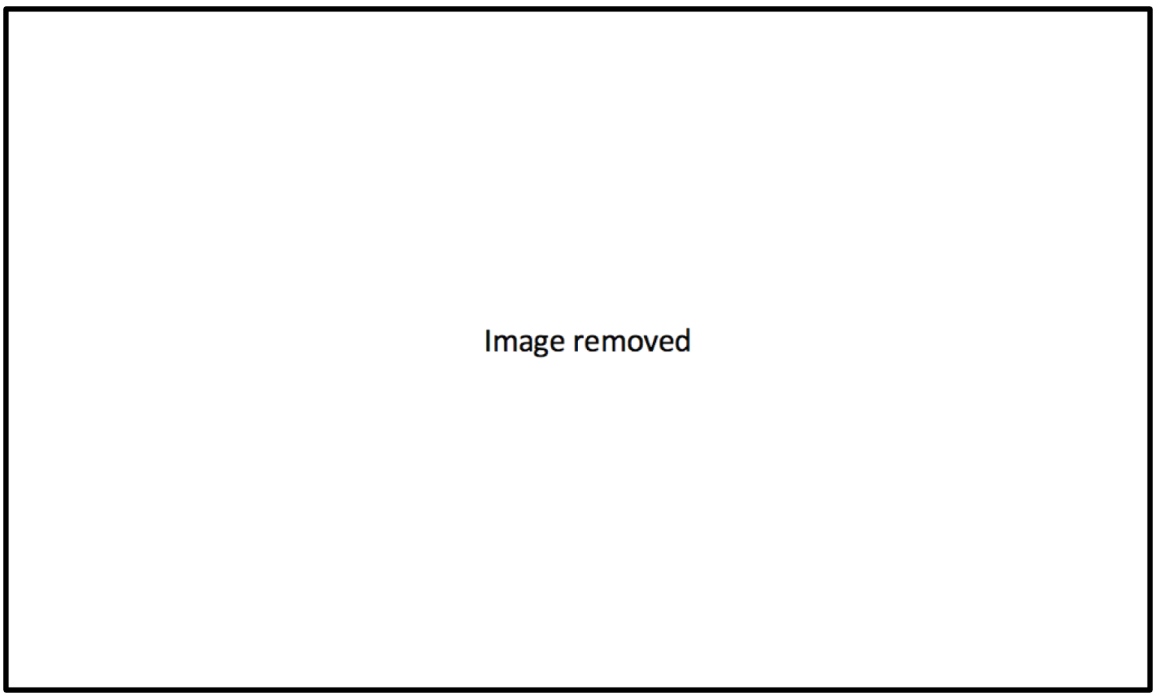

Figure 56. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 10 min 23 s. Simultaneously displaying photos not showing the face of the person in each image can generate curiosity. ©Bazelevs Company.

The use of text is also a prominent form of expression and communication for characters in the three *screenlife* films, especially in relation to traditionally shot narrative films where characters rely mainly on speech to communicate language. Hand-written or printed letters are classic examples of text onscreen used to express emotions or communicate information in traditionally shot films, especially ones filmed prior to the emergence of digital consumer technologies. More recent traditionally shot films have shown text messages on smartphone screens and e-mails on computer screens that reflect the evolution of digital consumer technologies around the world in the past 25 years. However, traditionally shot films do not typically display the entire back and forth interplay of written messages within a text conversation in an uninterrupted manner like *screenlife* films do. This may have to do with the fact that a *screenlife* film can simultaneously show the faces of the people typing in the video frames of a video call application virtual window, but in a traditionally shot film a continuous uninterrupted shot of a screen for the duration of a text conversation without seeing a character's face would be a much bolder decision. Another difference with traditionally shot films is that they show devices displaying text within the physical world they exist within, whereas *screenlife* films just show the pixel information of the screen being displayed.

The heavy use of text for interpersonal communication in the three *screenlife* films analyzed is most likely related to the fact that the personal computers, cellphones and tablets display text on their screens and much of the communication between these devices is through text messages. In a traditionally shot film, to display text directly onto the screen in a way similar to *screenlife* films, it had been much more time consuming to superimpose text onto the image or to create inter-titles before the advent of digital cameras and non-linear editing, so the practice of using speech on the audio track had become the norm for the communication of dialogue between characters once synchronized sound had been introduced to feature films in 1927. Since then, it has become less common to place dialogue in text format on the screen in narrative feature films shown in mainstream movie theatres. This is likely the case because speech is a much more efficient form of communication if the filmmaker wants the spectator to concentrate on the facial expressions of characters rather than reading dialogue in a text format such as with inter-titles or subtitles, or by filming text conversations on characters' digital display screens for smartphones

and computers. Thus, it is important to note that showing digital communication using text onscreen is not limited to *screenlife* films, it is just a less common practice in traditionally shot films.

Computer, cellphone and tablet screens today go well beyond showing written messages. Displaying high-definition video and high-quality photos have become the standard in social media communication as the quality of compression and increased bandwidth currently allows for the transmission of high-resolution images at a relatively low cost over the internet. Despite this trend, textual communication still remains very common for many social media applications. This use of text poses certain challenges for storytelling such as taking a spectator's eyes away from onscreen faces, but it also opens up many creative possibilities. Each social media or instant messaging application contains text zones which represent individual messages sent and received within a conversation between certain characters. The most common text zones in the three *screenlife* films are found within the instant messaging applications such as *Facebook Messenger* and *Messages*. In *Unfriended*, there are many conversations between Blaire and her friends on these two applications. The spectator can view the history of these conversations when they are displayed within a given application's virtual window. In one conversation that Blaire has with the Laura Barns *Facebook Messenger* account, Blaire asks, "Val is this you????" at 9:16p.m. (fig. 57). Earlier in the conversation at 9:08p.m., the Laura Barns *Facebook Messenger* account sent a message to Blaire asking, "hey blaire… what you watching?" This ability to reread previous messages in a conversation is unlike spoken conversations in a film that can usually only be heard once.

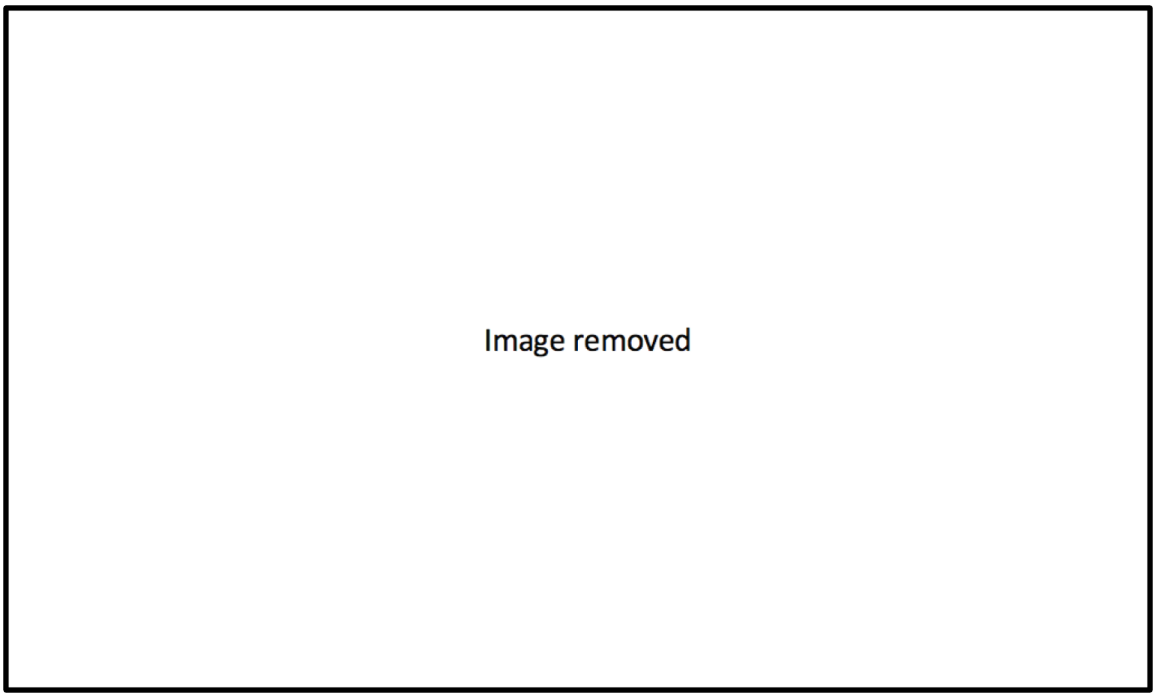

Figure 57. – Frame from the film *Unfriended* (Leo Gabriadze, 2014) at 19 min 02 s. Instant messaging applications often show multiple messages making it possible to read prior exchanges. ©Bazelevs Company.

The ability for the spectator to look back at what one character has written to another offers a different experience, which is more similar to the novel, because the text remains or can be quickly accessed and viewed within the application's virtual window. This allows the spectator to compare one text zone to another. Social media publications and instant messengers also use text to identify names of people in photos and messages, while indicating the time they were sent and allowing users to leave a brief caption next to images or to comment on the post. This additional information linked to text messages helps to better contextualize the communication between characters for the spectator.

The use of text is also not limited to communication between characters. There are times when certain applications are used as tools to investigate such as *Google Translate* that can quickly translate a text if a character wants to read a text written in another language. This occurs in *Unfriended: Dark Web* (2018) when Matias wants to read a message written in French sent to the mysterious *Facebook* account (fig. 58).

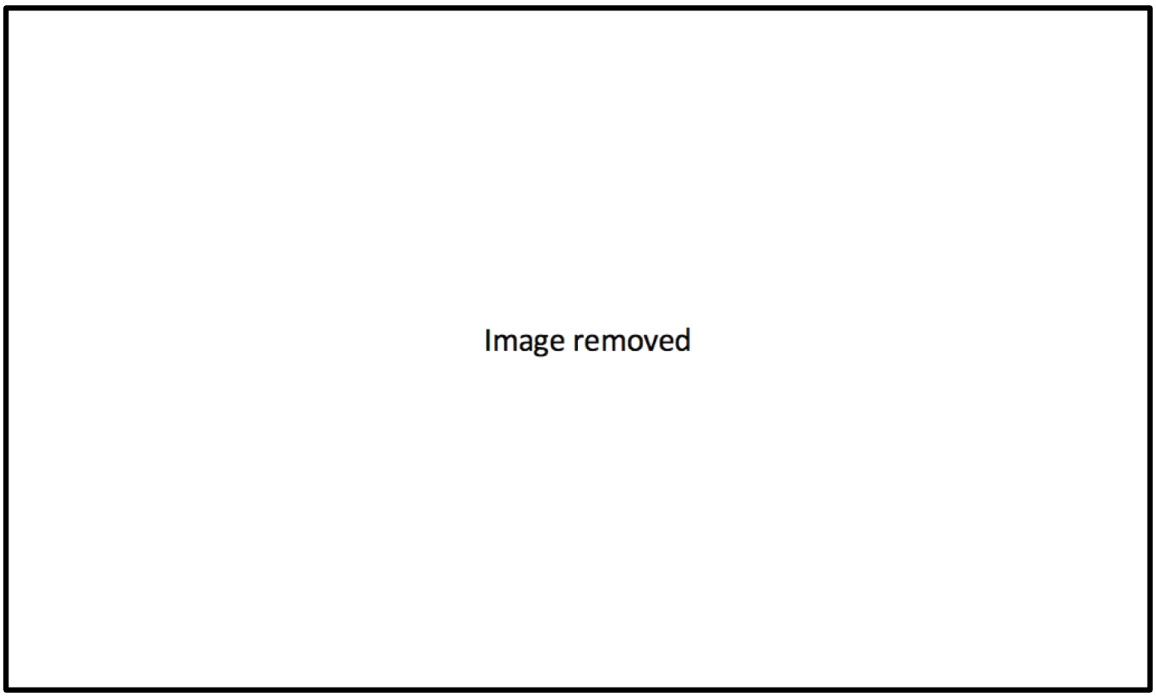

Figure 58. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 14 min 33 s. The representation of *Google Translate* displays the translation of languages onscreen. ©Bazelevs Company.

Showing two languages on the screen at the same time, French and English, is also a reminder that these *screenlife* films, because they can be quite dense with text on the screen, pose certain issues for subtitling these films into different languages because not every word can be translated, especially when there are large blocks of text to be read in short periods of time. In these cases, there is just not enough screen space to create subtitles for every word because they would require more than the standard space allocated on the screen for subtitles.

Text is also displayed in other applications such as the software that Matias, the protagonist in *Unfriended: Dark Web*, uses to analyze the contents of the hard drive on the computer he has stolen. This application displays in a text box that 960 GB of the 997 GB on the hard drive contains video files that are located in a hidden folder (fig. 59). This simple way of revealing that there is a large amount of video on the computer that has been intentionally hidden by its owner becomes a source of curiosity for the protagonist in the film.

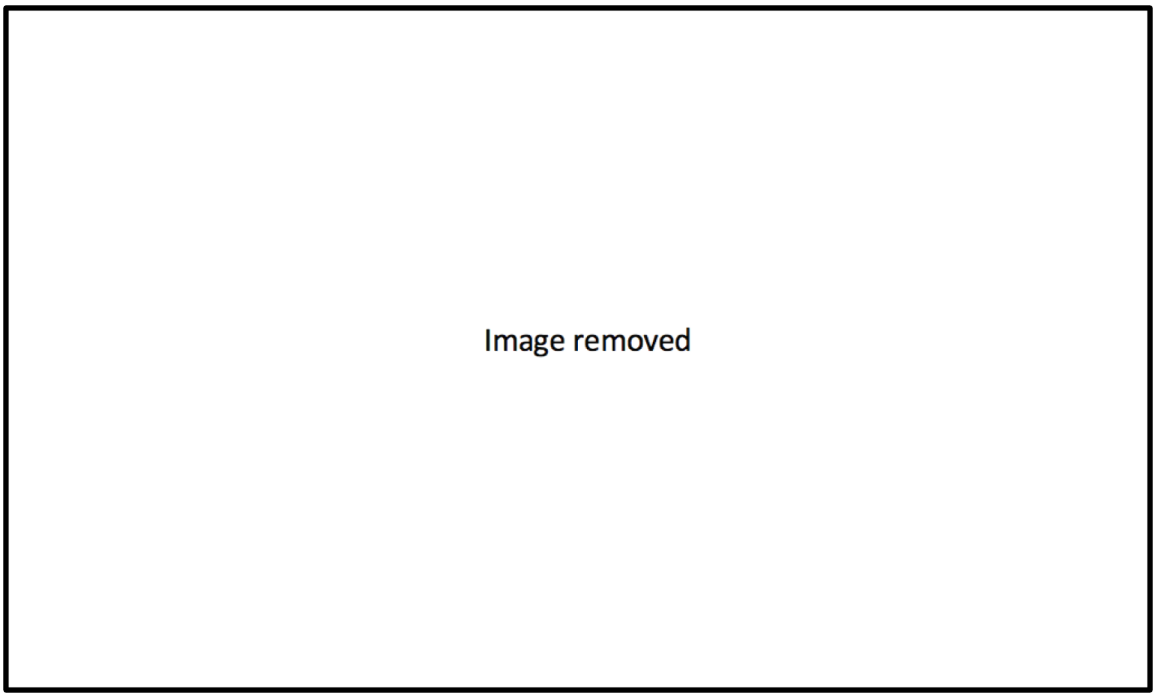

Figure 59. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 17 min 08 s. Text revealing that a hidden folder contains 960 GB on the hard drive. ©Bazelevs Company.

Once Matias gains access to the files in the folder, the naming convention used to label each video file also reveals important information. The videos indicate the time and date each of them had been filmed as well as the addresses of the homes they were recorded in. Each video file comes from security cameras and computer webcams that have been hacked and it appears that there are hundreds of them. Creating the files with a naming convention that indicates the time and location is an effective use of text to reveal what exactly Matias has uncovered on the hard drive. Much like the repetitions of the photos in the *Google Image Search* results of the young woman in *Searching*, this use of repetition also adds meaning to the mystery because it gives the impression that the owner of the computer had been illegally spying on a large number of victims.

The final type of juxtaposition within a virtual window is that which combines various types of frames (video, audio) and text zones. This is quite common in the three *screenlife* films because there are many forms of expression possible within social media because of its capacity to publish various combinations of text, photography and video within a single post. In the past, *Twitter* had been known as a social media platform that allowed its users to publish a message in text format

within 140 characters or less. Today, it allows photos as well as videos. *Instagram* had been an application to post photos, but now the addition of video and text are much more common within these publications. *YouTube* has always been a platform to post videos, but text still has an important place in describing the video and for writing comments. And *Facebook* has been traditionally known as an online space to post photos and write comments, but it also encourages other multimedia publications that superimpose text onto photos and videos, especially within its *Facebook Stories* format that permits users to publish content for a short period of time. It seems rare today to have a social media platform that relies exclusively on one media that does not allow combinations of text, photos and videos within a single post. This reality is reflected in many of the social media publications and interactions in the three *screenlife* films.

In *Unfriended: Dark Web*, the *Facebook Messenger* application is not only used to send text, but also to send images to bait the protagonist into a deadly game. The antagonists create a fictitious *Facebook* account using the name Eva Thomatos. This account is trying to get the attention of Matias, the protagonist, by sending racy messages to the Norah C. IV *Facebook* account, which is linked to the computer Matias had stolen. To pique his curiosity, the Thomatos account writes, “Norah?” then adds “i've been waiting so patiently” and finally “?” Adjacent to these text messages is a thumbnail photo of the person claiming to be Thomatos who appears to be a woman in her twenties. Then a video of this same person is sent from this account which shows off her midriff in a clear attempt to arouse Matias (fig. 60). This use of text, photo and video within the virtual window of a *Facebook Messenger* conversation shows how multiple media can be used as a form of persuasion to bait the protagonist into the inciting incident of the story. These messages and images eventually lead to the discovery of videos located on this stolen computer that appear to show kidnapped women.

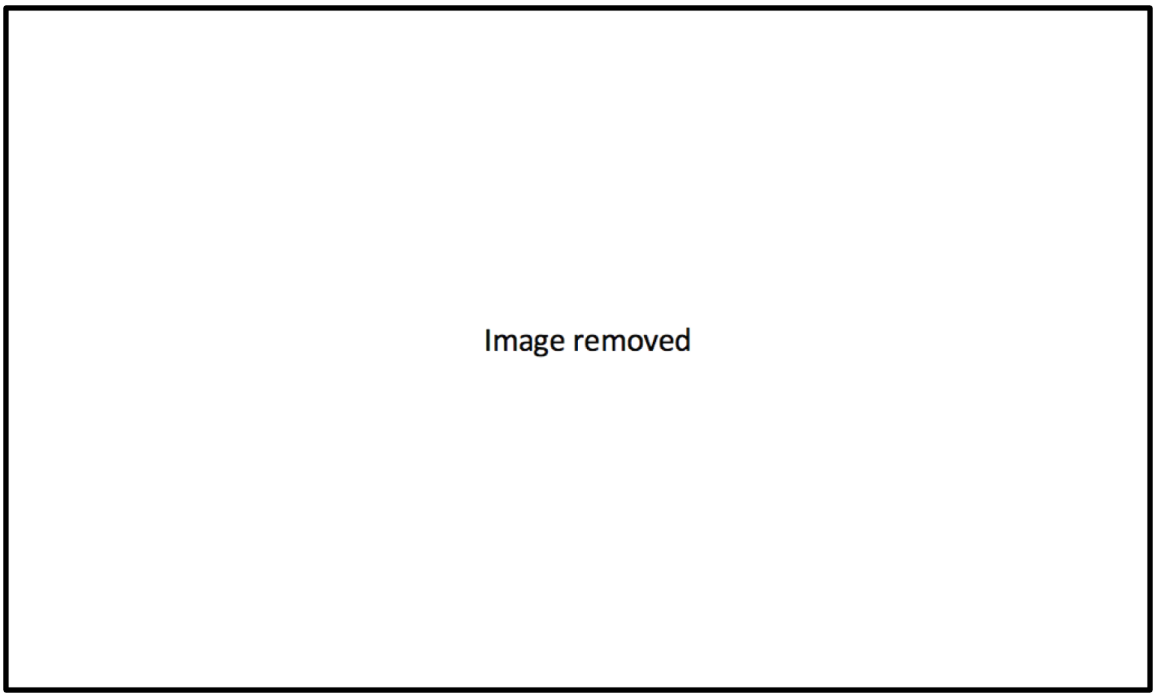

Figure 60. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 10 min 50 s. Multiple media – text, photo and video – are used to bait Matias into the inciting incident. ©Bazelevs Company.

The way that each media is revealed within *Facebook Messenger* in this sequence is important to note. It starts innocently with a request to see if Norah is present, then the Thomatos account mentions that she has been waiting patiently. There is also a thumbnail photo and then a video file showing off her body. The video, thumbnail image and text messages from this account and others sent within this application make it appear that several women are attracted to Norah, but it is not clear why. The interplay between the text messages and the images work effectively to generate a certain amount of curiosity for both the protagonist and potentially for the spectator. If the text messages were sent without the video or the video was sent without the text, the overall message is not the same. So, this sequence shows how effective multiple media can be in a relatively short period of time within a social media application to build up the curiosity and ultimately the mystery that is centred around the true identity of the owner of the laptop.

In *Searching* (2018), *Instagram* is used to reveal more about the character and the characterization of David Kim's missing daughter Margot. The film shows several of her *Instagram*

posts as well as the comments written by other accounts. These publications are meant to characterize Margot by showing what was important to her in the photos. Just as pertinent are the comments on these posted photos left by friends and colleagues. One of her posts is a selfie showing an extreme close-up of her eyes while she appears to be lying down with her head on a pillow. In response to this, *Instagram* account user derekellis6969 writes the comment, "you know you want me" (fig. 61). The juxtaposition between the image of Margot's eyes and Derek Ellis's comment indicates that he has an interest in her for one reason or another. This is one of several very direct comments left by this account on Margot's *Instagram* posts.

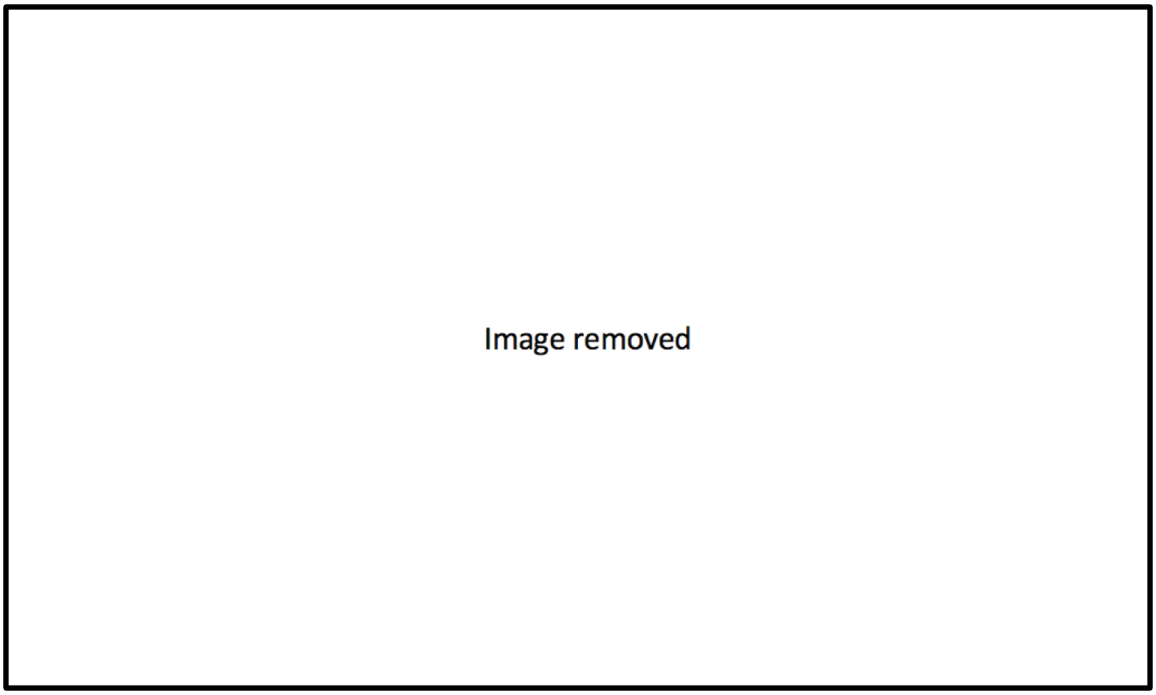

Figure 61. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 36 min 07 s. Margot communicates using a photo and text on *Instagram*, Derek Ellis responds just with text. ©Screen Gems.

These messages and the fact that Margot is missing makes it possible to deduce that Derek could be a suspect because his apparent obsession could potentially be linked to her disappearance. Another key piece of information related to this *Instagram* post is the date that it was published. Margot's photo indicates that it was posted two weeks prior to David Kim looking at it, so this indicates that it has a temporality linked to the past, a *past temporality*. As well, because the

communication is not face to face, the way people express themselves is not the same as they would in person. In this case, within *Instagram*, Margot shares an intimate photo of herself and Derek responds with text. The type of multimedia conversation where characters use whatever media they want to communicate with, whether it be text, photos or video, is also quite common in other social media applications such as *Facebook*, *YouTube*, *Tumblr*, and *Twitter* used within the *screenlife* films.

While the three *screenlife* films are works of fiction using actual social media applications, *Searching* has created a few of their own fictitious social networks to help tell its story. One of them is *YouCastNow* which allows users to broadcast a live video stream to other users within the network. During the broadcast, other users can write comments in a text zone in the bottom right corner of the video frame. Once each broadcast is complete, they become archived videos within user accounts. When David Kim discovers Margot's account, he watches her archived broadcasts. In one of them, Margot shows a picture of her deceased mother Pam to the three other accounts that had been watching (fig. 62).

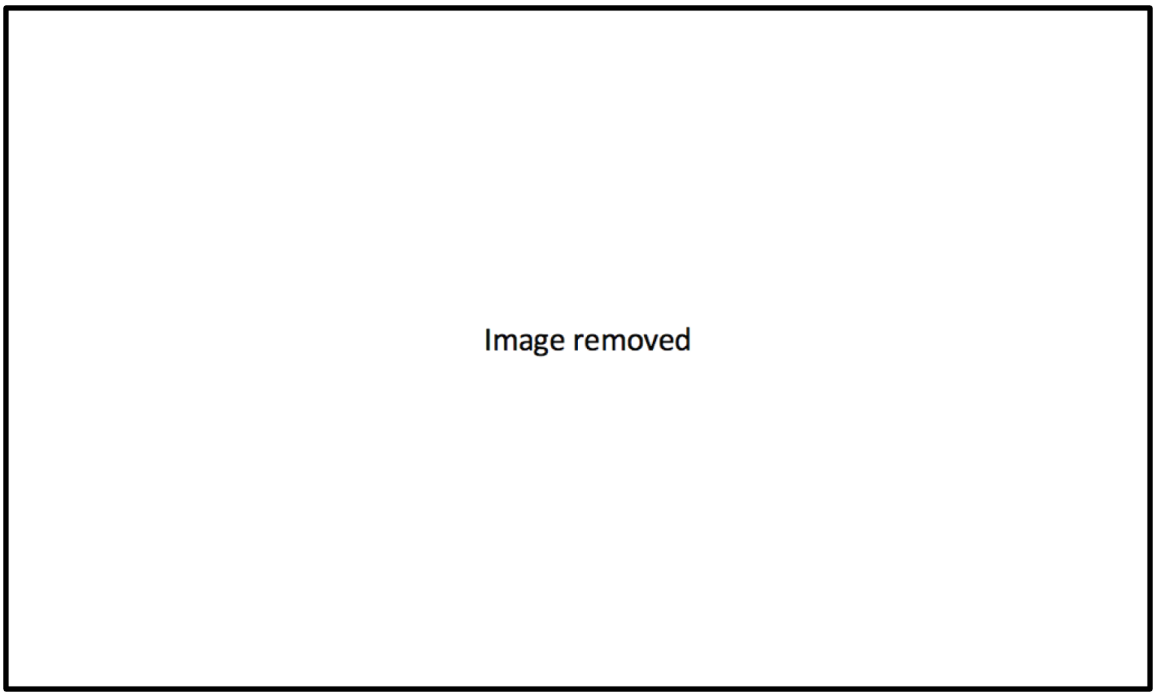

Figure 62. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 46 min 03 s. Margot is using video, photography and text simultaneously to communicate on social media. ©Screen Gems.

Margot is showing the photo because it would have been her mom's birthday. In the comments section, there are two comments written by a user named "fish_n_chips" that shows the image of a young woman with red hair smiling in the user's thumbnail photo. This archived video shows that Margot seems more comfortable talking about her mother with strangers online rather than in-person with her father. The video also indicates that she has developed an online relationship with another user who appears to be a young woman with the username fish_n_chips. When fish_n_chips writes, "we can talk about my day later" and then, "margot what's wrong?", it affirms this connection with Margot. In terms of the mise en scène, the video filmed by Margot's webcam takes up most of the virtual window, while the photo is a physical copy held by Margot that takes up about half of the video frame. The text comments left by fish_n_chips and other users are superimposed on the video which takes up about a sixth of the screen space. All three of these elements, the video, photo and text combine three layers of media within the same frame to communicate information about Margot's personality, her love for her mother, and her relationship with an online friend. This shows that within a single virtual window, multiple frames (video, photo) and text zones can be combined to communicate three different layers of visual information within one shot.

Third level of the *screenlife* mise en scène: objects (virtual windows) arranged within the screen space

The various combinations of frames (video, photo) and text zones within virtual windows provide the basic building blocks of each story for the three *screenlife* films. The content within each of the frames and zones are produced by the characters and their devices within the story. As previously discussed, the placement and relative size of each frame or zone within each virtual window can change how a scene is interpreted. However, there is a third and final level of mise en scène that extends outside the boundaries of each virtual window. How each virtual window is moved, positioned and ordered within the entire screen space adds yet another layer of

meaning. Much like how the placement of the webcam is determined by its user in these films, the movement, position and order of each virtual window are also manipulated by the hands of a character. The most common tools used to manipulate the virtual window are the mouse and trackpad which essentially perform the same functions: clicking and dragging. Certain tasks are made possible using these mouse and trackpad functions, some of the most notable are to toggle between windows; to compare images; to play a video in full-screen mode; and to move a virtual window, icon or other object within the screen space. Each of these tasks, however technical, has the potential to reveal important information about a character, to advance the plot and to evoke or heighten an emotion.

In certain scenes in the *screenlife* films, the protagonist will toggle between virtual windows that represent different applications. In *Unfriended*, Blaire is often using her mouse to click on the icons for *Skype* and *Messages* located in the dock which permits a sort of back and forth multitasking between a verbal conversation on the video call (*Skype*) and typing on the instant messenger (*Messages*) (fig. 63).

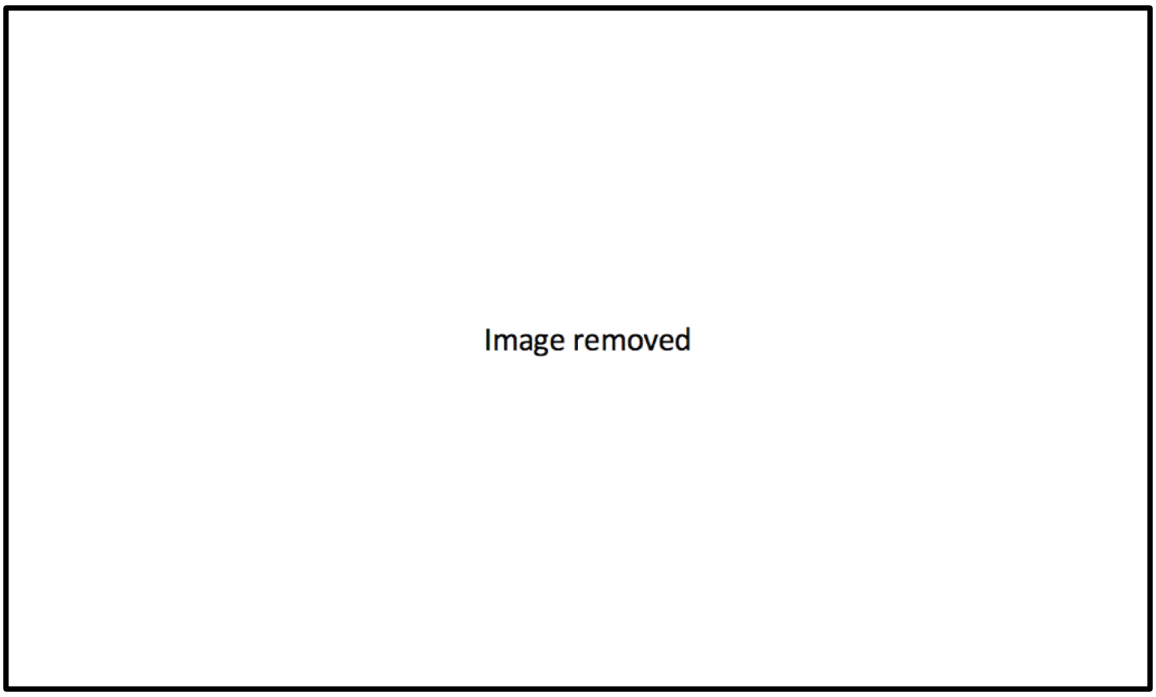

Figure 63. – Frame from the film *Unfriended* (Leo Gabriadze, 2014) at 18 min 26 s. Blaire toggles between virtual windows for *Skype* and *Messages* by clicking on application icons in the dock. ©Bazelevs Company.

In *Searching* (2018), the protagonist David Kim often toggles between his *FaceTime* calls and other applications on his computer such as the spreadsheet application *Google Sheets* (fig. 64) and *YouTube* (fig. 65).

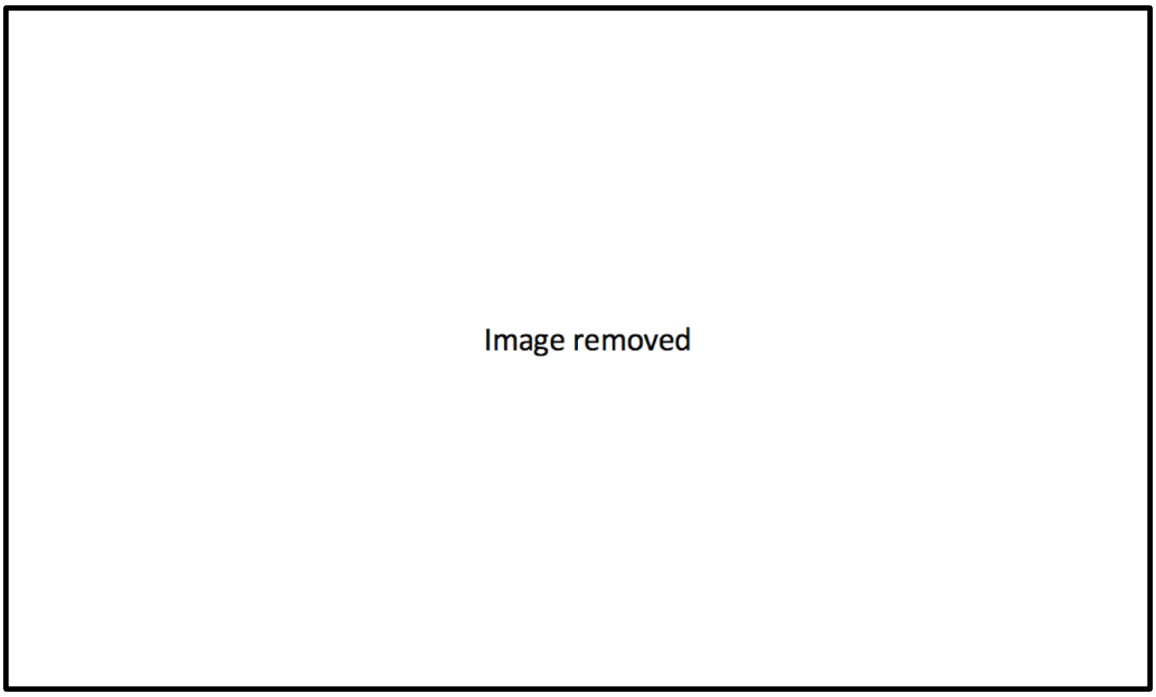

Figure 64. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 30 min 39 s. David toggles between *FaceTime* and *Google Sheets*. ©Screen Gems.

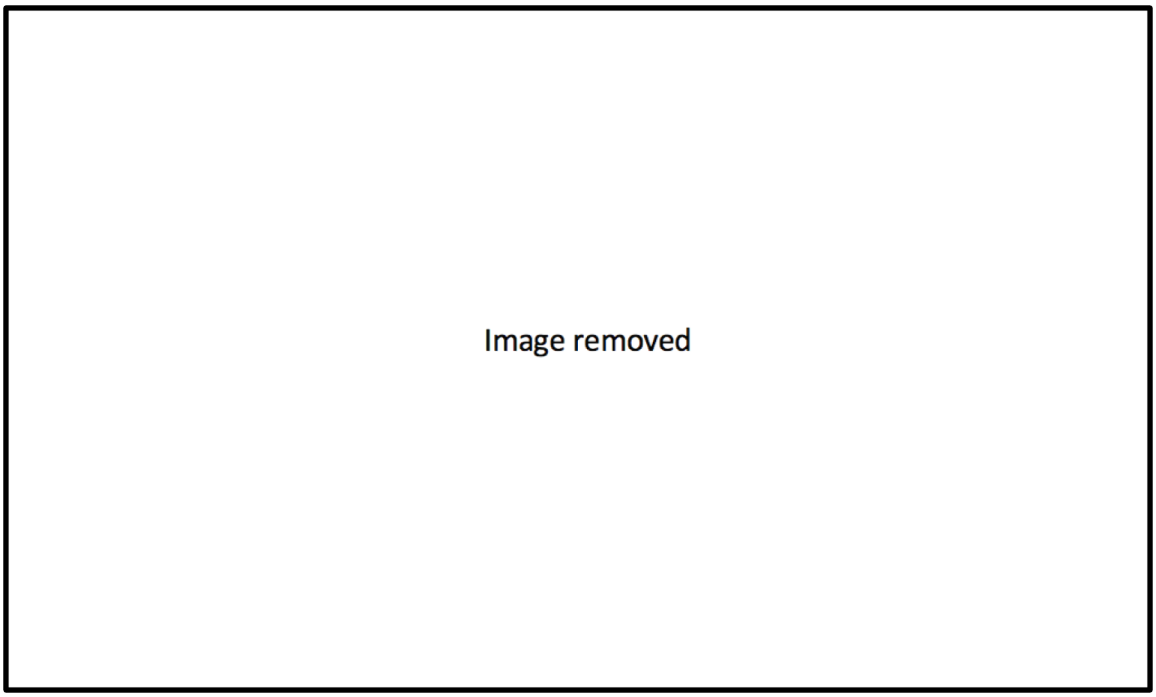

Figure 65. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 59 min 33 s. David toggles between *FaceTime* and *YouTube*. ©Screen Gems.

In a more suspenseful scene in *Unfriended: Dark Web*, Matias is toggling between applications in an attempt to calm his friends on a *Skype* video call while also keeping an eye on his deaf girlfriend Amaya's apartment during a *Facebook* video call because there is an intruder hiding in one of the rooms while she is getting changed in another (fig. 66). The toggling between windows allows Matias to be in more than one place at a time. The alternating between virtual windows using the mouse mimics the way cross-cutting editing operates in traditionally edited films that show one shot at a time.

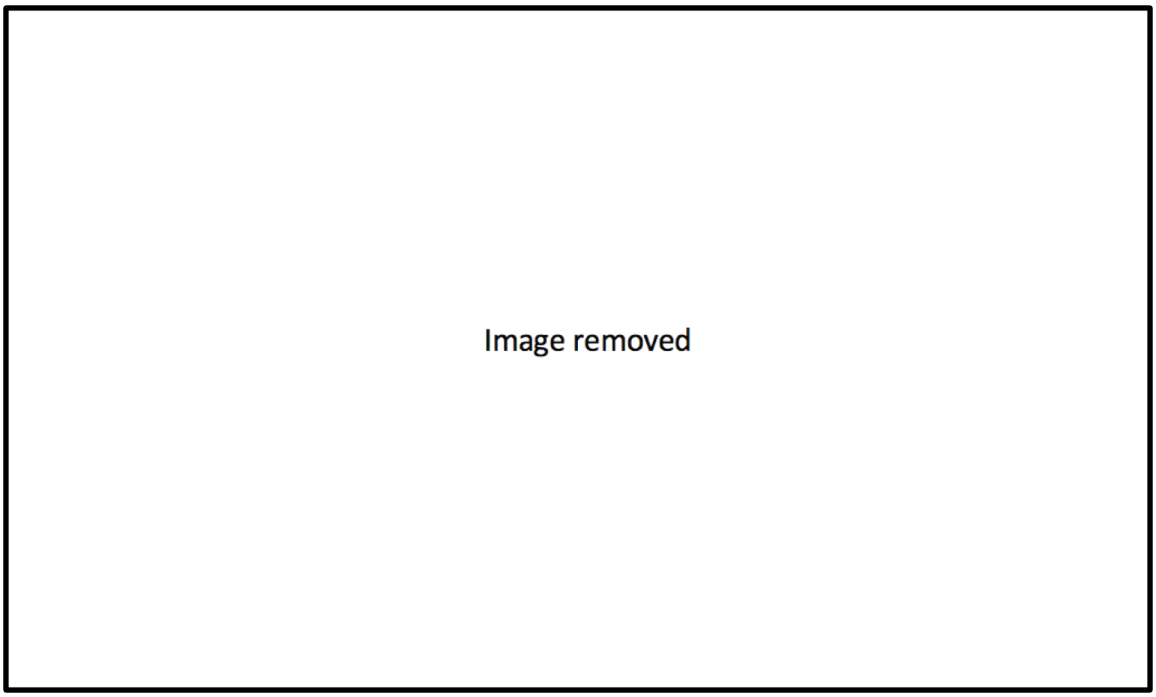

Figure 66. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 45 min 54 s. Toggling between video call virtual windows (*Skype* and *Facebook* video call) imitates cross-cut editing. ©Bazelevs Company.

Toggling between virtual windows allows the protagonists to keep track of two or more separate streams of information. Another technique that achieves a similar goal is to reposition a virtual window in relation to another in order to show enough visual information from each one, so that is it unnecessary to toggle between them. This creates a split screen like effect, but the result often has more of a collage aesthetic rather than clearly separated images shown in their entirety. In *Unfriended: Dark Web* (2018), once Matias concludes speaking to his deaf girlfriend Amaya on a *Facebook* video call, he keeps the call connected while she is in the subway, but he then slides its virtual window into bottom left corner of the screen, so that he can still see the top right corner of the video frame of the video call virtual window (fig. 67).

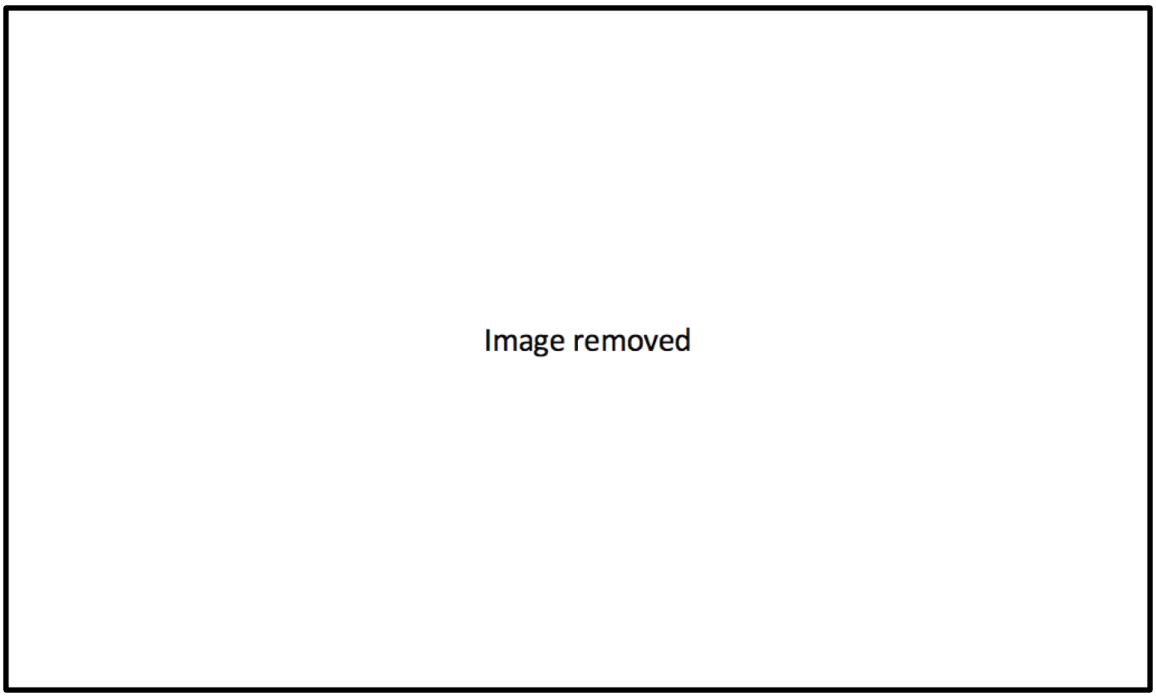

Figure 67. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 1 h 01 min 38 s. Two video call virtual windows (*Skype* and *Facebook* video call) displayed simultaneously can be interpreted as cross-cut editing transposed onto the screen. ©Bazelevs Company.

He does this in order to see when Amaya's cellphone loses internet connection in the subway. She is being followed by the intruder who Matias believes has been using a cellphone network to access the internet in order to spy on his computer in order to observe his conversations on-line. Once Matias realizes that there is no cellphone internet connection in the subway where Amaya is, he speaks openly to his friends on *Skype* about what is actually happening because he assumes that if the intruder has lost his internet access in the subway, as Amaya has, he cannot spy on his computer (fig. 68).

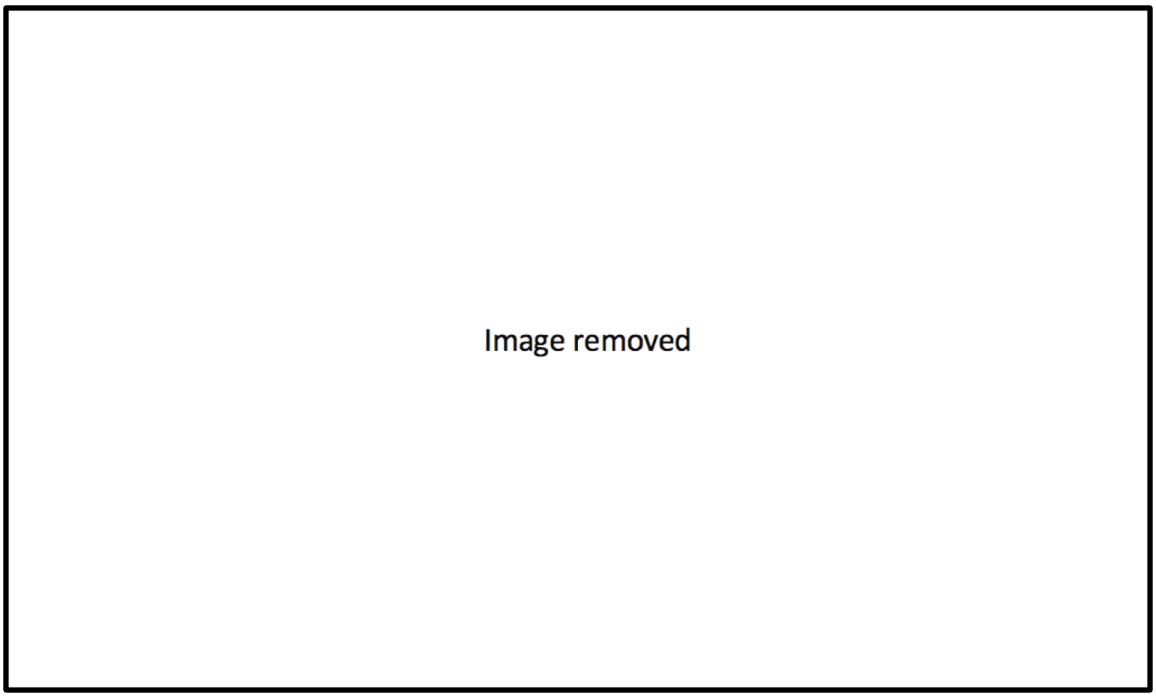

Figure 68. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 1 h 02 min 12 s. Simultaneously displayed video call virtual windows can imitate cross-cut editing even if there is only a fraction of one of the video frames being displayed. ©Bazelevs Company.

This technique is interesting because it also replaces the cross-cutting editing technique, but in a way that relies on just a fraction of a video frame rather than its entirety. While all of the video frames in the *Skype* virtual window are clearly visible, just a portion of the *Facebook* video call video frame remains onscreen. While it is just a fraction of the frame, it still shows enough pixels to communicate the most essential information. At first when Matias moves the *Facebook* video call virtual window into the bottom left corner of the screen, it is not completely evident why he is doing this, but over the next few minutes of the film, as the internet connection comes and goes in the subway, it becomes obvious.

Virtual windows are also rearranged to make direct comparisons between images in separate windows. This occurs several times in *Searching* while David Kim is trying to locate his missing daughter and the people responsible for her disappearance. In one scene, he identifies Barbosa Lake as a possible location for his daughter's whereabouts because he sees that she has been to a lake in one of her *Instagram* posts and again in another video blog post in *YouCastNow*. When

he places both images side by side, it becomes clear that they are the same lake which indicates that this has been a hangout spot for Margot (fig. 69).

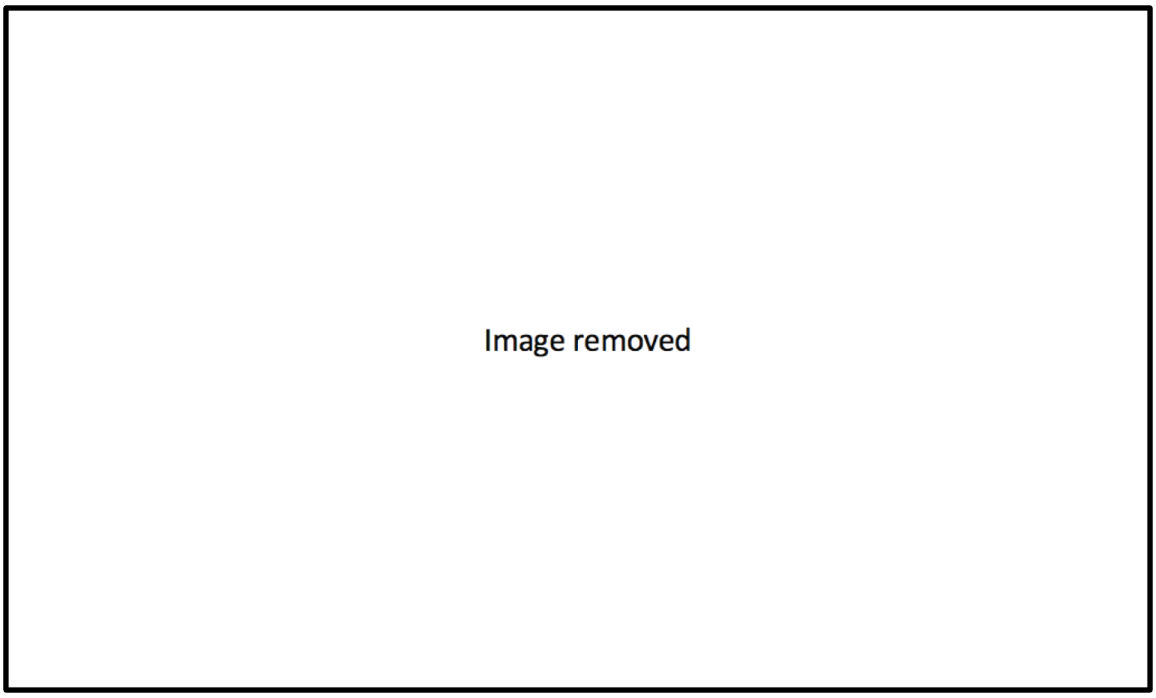

Figure 69. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 51 min 28 s. Virtual windows can be used to make comparisons between images simultaneously displayed. ©Screen Gems.

The comparison leads David to Barbosa Lake which is where Margot's missing car is eventually located. Another comparison between images in two separate virtual windows takes place when the funeral service website for Margot shows an image of a woman on one of its webpages that looks similar to the image of the young woman that had been chatting with Margot on *YouCastNow*. Once David slides the two images side by side, it is clear that these images are showing the same person (fig. 70).

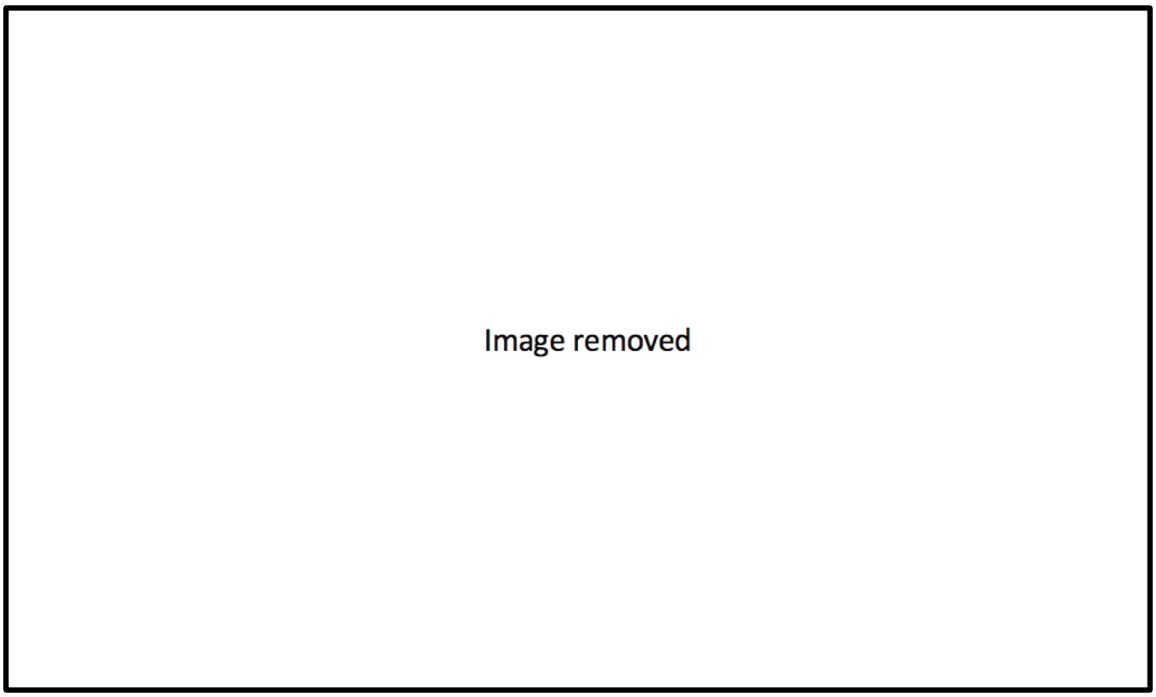

Figure 70. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 1 h 19 min 43 s. Two separate photos of the same woman displayed simultaneously in separate websites are compared. ©Screen Gems.

This reveal leads David to discover that the person that Margot was communicating with on *YouCastNow* is not the woman in the image of the avatar for the fish_n_chips account. David makes yet another important comparison by sliding two separate virtual windows next to each other to reveal that the man who confessed killing his daughter in a news report is also the same person linked to Detective Vick in a prior news story about ex-convicts working with her to build a rehab clinic (fig. 71). This revelation leads to the arrest of Vick for the kidnapping of his daughter. What is also important to retain in all three of these photo comparisons is the dramatic way in which David slides the virtual windows with the trackpad in order to reveal the connections between separate images. Without David's trackpad gesture to move the virtual windows, the scenes may not have the same emotional impact when these turning points are shown in the story.

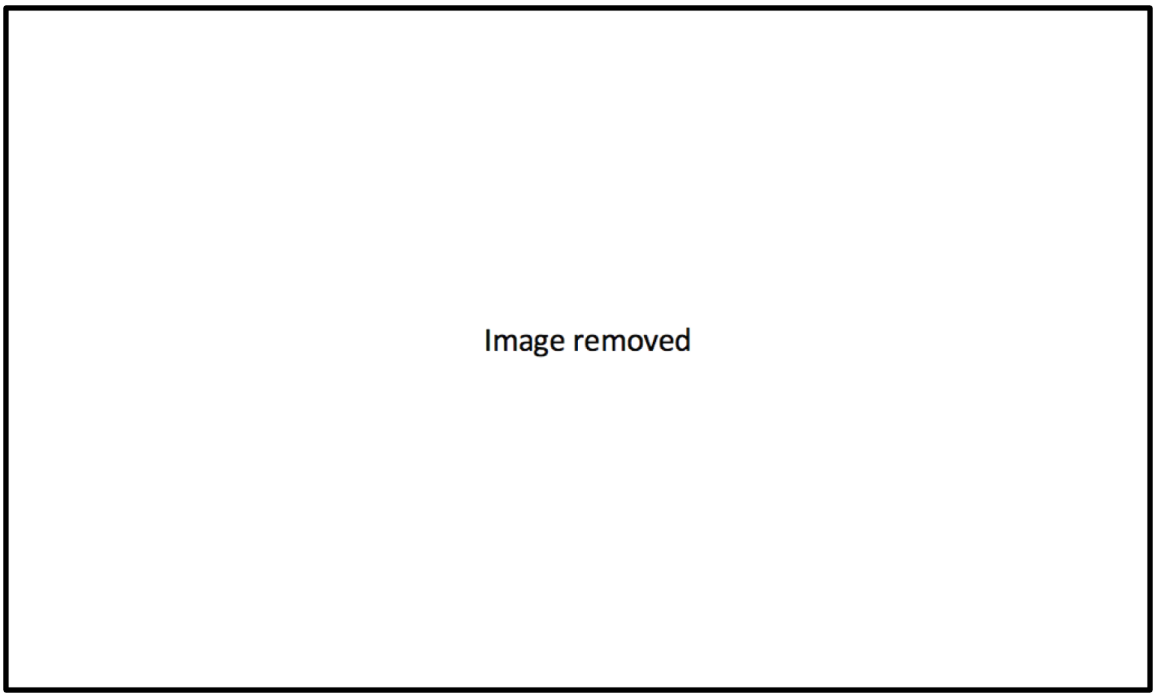

Figure 71. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 1 h 23 min 02 s. Two photos of the same character are revealed dramatically by sliding one of them to the right to reveal the other one in the background. ©Screen Gems.

Another way that a virtual window can create meaning in relation to another virtual window is if the protagonist uses the mouse to grab the contents within a virtual window that is not displaying all of its vertical and horizontal space. When this occurs in some virtual windows, the vertical and horizontal scroll bars indicate that not all of the contents of the page are being displayed. In order to see more of the contents, the user can slide either of the scroll bars to see the parts of the page that are hidden. To see more of the content to the left or the right, the horizontal scroll bar can be clicked on and dragged using the mouse to show either of the left or right edges of the webpage. For the content on the upper and lower sides, the vertical scroll bar can be used in a similar manner. However, the mouse or trackpad can also maneuver the contents in any direction by placing the cursor within the space of the page, then grabbing it with a click and holding it down. The user can then move the mouse to show the parts of the page not yet visible that the user wants to see. In one scene in *Unfriended*, Blaire takes control of the content within a *Facebook* page that shows her friendship with Laura Barns. While in a panic, Blaire starts to shake

her trackpad frantically while the *Facebook* page shows images of her and Laura. This frenetic movement in relation to the stable *Skype* virtual window in the background captures the emotional state of Blaire through her trackpad gestures (fig. 72).

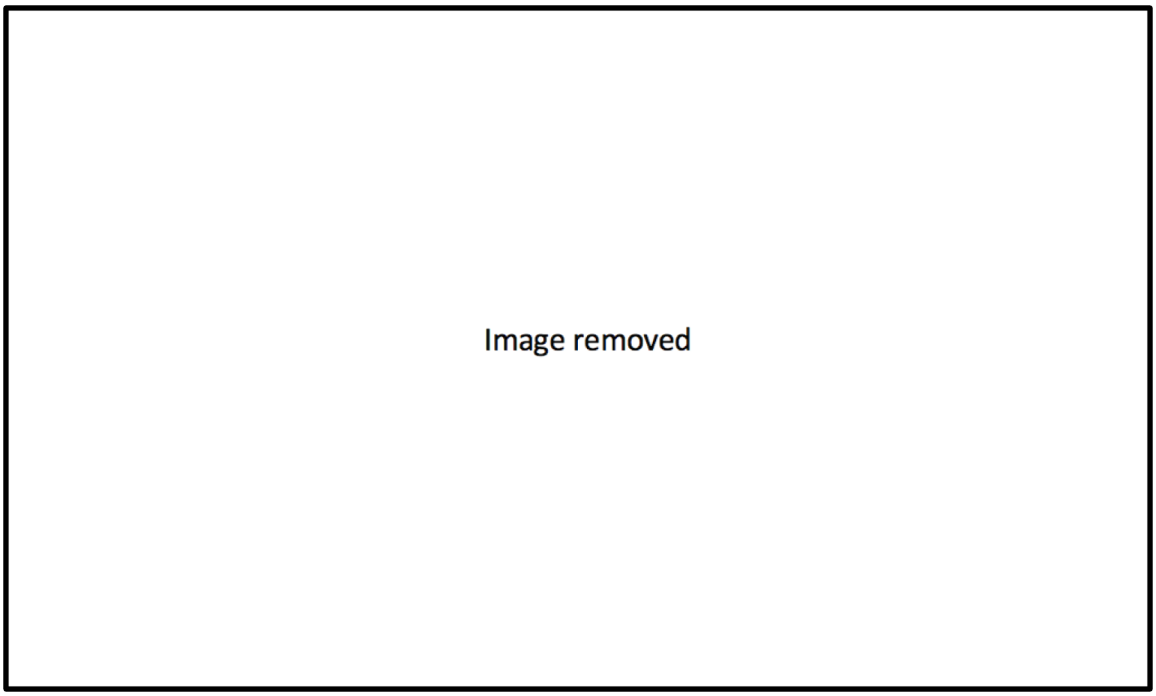

Figure 72. – Frame from the film *Unfriended* (Leo Gabriadze, 2014) at 1 h 14 min 36 s. Frantic trackpad movements causing *Facebook* images to shake erratically reflect Blaire's uneasiness. ©Bazelevs Company.

Her face appears emotionally distressed in the *Skype* virtual window as she fears for her life because she knows that she has been keeping her involvement in the death of Laura secret, but what is unique is what she does with one of her hands. Her hand gestures reflect her anxiety while trying unconvincingly to show that her loyalty and friendship to Laura has been unwavering in the *Facebook* photos that show them smiling together. What should be shown clearly and in focus is made shaky and blurry. The hand gestures reveal a certain truth about the *Facebook* photos, the friendship between Blaire and Laura had been a lot more unstable and frenetic in real life than it appears to be in the images.

The mouse can also be used to make a video within a virtual window take up the entire screen with a click. Many applications such as *YouTube* have a button within the video player located in

the virtual window that can be clicked to put the moving images in full-screen mode. This mode is sometimes used in the *screenlife* films to amplify the emotional impact of a certain moment while other social media applications such as *Skype* remain active but hidden behind the video in full-screen mode while it is playing. This effect allows video in one video frame to take up the entire screen space, but also permits the audio from the other applications to continue to be heard. This audio can reveal emotional reactions from certain characters while they are watching the video. This technique is on display in *Unfriended* when the mysterious *Skype* account opens a *YouTube* page to show the love affair between Blaire and Adam in a bedroom. A button on *YouTube* is clicked to play the video in full-screen mode while Blaire and her friends, which includes her boyfriend Mitch, are all watching it while participating in a *Skype* video call. Blaire screams asking why this video is being shown and she pleads with her boyfriend not to watch it. This scene shows how two layers of virtual windows can interact at the same time while only one is visible, the *YouTube* video. The other, the *Skype* video call, remains open and active, but its visual information is being entirely overlapped while its aural information is loud and clear. This shows that certain virtual windows don't necessarily have to show their visual information to express emotion, the audio is sufficient, especially while being juxtaposed to other images in other virtual windows.

There is another important juxtaposition in *screenlife* films that occurs between frames and text zones within different virtual windows on the same screen that also imitates the subjective point-of-view shot, but in a simultaneous and overlapping way rather than in its traditional sequential format of one shot showing a person looking followed by the subjective point-of-view shot that shows the object or action this person is looking at. The video frames within the virtual windows of video call applications are placed onscreen in relation to archived media in other virtual windows representing other applications. This archived media, located within frames (video, photo) and text zones, often comes from social media sites, but not always. Some of the archived media are found within files saved on hard drives of personal computers. Each video frame within a video call virtual window typically displays a character's face and upper body (close-up or medium shot) while in conversation via webcam with other friends or family that are each themselves contained within their own individual video frame within the same virtual window.

The juxtaposition that is important to observe is between these video frames of video call virtual windows and the frames (video, photo) and text zones of archived media in other virtual windows.

In a previous section within this chapter, it had been demonstrated that the subjective point-of-view shot can be transposed into a single virtual window that constructs a simultaneous, but not overlapping relationship between the frames (video, photo) and/or text zones. In the following examples, the subjective point-of-view shot is transposed into two separate virtual windows, rather than within one, which allows this transposition to be in both a simultaneous and overlapping manner. It should also be noted that this juxtaposition is defined by video frames within a video call virtual window that represent the *present temporality*. Whereas, the archived media in the other virtual windows represent *past temporalities*. This distinction between temporalities is important because it identifies that this transposed subjective point-of-view shot occurs between someone who is, within the present moment of the story, looking from within a video call virtual window toward another media that had been created during a prior time period located within the frame (video, photo) or text zone of another virtual window.

To better understand how this transposed subjective point-of-view shot operates between two virtual windows, it is important to further describe how the video call virtual window operates in relation other virtual windows onscreen. The video call virtual window usually represents an application such as *Skype* or *FaceTime* which shows characters in individual video frames. The users communicate by either looking into the webcam, which is typically centred just above and outside of the screen space, or looking just below the webcam into the video frame on the screen where the image of the person they are communicating with is situated. The user can also look at other subjects and objects that appear as archival media in other virtual windows. There are effectively two cameras that operate at the same time on each computer to simultaneously present the video frames in a video call virtual window along with other frames and zones in other virtual windows. The first camera is the webcam that films from the point of view of just above the screen toward the user who is situated in front of it. The other camera is not a camera in the traditional sense, but it operates as one. It is the screen recording and it creates the illusion that it is filming from the point of view of the user, but it is not because it is purely a digital recording

of the pixels on the screen. However, this screen recording represents what is on the screen, which is what the user sees from their perspective, so the images from these screen recordings imitate the perspective from the user's point of view. These two "cameras" allow two opposite angles to be filmed at nearly the same time on the same surface, the same screen, on the same video track. This works because the webcam footage is being displayed on the screen almost instantaneously in the video frame of the video call virtual window as it is being recorded a second time by the screen recording. This is the main technical element that allows for the subjective point-of-view shot to be transposed onto a computer screen in a simultaneous way with the shot of the person who is looking. The character who is doing the looking, whose perspective is represented in the subjective point-of-view shot, can be immediately projected onto the same space as the object that he or she is looking at which is located in another frame (video, photo) or text zone which is the subjective point-of-view shot.

This type of juxtaposition between virtual windows that replicates the subjective point-of-view shot often, but not always, involves virtual windows that are overlapping. This means that the faces of the characters in the video call are not always completely visible. If a face is covered by another virtual window, it is usually implied that it is present and looking at an object or action in another frame located in another virtual window. Verbal and non-verbal emotional responses help to indicate that the eyes on a character's face are looking at an object or action if the face is not visible because it is being overlapped by another virtual window. An example of this is in *Unfriended* when the *YouTube* video that shows Blaire and Adam having an affair in a bedroom is playing in the foreground and the *Skype* video call conversation between Blaire and her friends that include her boyfriend Mitch is in the background (fig. 73).

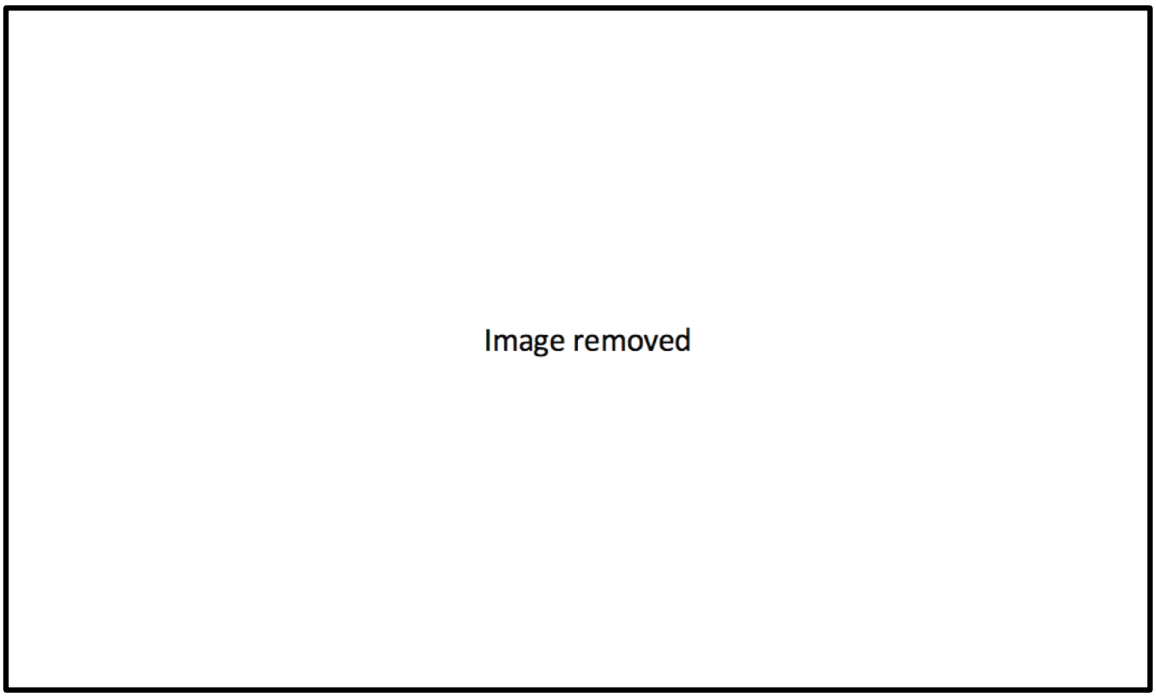

Figure 73. – Frame from the film *Unfriended* (Leo Gabriadze, 2014) at 1 h 01 min 22 s. Transposition of the subjective point-of-view shot, the reactions to it are communicated through verbal and non-verbal sounds. ©Bazelevs Company.

When this occurs parts of the video frames of Blaire and Mitch in the *Skype* virtual window in the background can be seen while the *YouTube* video plays. This scene shows that reactions, while not fully visible at all times, are captured though the verbal and non-verbal emotional outbursts from Blaire. While this scene does not show the reactions of the faces of each of the characters at all times while the *YouTube* video is playing, it is creating a similar effect as the subjective point-of-view shot. However, in this case, the spectator has to imagine what the reactions are on each of the characters' faces until they are eventually revealed.

This transposition of the subjective point-of-view shot in a simultaneous and overlapping way with the shot(s) of the looker or lookers looking is also on display in the other two *screenlife* films. In *Unfriended: Dark Web*, the face of Matias is shown within a video frame of the video call application *Skype* while looking at the contents of a *QuickTime* video on *Google Drive* (fig. 74).

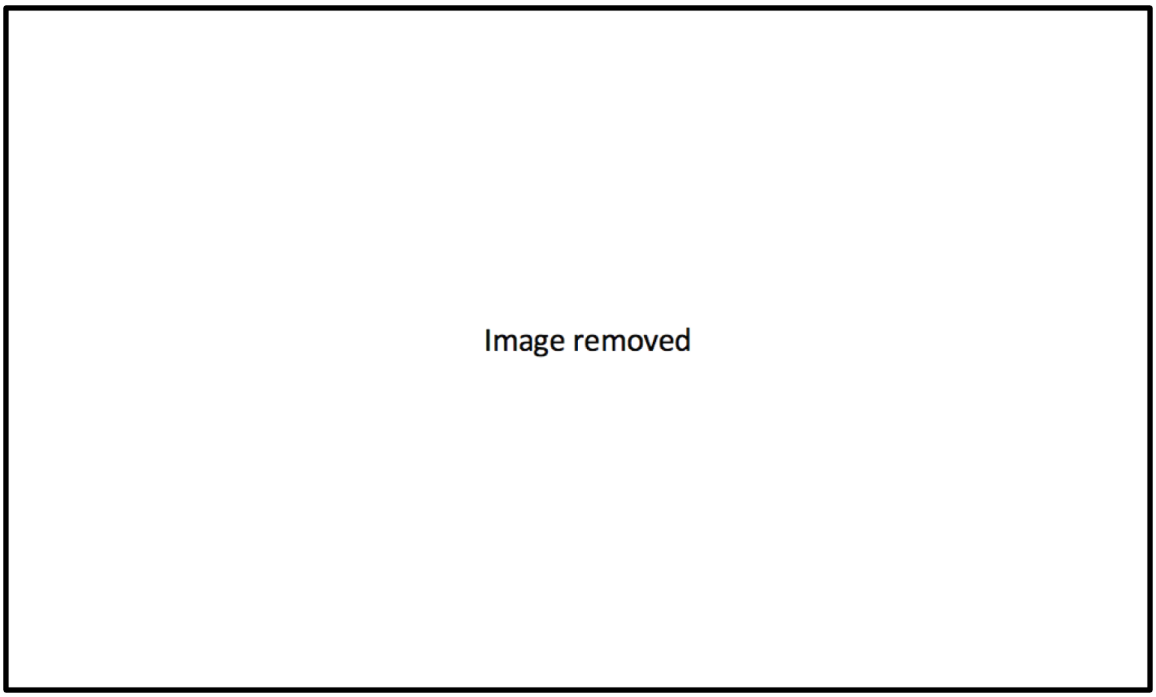

Figure 74. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 21 min 43 s. The subjective point-of-view shot transposed onto the computer screen using two separate virtual windows. ©Bazelevs Company.

In this scene, Matias looks at a video of his first hike with Amaya that he filmed and edited. His face can be seen looking at this video in one of the video frames in *Skype*. While he is not using *Skype* at the moment to speak to his friends, his face is still present within his video frame as he is watching the initial dating phase of his relationship with Amaya in another virtual window. The combination of these two shots is a clearer example of the subjective point-of-view shot transposed onto the computer screen in a simultaneous way. However, these two shots are not overlapping as they are in the previous example. The *present temporality* is shown in the smaller *Skype* video call virtual window in the bottom right corner of the screen which shows the looker, the protagonist Matias, looking. The other video frame that represents the *past temporality* takes up much of the centre portion of the screen. It shows Matias and Amaya on a date. It is probably understood by most spectators that are familiar with computers that *Skype* shows video that is a live stream, a continuous video representing the present, while edited *QuickTime* videos show video that has been pre-recorded that represents the past. These computer conventions help the

spectator to differentiate between the temporality of each video frame which also helps to confirm the relationship between the two video sources that simulate the subjective point-of-view shot.

Searching offers another example of this transposed subjective point-of-view shot into separate virtual windows on the same screen surface. Rather than displaying a character looking at another video as in the two previous examples, this scene shows the character David Kim in the video frame of the video call application *FaceTime* looking at a photo of his daughter Margot in a forged California driver licence framed in his *Gmail* account's virtual window (fig. 75).

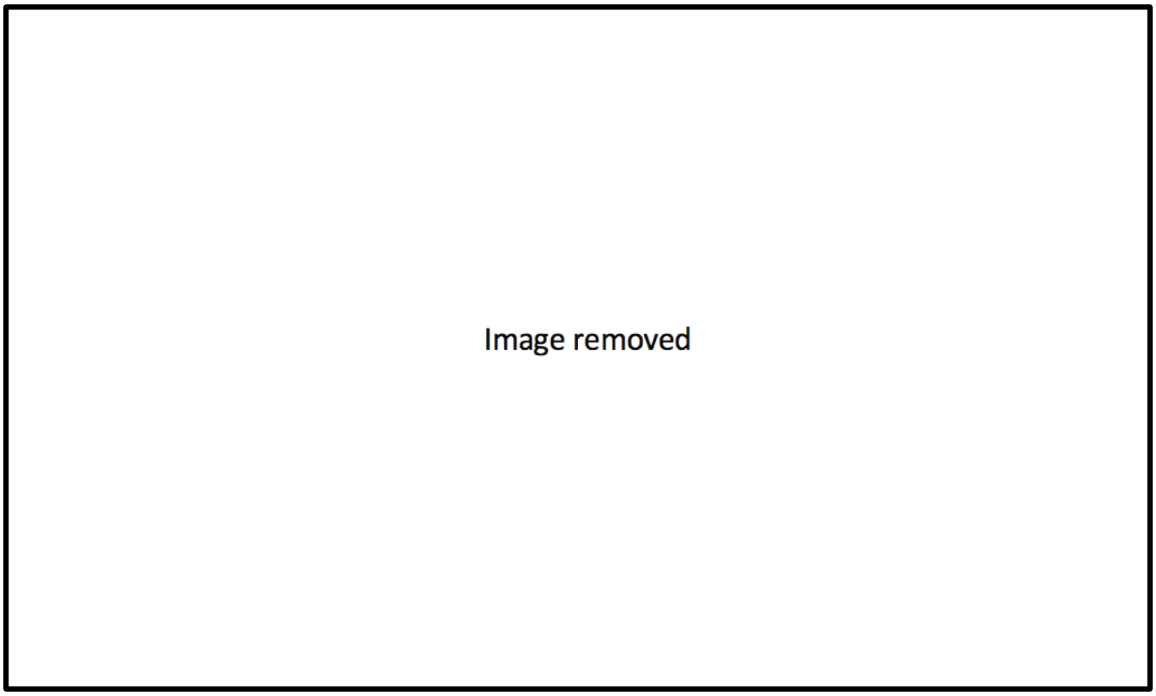

Figure 75. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 38 min 05 s. Transposed subjective point-of-view shot is a still image rather than moving images. ©Screen Gems.

The driver licence also contains text that reveals a name other than Margot on the identification. What is also unique in this scene is that the *FaceTime* application has been left open while it is not being used. David is not using it to make a video call, but his face is visible in the video frame of the *FaceTime* virtual window because the webcam is still filming him, and the application is still displaying the webcam video in its virtual window. This allows the spectator to see David's face which is critical to establish when replicating the subjective point-of-view shot which requires the

juxtaposition between a subject looking and an object/action being looking at. In this scene, and in others, the video call application is left on for no other apparent reason that to show the face of a character to create this transposed subjective point-of-view shot.

While the transposed subjective point-of-view shot in the three *screenlife* films normally occurs between video frames in a virtual window that represent the *present temporality* and another frame or text zone in another virtual window that represents a *past temporality*, there are certain scenes that show two *present temporalities* in two separate virtual windows that represent threads of the same story that are occurring simultaneously in the present moment of the plot. This usually happens when a text message conversation occurs at the same time as a video call is taking place. The protagonist communicates through speech in a video call virtual window which represents one thread of the *present temporality*, while another thread representing this same *present temporality* is typically shown within a text message conversation in another virtual window. In *Unfriended: Dark Web*, Matias speaks to his deaf girlfriend Amaya through the *Facebook* video call application. She can lip-read what he is saying, so the video call works while Matias is speaking. However, Matias does not understand sign language, so Amaya writes to him using the *Facebook Messenger* application in another virtual window. To complicate things during this video call, it is possible to have more than one text message conversation ongoing simultaneously. To give an example of this, Matias and Amaya are communicating using the *Facebook* video call and *Facebook Messenger* applications in a scene when Matias starts to receive other *Facebook Messenger* messages through *Facebook* notifications that are displayed in smaller separate virtual windows (fig. 76). This third thread of interpersonal communication also represents the *present temporality*, but it is coming from a second text conversation which demonstrates that it is possible for a character to maintain more than one conversation within a specific mode of communication at the same time.[7]

[7] This type of multitasking centred around the video call resembles the concept of *polymedia* articulated by Daniel Miller and Jolynna Sinanan ((Miller and Sinanan 2014, 136) that states that no one is ever just on a video call, a person it also typically engaged with other media or applications simultaneously.

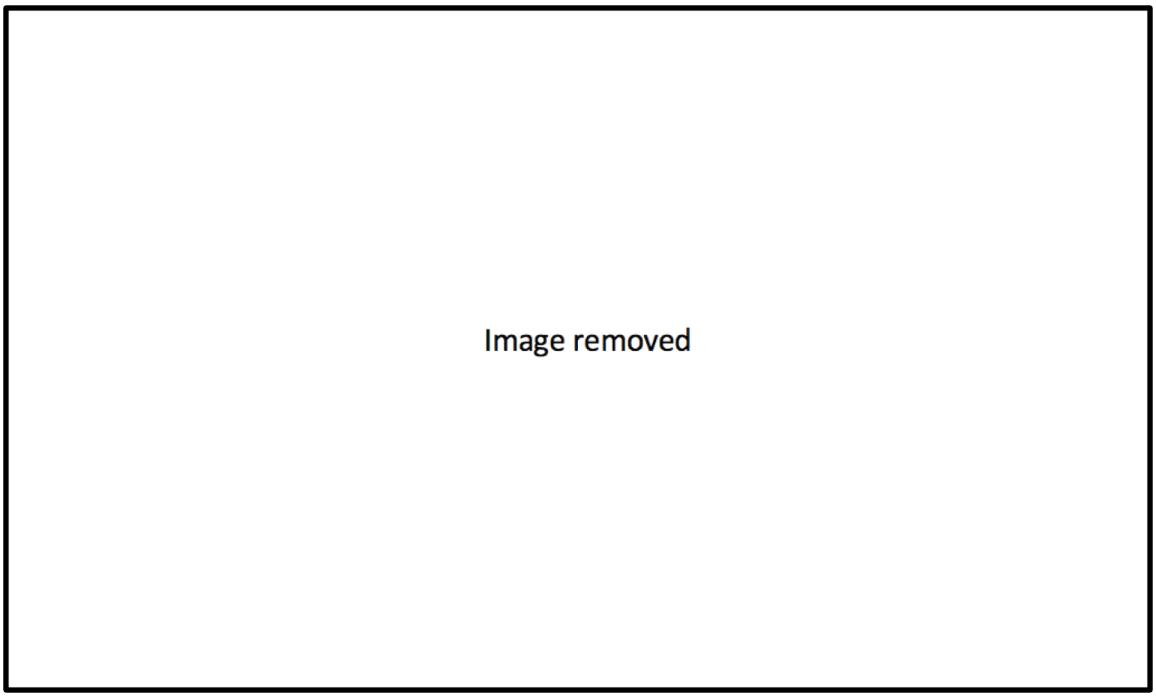

Figure 76. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 48 min 18 s. Matias communicates simultaneously through a video call and two separate channels of text message communication that all represent the *present temporality*. ©Bazelevs Company.

One could argue that the messages received within notifications and instant messaging virtual windows should not necessarily be classified as being a part of the *present temporality* because they have already been written, so therefore they should be categorized as representing a *past temporality*. However, the decision to classify the messages received from an instant messenger as being part of the *present temporality* is that text messages are usually received almost instantaneously (hence the name instant messenger). There is always a slight delay between transmission and reception, but it is negligible enough that they should be considered as being classified within the *present temporality*. However, if there has been a much longer delay between the production and the reception, such as old text messages that are re-read, then these could be considered as representing a *past temporality*.

In *Searching*, the protagonist, David Kim, also communicates simultaneously on a video call and a text-messaging application. In a scene when he is taking part in a video conference call with his colleagues at work, he must respond to a question from his boss. While participating in this verbal

conversation, he has been typing a message in a text message application that he eventually sends to his daughter (fig. 77).

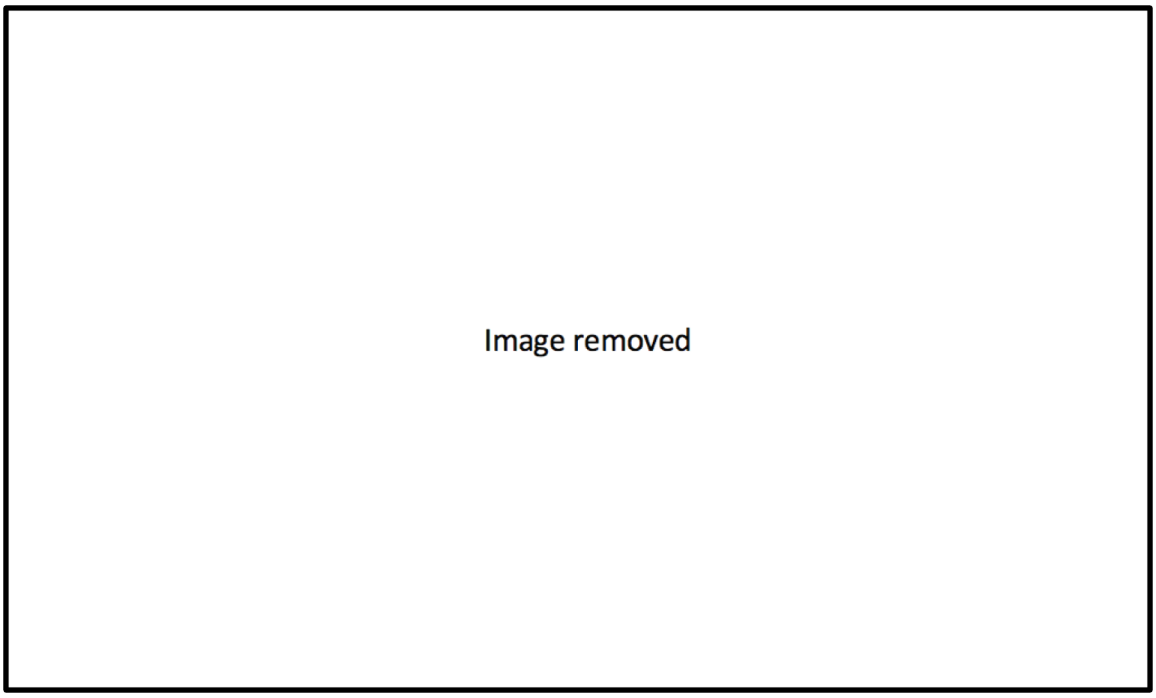

Figure 77. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 15 min 47 s. Simultaneous communication occurs while David participates in a video call and writes a text message at the same time. ©Screen Gems.

The text message, which is just one sentence, and the relatively meaningless verbal exchange between himself and his boss on the video call is not difficult to follow. However, there is a scene in *Unfriended: Dark Web* where there is an ongoing text message conversation in one virtual window and a verbal conversation, occurring at the same time, in another. Following these two threads at the same time becomes much more challenging because of their duration and the level of detail that is expressed in the verbal and written language encoded within each media (fig. 78).

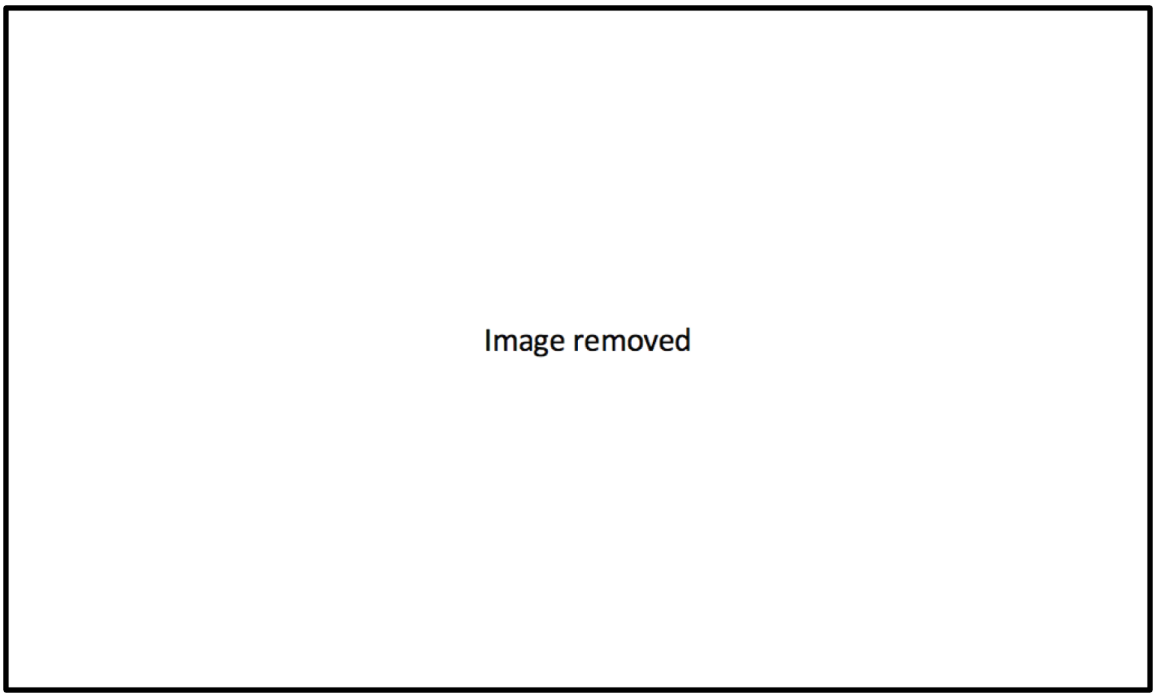

Figure 78. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 15 min 51 s. Two separate simultaneous conversations are taking place at the same time. ©Bazelevs Company.

What also makes them more difficult to follow, as opposed to the other examples, is that two characters are involved in the text message conversation while the conversation in the video call involves a separate third person monologuing about conspiracies. The other examples show the protagonists multitasking between the two conversations in separate virtual windows, so it is easier to follow as they have to flip back and forth between the two applications. This is in contrast to the scene in *Unfriended: Dark Web* which involves the protagonist Matias engaged in an important text message conversation with Damon in *Skype's* text messenger while AJ is going on a rant in a video frame of the same application about underground organizations that are constantly spying on people on the internet.

This example shows that it is also possible to have two virtual windows showing two separate simultaneous actions involving separate groups of characters. In this type of juxtaposition, the subjective point-of-view shot is not the cinematic convention being transposed into the simultaneous, overlapping universe of the *screenlife* film. Instead, it is the cross-cutting editing

technique that has been replaced by showing the two simultaneous events on the screen at the same time which both represent the *present temporality*. Another example of this type of scene is demonstrated in *Unfriended: Dark Web* when Damon is shown being hung by a noose in a doorway via his webcam in one virtual window while another virtual window shows a confession note being written in a *Microsoft Word* document by one of the Charons who has hacked Damon's computer (fig. 79).

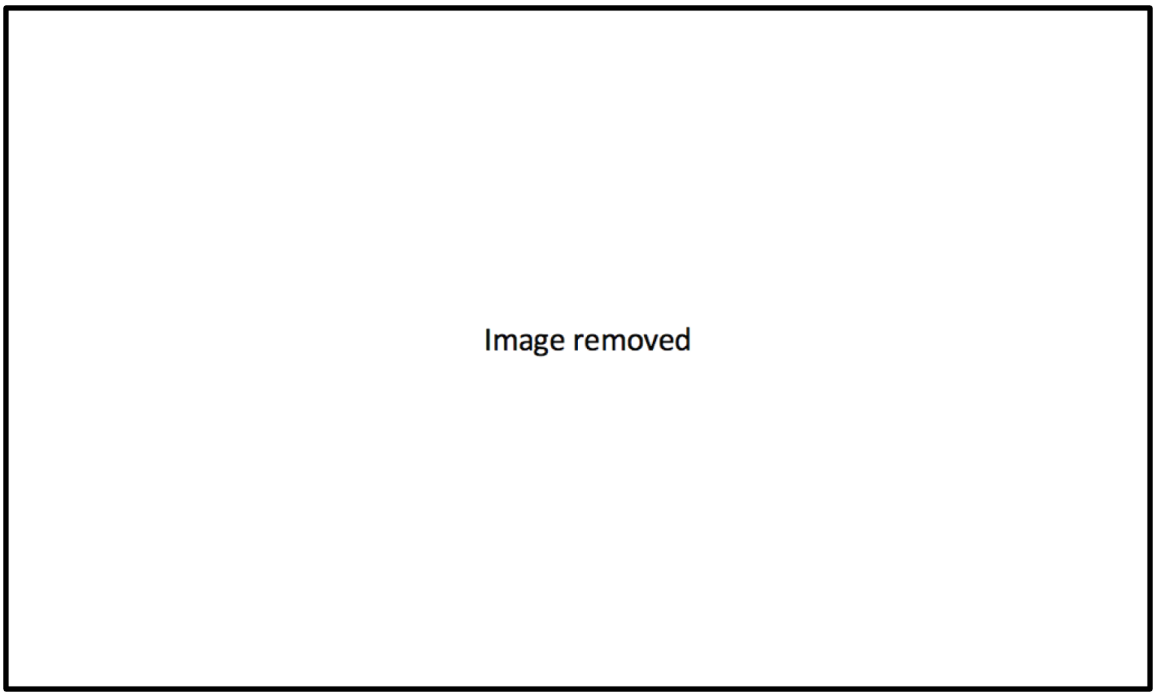

Figure 79. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 1 h 25 min 11 s. Two separate actions evoking the present are occurring simultaneously in separate virtual windows. ©Bazelevs Company.

These two actions are occurring at the same time in the present moment of the plot, so they represent the *present temporality*. These two shots are also not simulating the subjective point-of-view shot in a simultaneous way. In this case, Damon is not looking at the *Word* document, he is choking to death while a forged confession letter is being written. These two simultaneous actions in a conventional film would likely be contained in separate shots alternating between each other in an edited sequence. In this *screenlife* film, the text zones within the Word document and the video frame showing Damon are not only simultaneously shown on the screen at the

same time, these images are also overlapping one another which are two common characteristics of the mise en scène within this virtual window *screenlife* world.

For each of the examples showing multiple virtual windows simultaneously representing the *present temporality*, the challenge for the spectator is knowing if he or she should focus their attention on a specific video frame or text zone because it is difficult to simultaneously follow multiple threads of information being displayed at the same time. In a traditionally shot and edited film, the sequence of shots determines what the spectator can see or not see, but in these *screenlife* films, it is up to the spectator to choose. As far as the impact of overlapping, in these examples, it does not appear to block information or change the meaning of the scenes. This effect of placing parts of virtual windows over others serves more to reflect the aesthetic of computer screen layouts that have overlapping windows. However, the relative size of virtual windows and their embedded video frames and text zones do serve a purpose as in the scene in *Unfriended: Dark Web* when AJ is shown in a small video frame in a small *Skype* virtual window in relation to the text conversation between Damon and Matias that is represented in a much larger virtual window that puts more emphasis on this *present temporality* (fig. 78).

While the frames (video, photo) and text zones within virtual windows are the main units containing narrative information, icons located on the desktop are also used to tell the story, but they typically, along with the desktop wallpaper, serve as background decor to further characterize the protagonist. The file type and thumbnail images of icons illustrate or indicate the type of content within the files, such as personal photos on Blaire's desktop in *Unfriended*, which inevitably help to paint a portrait of whom has been using the computer. How well organized or cluttered these icons are within the screen space also helps to portray whom the user is and their emotional or intellectual state. The icon images serve as well to give the flat image of the screen more visual depth and texture in relation to the overlapping virtual windows. However, while decor remains their principal function, there are certain icons that go beyond the role of background performers and serve to advance the plot. In *Unfriended*, Blaire downloads an *Apple Disk Image* file labelled "just a game.dmg" sent to her in an e-mail attachment to her *Gmail* account from her friend Ken. Once downloaded, the icon for this file is shown on her desktop and she must double click on it in order to load an application called *Trojan Destroyer* (fig. 80).

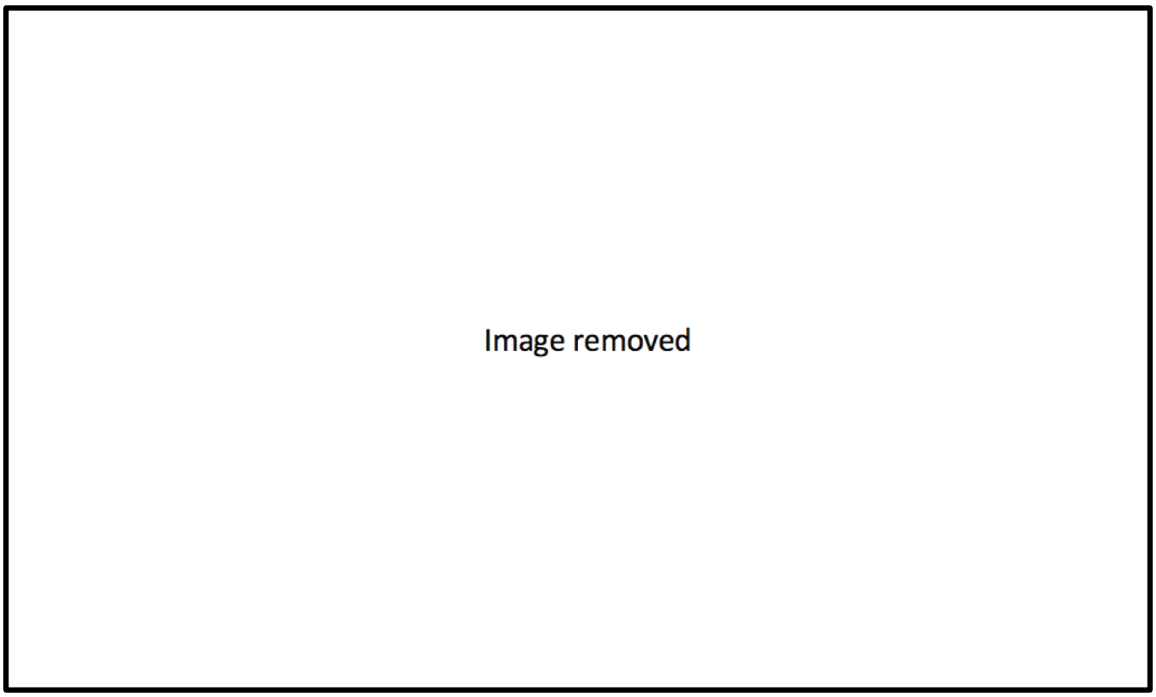

Figure 80. – Frame from the film *Unfriended* (Leo Gabriadze, 2014) at 40 min 28 s. The icon "just a game.dmg" on the desktop serves as a gateway to a program. ©Bazelevs Company.

This software has been designed to locate any suspicious files on her computer that could be linked to the mysterious account that has been harassing Blaire and her friends on *Skype*. The overall screen time that the icon is the focus of the action is just a few seconds as it is clicked on almost immediately after it appears on the desktop, but it nonetheless serves a role to advance the plot.

In *Unfriended: Dark Web*, a similar scenario plays out with a folder icon. Once Matias discovers that there are hidden folders located on his stolen computer, he manages to uncover the main hidden folder that contains them. It is a pink folder titled "UNTITLED" (fig. 81).

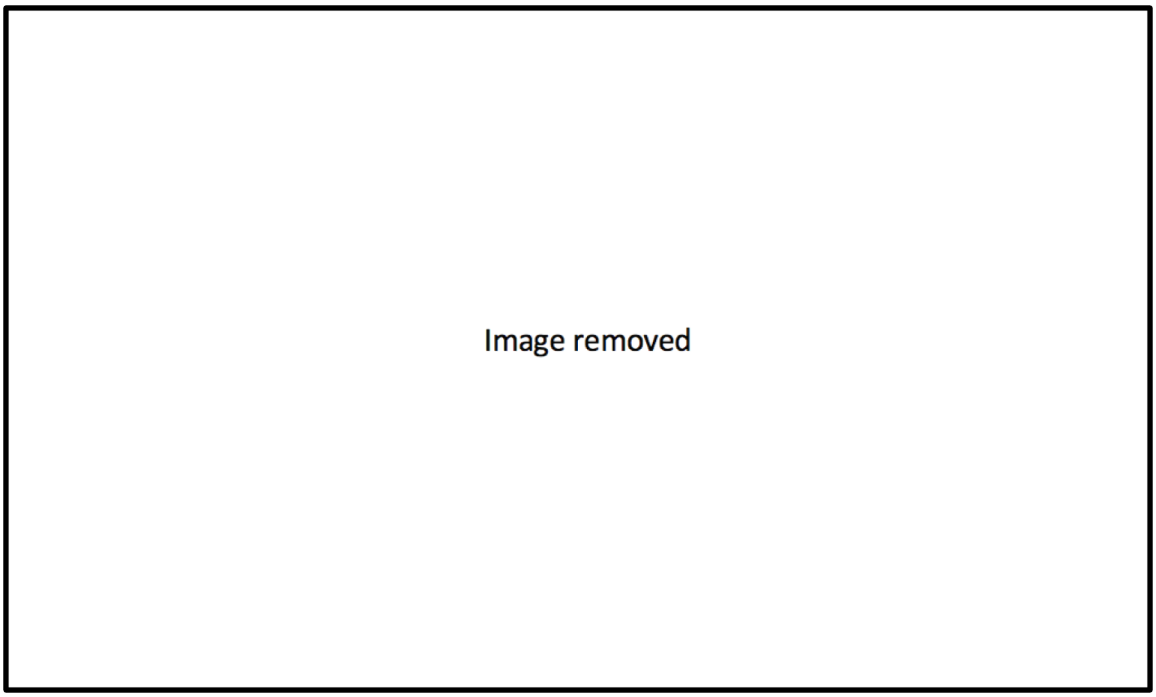

Figure 81. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 17 min 42 s. The folder icon serves as a portal to a turning point in the story. ©Bazelevs Company.

This folder icon sets up a major turning point within the plot because inside it Matias and his friends, through shared screen access, discover that there are videos showing kidnapped women. One of the women, Erica Dunne, turns out to be a 17-year-old who is currently reported missing. Much like in the example from *Unfriended*, the icon is immediately opened once it appears on the desktop. The icon itself is not what becomes important, it is the contents within it that changes the direction of the story. However, without the icon, there would have been no way for Matias to access the videos, so icons, much like hyperlinks on webpages, serve like portals to important information that advance the story. This metaphor of computer imagery operating like portals is yet another deviation from the window metaphor that is associated with the photographic imagery in traditionally shot films. Thomas Elsaesser and Malte Hagener have articulated an association between portals and webpages because webpages are not images created in the traditional photographic way where the window metaphor functions.

> In light of the above, any conceptualisation of *'window and frame' now has to include their function as portal or segment*, thus approximating some of the *properties we previously ascribed to 'door'*, but figured as an opening that provides access to an

> always possible 'beyond,' fracturing into 'multiples' (as in the frames of web pages) rather than marking off a clearly circumscribed composition, or delimiting a physically plausible space (Elsaesser and Hagener 2015, 200).

While icons on a desktop can also serve as "portals" to "an always possible 'beyond'" like the webpage, it is also possible for icons to simultaneously serve roles as both background images and as important storytelling devices. A scene in *Searching* shows David Kim looking rather depressed in the *FaceTime* video frame (fig. 82).

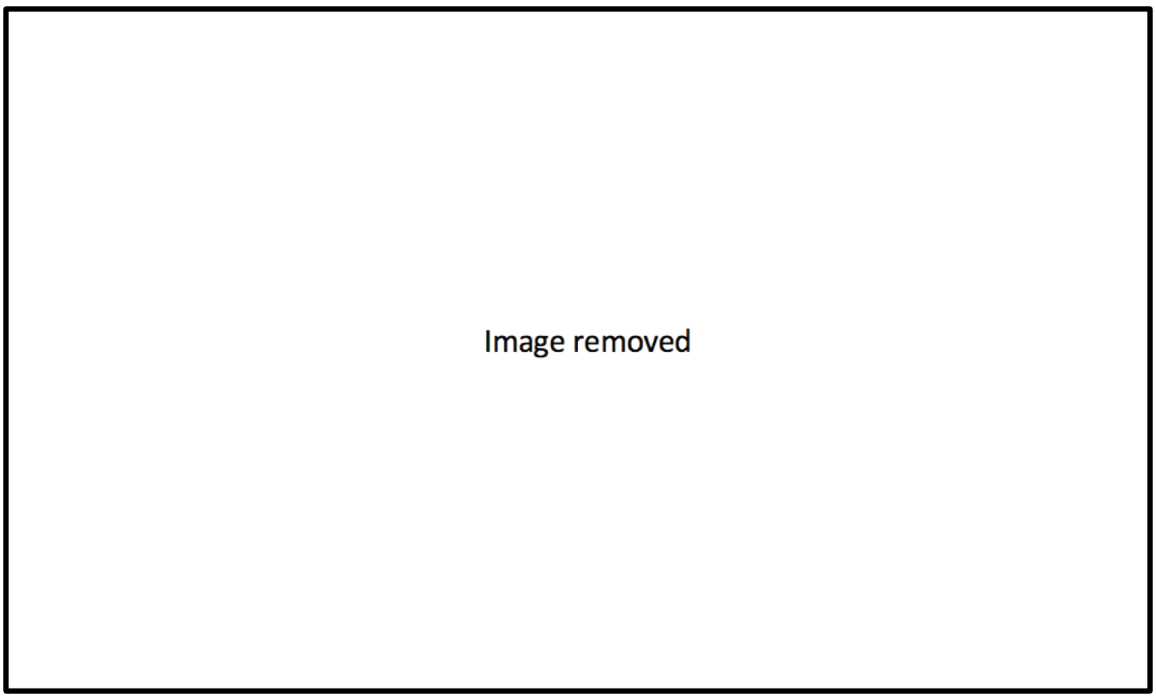

Figure 82. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 37 min 36 s. Icons on the desktop can serve as background images and important storytelling devices. ©Screen Gems.

His hand rests against his face while he looks blankly at the desktop. The desktop is littered with an array of cluttered icons that reveal all of the different photos, text files, internet links and folders that David has saved to the desktop as part of his investigation into the disappearance of his daughter Margot. His look of discouragement comes from these icon images because they show how much he has been working on this investigation, but as of this moment in the film, he has made little progress in tracking down his daughter or a potential suspect linked to her disappearance. So, while these icons serve as background images, they also help to capture the emotional fatigue of David, as well as the incredible amount of intellectual effort and analysis he

has applied in trying to pinpoint exactly what happened to Margot and where she might be located.

Much like the icons, the desktop wallpaper and screen saver also go beyond a decorative role because they can communicate important story information. In *Searching*, the desktop wallpaper is used as a clue, but not one that is meant to be detected by David, but rather as a way to indirectly hint to the spectator where Margot might be located while she is missing. This desktop wallpaper, which shows a set of steep cliffs, takes up most of the desktop screen space while David is talking to Isaac, one of Margot's friends, about her whereabouts which is displayed in a *FaceTime* audio call virtual window (fig. 83).

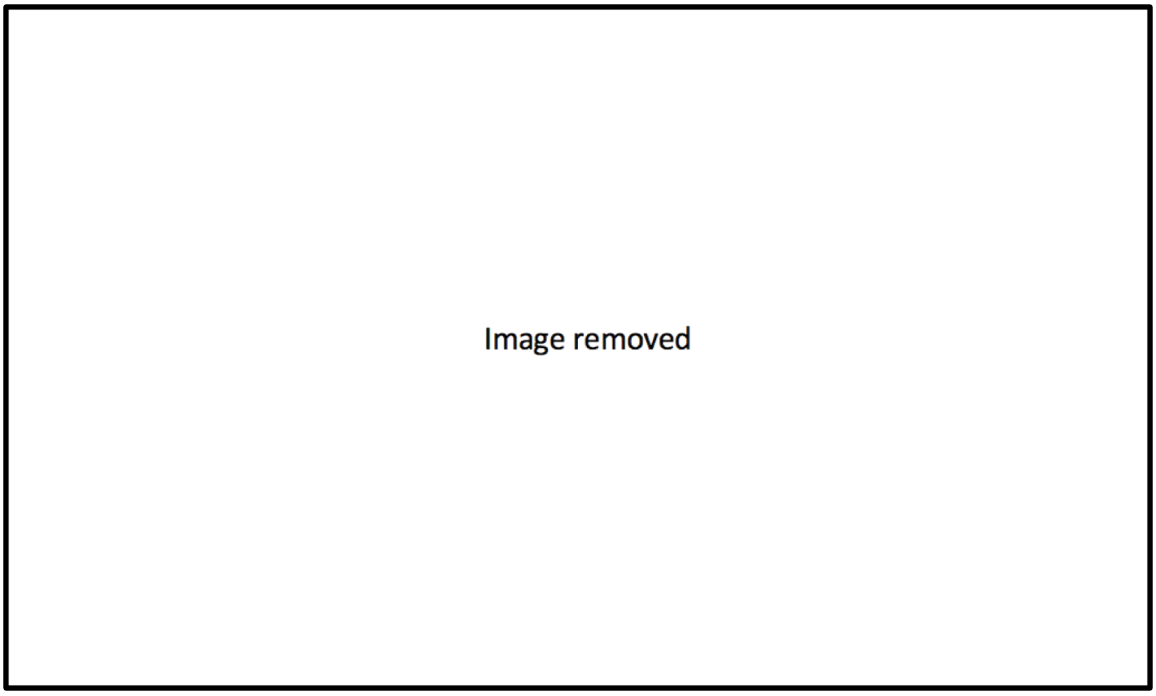

Figure 83. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 23 min 31 s. The image of the cliffs in the desktop wallpaper serves as a clue. ©Screen Gems.

The cliffs in the desktop wallpaper photo seem to offer a hint to where Margot is located because later in the film she is found at the bottom of the cliffs of Barbosa Ravine. This desktop image does not instantly solve the mystery for the spectator because it is a very subtle clue that likely goes unnoticed by most spectators as it does by David. However, it is interesting to note that the desktop wallpaper on David's computer shows cliffs while his daughter is lost at the bottom of

cliffs. This clue as well as others in the three *screenlife* films analyzed that appear to have hidden meanings represented within images and texts can also be interpreted as *Easter eggs*. In chapter 3, clues that can be categorized as *Easter eggs* are also described and analyzed as part of the clue camouflaging techniques transposed into the representations of GUIs in *screenlife* films.

The screen saver is also used in *Searching* (2018) to indicate that David has not been at his computer for a while, he has been sleeping. Not long after the screen saver is shown, there is a small virtual window that pops up superimposed onto the screen saver to show Margot calling on her *iPhone 7*. This turns out to be a critical moment in the story because it is the last contact that Margot tries to make with her father before she goes missing. After a second phone call attempt, Margot calls using *FaceTime*. A *FaceTime* virtual window now appears superimposed over the screen saver, but this time includes live video images from the webcam on David's *MacBook* showing him sleeping in his bedroom. This webcam video within the *FaceTime* virtual window superimposed over the screen saver confirms that David is not ignoring his daughter's calls, he is just sleeping and cannot respond (fig. 84).

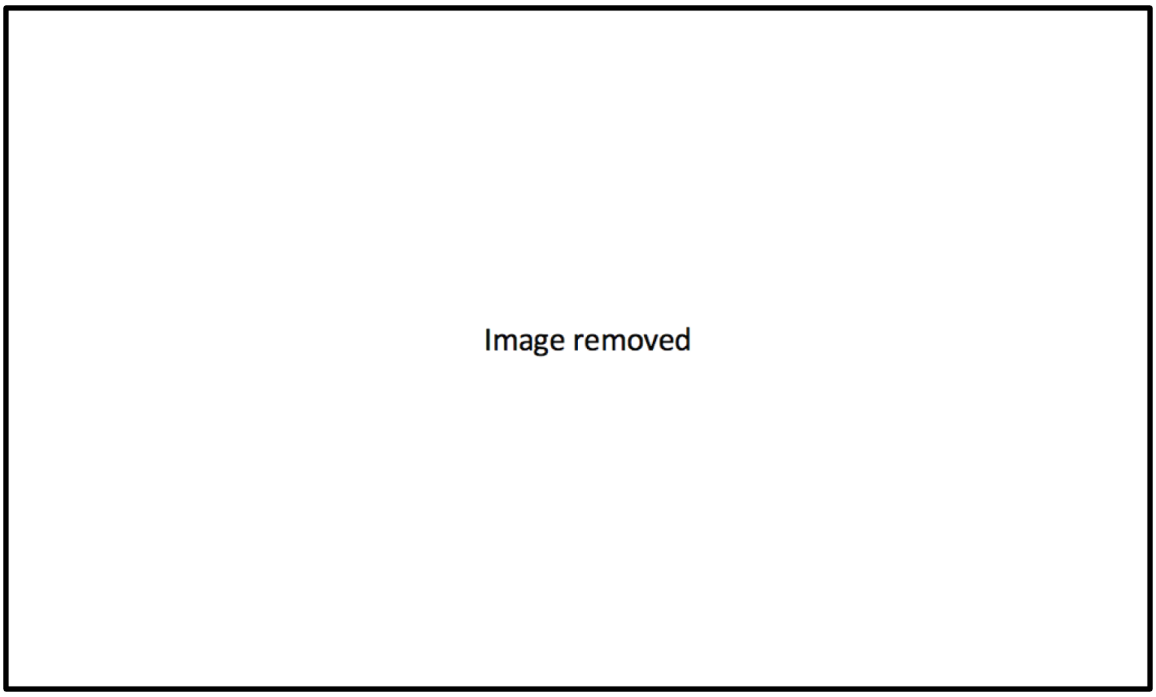

Figure 84. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 13 min 30 s. The screen saver implies that David has not used his computer for a while. ©Screen Gems.

One of the most interesting elements of the interplay between virtual windows within the screen space is the types of reframing that occurs because of overlapping. Video and photo frames located within virtual windows that are being overlapped by other ones can have their visible aspect ratio altered, essentially meaning that the visible vertical height and/or horizontal length of a frame, if overlapped, can be reduced. This can make the frame's rectangular dimensions appear to be more square or narrower depending on where it is being cropped from. *Unfriended: Dark Web* has perhaps the narrowest composition from overlapping when the protagonist Matias appears in a video frame that is being overlapped by *Facebook*, *Spotify* and *Skype* virtual windows (fig. 85).

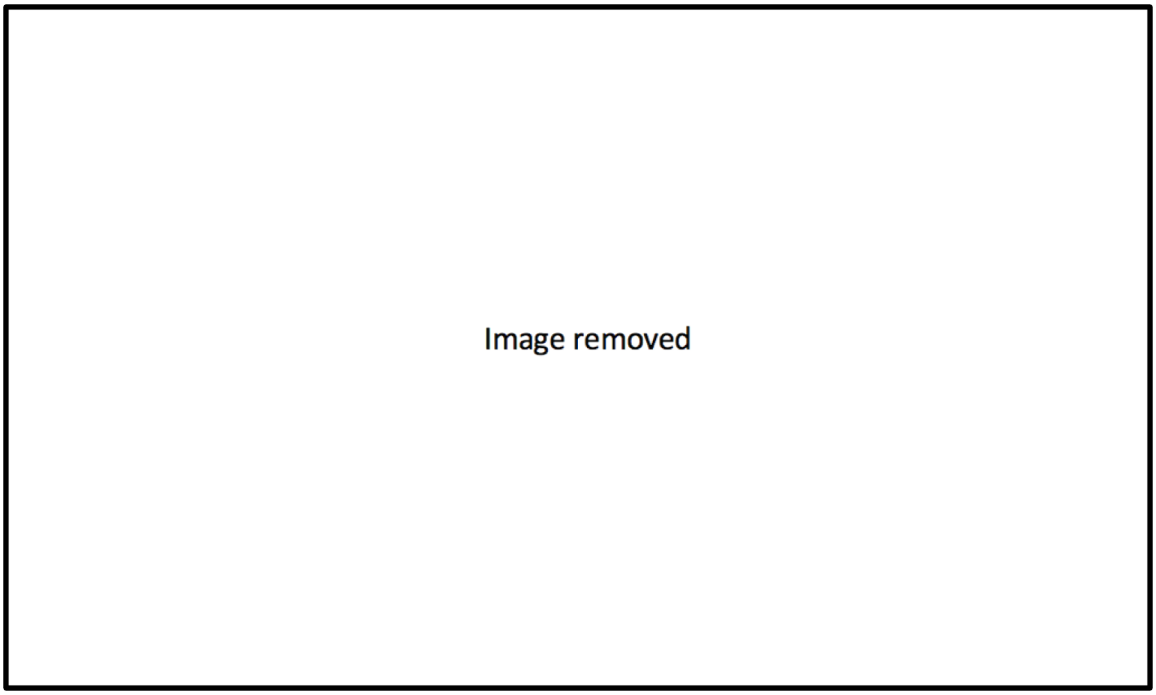

Figure 85. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 9 min 47 s. The video frame is cropped by other virtual windows making the visible aspect ratio much narrower. ©Bazelevs Company.

In a scene near the beginning of the film, he returns from the bathroom into his living room where his webcam films him looking at some very sexually suggestive *Facebook* notifications. The left side of his body is being cropped by the left side of the video frame, while the right side of his face and body is being cropped by the left side of a *Facebook* virtual window. Despite showing

just the middle third of Matias' upper body, this composition communicates enough information to the spectator to indicate that Matias is looking at the alluring messages on the computer screen. While it is a very precise reframing of Matias due to the overlapping, this effect still gives the impression that it is all part of the collage of virtual windows that Matias has created on the desktop. Fortunately, for the spectator, the 10 per cent of the video frame that remains after being cropped is the part that displays the protagonist's face which is important because it indicates that he is looking at these *Facebook* messages on the screen, and it is another example of the transposition of the subjective point-of-view shot onto the simultaneous environment of the GUI on the computer screen because it establishes the looker (Matias) in one frame and the looked at (*Facebook* notifications) from the looker's perspective in text zones.

While extreme overlapping can create slivers of video within the screen space, less intense cropping of a video frame's length can shift the aspect ratio from rectangular to more square-like dimensions. In *Searching*, the virtual window for a *Venmo* account crops the *FaceTime* video frame that is normally in a 16X9 aspect ratio (fig. 86).

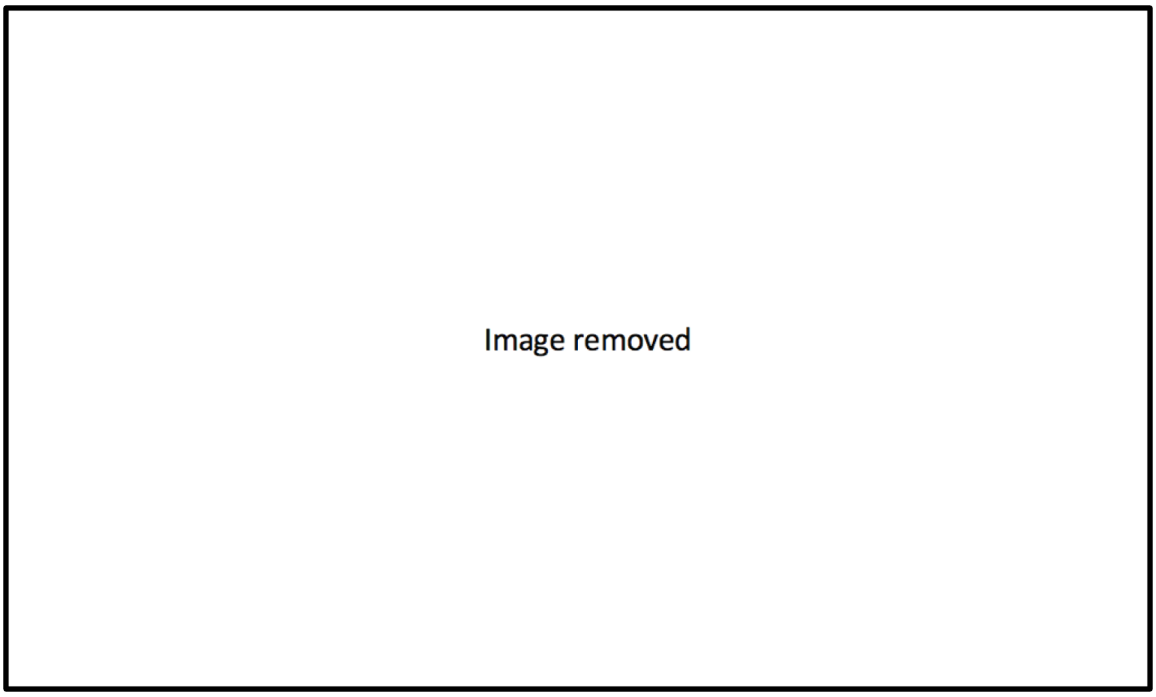

Figure 86. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 35 min 41 s. The visible aspect ratio is closer to 1:1 because a virtual window crops the video frame. ©Screen Gems.

The *FaceTime* conversation between the Kim brothers, Peter and David, feels more intimate because the left side of the video frame, which would be showing more of the wall in Peter's living room if the entire *FaceTime* frame was shown, is being overlapped. The aspect ratio of this video frame now appears to be closer to 1X1, squarer than rectangular, but more importantly, it tightens the frame around the two brothers which amplifies the importance and intensity of their conversation. In the three *screenlife* films, the overlapping of video frames tends to impact the length of the video frame. This is likely done to keep the eyes and facial expressions of the characters within the frame, so the spectator can see what they are looking at and how they are reacting emotionally. However, there are examples that do impact the height of the video frame when other virtual windows are either cropping the top or the bottom rather than the left or right side of the frame. This occurs when the virtual window for the Norah C. IV *Facebook* account is overlapping and effectively cropping two thirds of AJ's video frame in *Skype* which effectively cuts out his face leaving only the hair on the top of his head visible (fig. 87).

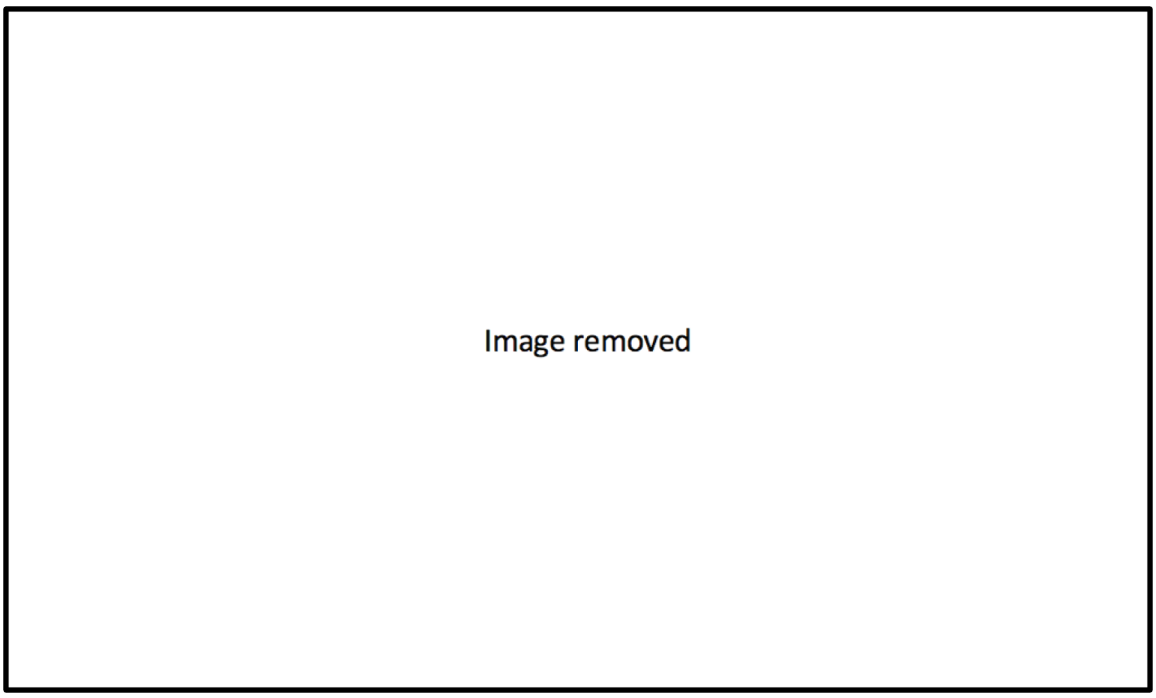

Figure 87. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 30 min 56 s. A *Facebook* virtual window crops the face of AJ in the video frame on the left side in *Skype*. ©Bazelevs Company.

While extreme, this cropping does not impact this scene to a great extent because the cropping is relatively temporary, and it occurs while another character is talking in the adjacent frame. As well, AJ's reaction to the *Facebook* page had already been expressed verbally which was not overtly emotional.

In summarizing this chapter, each of the three main individual media types – video, photography and text – represented within the first level of the *screenlife* mise en scène demonstrate that they have been created by characters and their devices within the diegesis of each story. Each of these media is also associated with a temporality that either evokes the present or the past. These videos, photos and texts often have an amateur aesthetic to them. The webcam videos are typically static, positioned just above the computer screen located within a character's room. Shot size is therefore determined by the relative position of characters to this camera. Other videos produced by cellphone cameras are often shaky filmed from the hands of a character who can change the camera position, but it is typically a plausible movement that serves the story. Photos are often produced in a similar way, especially handheld photographed selfies showing a character's face. The aesthetics of text produced by characters does not necessarily appear as amateur as videos and photos do, but spelling, grammar and slang can indicate important information about a character such as their education, their way of communicating with friends and family. Each of the media represented within this first level of the *screenlife* mise en scène has unique qualities that are defined by both the device being used and the representations of hand and body gestures of characters manipulating each individual device producing images. This is why this first level of mise en scène is ultimately important, notably for video because anything related to the characteristics of a shot such as its shot size, angle, focal length, depth of field or point of view comes from a character using a device, typically a consumer product such as a laptop with a webcam or cellphone with a camera. This limits what is possible to film and how it can be filmed, thus significantly impacting how individual shots can be transposed into the *screenlife* environment, the computer screen.

The second level of the *screenlife* mise en scène is concerned with how various combinations of media – video, photo and text – are combined within individual virtual windows to tell the story. The use of multiple video frames displayed within video call virtual windows for applications such

as *FaceTime* and *Skype* function to transpose the shot reverse-shot and subjective point-of-view shots. The use of reframings within *Searching* permits the transpositions of these two cinematic conventions to appear more similar to their traditional representations because individual video frames within a virtual window can be isolated and resized to match shot sizes. This is in contrast to the other two *screenlife* films that show the entire screen space throughout their duration, so there is often a significant different between shot sizes. Photos simultaneously displayed provide multiple images to compare, contrast and make certain conclusions about the characters shown in the photos. One photo can be compared to several others to verify the identity of a character with *Google Image Search*, or a group of photos as an ensemble can portray a certain trend such as apparent friendships between friends on *Facebook*. Much of the text displayed onscreen reveals the text message conversations between characters. These conversations can be happening in the present moment or can be prior conversations revisited. The three main visual media on the computer screens – video, photo and text – can also be combined within the same virtual window to reflect the multimedia nature of most social media that permits characters to communicate video, photo and text within a single instant messaging application. This multimedia approach to communication is not unique to *screenlife* films because multimedia interpersonal communication through social media has also become more and more present in traditionally shot films in the past 15 to 20 years. However, *screenlife* films are primarily built around this mode of communication between characters using multiple media, whereas verbal communication without mediation has dominated the bulk of interpersonal communication in traditional films for more than 90 years. In *screenlife* films, verbal communication is still dominant, but it is typically mediated over the internet using video call applications while also engaging with text messages and pre-recorded videos, photos and text on social media. Thus, the transposition of interpersonal communication into the *screenlife* environment can be characterized by its evolution from the sequential nature of verbal dialogue between characters in traditionally shot films to a simultaneous mode of communication between characters who can use not only their voice, but also text, photo and video within applications such as *Facebook*, *Instagram*, *Tumblr*, Twitter and *YouTube* to express themselves.

Finally, the third level of the *screenlife* mise en scène primarily demonstrates the various combinations of juxtapositions between individual media in the first level displayed within two or more virtual windows to transpose certain cinematic conventions and storytelling techniques. Perhaps the most common transposition is created from the juxtapositions that emulate the subjective point-of-view shot in a simultaneous way between images showing a character existing in the *present temporality* looking at the computer screen in the video frame of a video call virtual window and the images being looked at in another virtual window that often represent a *past temporality* because the video, photo or text displayed had been created in the past. Cross-cutting is also transposed into separate virtual windows by displaying separate video frames in the *present temporality*. These simultaneously displayed video frames can also overlap at times giving this transposition a unique collage-like quality. Multiple text message conversations in separate virtual windows are also presented simultaneously through applications such as *Messages* and the built-in text messengers for *Facebook* and *Skype*. These text message conversations representing the *present temporality* can also be displayed simultaneously with a verbal conversation shown in a video call virtual window also sharing the *present temporality*. Icons on the desktop can serve as decoration to characterize a protagonist, but also as portals that can lead to important information or turning points within a story such as the inciting incident. And the overlapping of virtual windows can create new aspect ratios for video frames that make these images either narrower or more square-like. This third level is ultimately important because it merges the other two levels of the *screenlife* mise en scène – the individual media and virtual windows – primarily to transpose two important cinematic conventions, the subjective point-of-view shot and cross-cut editing, onto the computer screen in a multiple, simultaneous and overlapping way.

The detailed and laborious descriptions of how the GUIs and individual media are used within the *screenlife* film frame in this chapter have not only served to define the mise en scène by dividing it into three separate levels to better understand how computers, their operating systems (mac*OS*, *Windows*), their applications (*Facebook*, *Skype*, *Messages*, etc.) and interface technologies (GUIs, webcams, keyboards, trackpads, etc.) converge to display images that fill the film frame, they have also revealed several different ways that scenes can now be staged to tell

stories on a computer screen. Transposing cinematic conventions and storytelling techniques into each of the three defined levels effectively replaces traditional mise en scène, the ways that objects had been organized within a physical three-dimensional space in most traditionally shot films. Each example in this chapter has demonstrated different ways narrative can be transposed into the three levels of the *screenlife* mise en scène which when all added up reveals a new narrative toolbox a filmmaker has at his or her disposal to stage stories onto the flat two-dimensional space of a computer screen.

Chapter 3: The transposition of clues and red herrings into *screenlife* films

Much of the last chapter presented how certain narrative cinematic conventions and some storytelling techniques are transposed into the graphical user interface (GUI) environments of the computer screens represented in the three *screenlife* films. These screens representing the diegesis are characterized by a mise en scène that can be divided into three levels. Each level – the individual media (defined by a character and his or her device), the individual virtual window (defined by its application's GUI), the individual screen (defined by its operating system's GUI) – has the potential to alter the interpretation of a scene. This next chapter is a continuation of the description and analysis of the transposition of narration techniques into the GUIs, but with a focus on specific mystery fiction techniques, notably the clue and the red herring. Clues and red herrings have been important mystery fiction techniques in both novels and traditionally shot films. While the novel is limited to text and the traditional film is typically constrained to showing one shot, one perspective at a time, the graphical user interfaces (GUIs) represented in the three *screenlife* films demonstrate new creative possibilities for revealing clues and red herrings within the three levels of the *screenlife* mise en scène because they are defined by the GUIs' abilities to display multiple media simultaneously within virtual windows. Thus, the GUIs' inherent capacity to present multiple streams of information simultaneously – some of which could be true while others could be false – demonstrates that these types of display interface technologies have a fundamental affinity with the mystery genre because this genre has a built-in audience expectation to present clues and red herrings and the GUIs represented in these *screenlife* films can present these types of information not only in their traditional sequential manner, but also in a simultaneous way that instantly adds new layers to the detection process for the spectator.

In order to address the impact of the GUIs, this chapter will examine how different types of clues and red herrings operating on the first level of the *screenlife* mise en scène take form within frames (video, photo) and text zones. How each of these frames and zones functions on the second level of the mise en scène, the virtual window they are embedded within, will also be

confronted. As well, this study will describe and analyze how these clues and red herrings contained in frames and zones operate within the entire screen space, the third level of the mise en scène, which can include juxtapositions with other frames and zones in other virtual windows. It is these juxtapositions that can significantly change how a clue or red herring is presented, perceived, interpreted. Thus, the descriptions and analyses are aimed at demonstrating how clues and red herrings within GUI environments operate in the three *screenlife* films in a simultaneous way with multiple other media present within the mise en scène. This will demonstrate how the GUIs in these three *screenlife* films offer new ways to present clues and red herrings within the mystery fiction genre. Different types of clues and red herrings have different functions, so an important process in this analysis is also identifying and defining the types of clues and red herrings present in order to evaluate how each of them functions after being transposed into the multiple and simultaneous GUI environments of the *screenlife* films.

Clues and red herrings are particularly important to observe within the *screenlife* environment because they provide the information that the detectives must evaluate if they hope to resolve a given mystery. The detectives in the three *screenlife* films are not typical detectives working for police departments or private investigators hired to solve a case. The detective within each of these films is typically the protagonist, a seemingly ordinary citizen, who plays the role of an amateur detective looking for clues to solve a mystery. The protagonist or character playing the amateur detective may assume this role from the inciting incident to the climax or it may just be for a shorter period during the film. Regardless of the duration, this amateur sleuthing is not typical of traditional representations of detective work in novels and narrative films because the detection is exclusively limited to what the protagonist can observe from their computer screen as they try to navigate between various websites and social media on the internet or files and folders within an internal hard drive in search of answers to a mystery. The mystery could be related to a missing person or the identity of an anonymous person. Each step in the investigation conducted by a protagonist is displayed on their computer screen, the screen that the spectator is also watching at the same time. The protagonist or detective is ultimately searching for clues, but can also encounter red herrings that have the same visual appearance of clues on the screen, but serve an opposite role aimed at derailing the investigation. Each clue or red herring is typically

located within a frame (video, photo) or text zone or a combination of them within the GUI of a virtual window or a series of virtual windows.

Before identifying the types of clues and red herrings, it is also important to identify each mystery that is presented within each film. Once a mystery has been identified and set in motion, only then can the detective (and the spectator) start to look for clues and try to filter out red herrings. If the detective (or the spectator) knows the crime, he or she can enter into a mode of detection in search of clues that have links to its resolution. However, it is also important to note that just because there is a clue does not mean that it offers sufficient information to solve the mystery because a resolution is typically based on the correct interpretation of several clues, not just one. In this analysis, it is nevertheless important to identify each mystery, so that it is possible to detect or target pertinent information related to it. The goal of the amateur detective (and the spectator should he or she choose to participate) in these mystery fiction plots is to correctly interpret the clues and to reject the red herrings. Thus, due to the simultaneous presentation of multiple media within the mise en scène of these *screenlife* films, an important part of the detection and interpretation process of a clue is to evaluate any individual media – video, photo or text – located within a frame or zone (that potentially represents a clue) and try to determine if any other media embedded within other frames and zones within its GUI environment changes its interpretation. It is this multiple and simultaneous nature of GUIs, as described by Anne Friedberg, that makes the presentation and interpretation of clues (and red herrings) unique in *screenlife* films in relation to the traditional ways that clues have been presented in novels and traditionally shot films.

The mysteries in each *screenlife* film

In *Unfriended*, there are two important mysteries to be resolved. The first is to find out who are the people responsible for the video that led to the suicide of Laura Barns. This mystery is revealed in a text published on the site *LiveLeak* that specifies that Laura's classmates posted an embarrassing video online that led to her suicide (fig. 88). Throughout the film, clues are revealed that suggest whom the characters responsible for the video might be. This mystery is unique because no character in the film takes on the role of detective for this mystery. One of the

antagonists reveals clues about who is responsible, but this antagonist (Laura Barns' phantom) is not operating as a detective. The protagonist Blaire is also not the detective for this mystery because at the end of the film it is revealed that she was responsible for filming the embarrassing video of Laura.

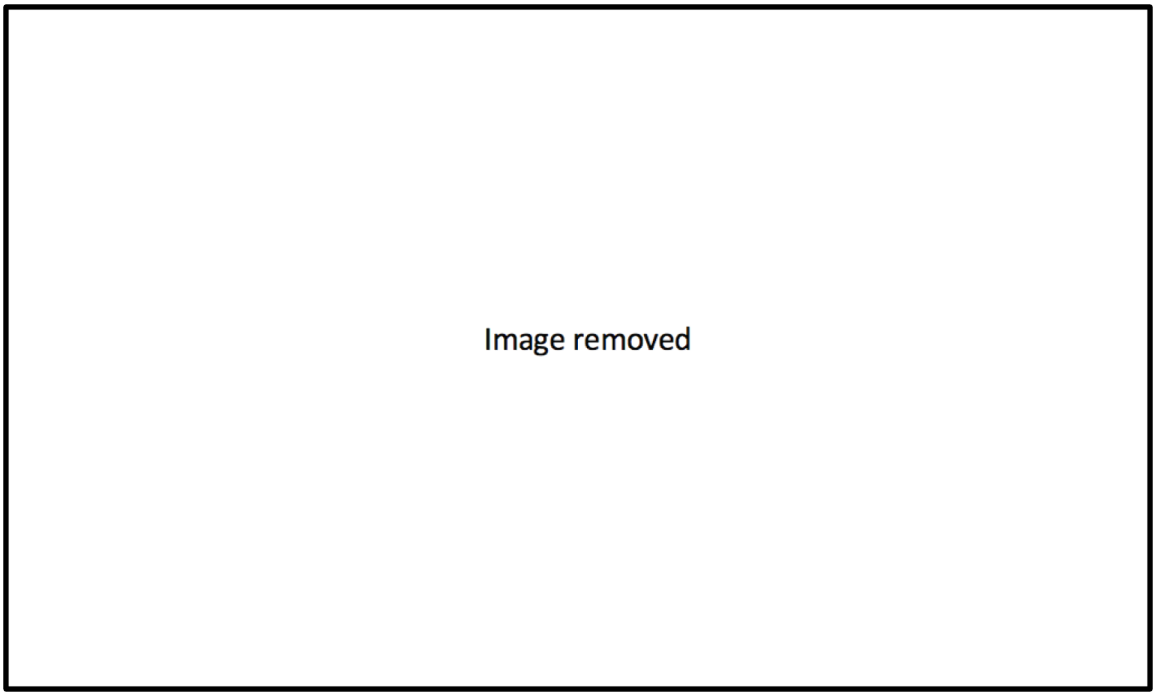

Figure 88. – Frame from the film *Unfriended* (Leo Gabriadze, 2014) at 00 min 43 s. The mystery is revealed in the text which suggests that it is Laura Barns classmates who were responsible for her suicide, but it's not clear who exactly they are. ©Bazelevs Company.

The second mystery in *Unfriended* is the true identity of the antagonist, the person who has been hiding behind Laura Barns' social media accounts who has not only been threatening Blaire and her friends, but also revealing them to be involved in the cyberbullying of Laura that led to her suicide. The clues (and red herrings) suggest several possibilities as to the true identity of this mysterious person. Blaire, the protagonist, in this case, plays the role of an amateur detective in trying to figure out who it is as she tries to find out more information about the identity of the person using Laura Barns' social media accounts to threaten her and her friends as well as to reveal embarrassing and incriminating information about them. The mystery in *Unfriended: Dark Web* centres around videos files showing kidnapped women that Matias discovers in a hidden

folder on a hard drive within the computer he has stolen. Questions surrounding the actual owner of the laptop and the people responsible for the kidnappings of the women in the videos are at the centre of this mystery. However, while Matias, the protagonist, plays the role of an amateur detective, it is a collective effort amongst him and his friends that is driving the investigation (while communicating on *Skype*) into the identities of those responsible for the kidnapped women and the laptop. Finally, the mystery in *Searching* is more of a classical type of *whodunnit* because the amateur detective, David Kim, wants to find out where his daughter Margot is after she has gone missing as well as track down those who are responsible for her disappearance.

What is a clue?

Each of the mystery plots within the three *screenlife* films uses the clue much like most traditional mystery fiction to reveal information (regardless of how discretely it is communicated) that is relevant to the solution. The use of the clue as a means to solve a mystery within a fictional story rose in popularity in the 1920s American and English mystery novel. However, the origin of the clue in its current form dates back to a mid-nineteenth century Edgar Allen Poe novel.

> It is from here that the modern use of the term in crime fiction comes; while clues as literary devices appear sporadically in earlier crime fiction, the word itself seems to have been introduced to the genre – with the spelling "clew" – by Edgar Allan Poe in the "The Murders in the Rue Morgue" (1841). A clue in this sense is a thread that the detective can follow and thereby find the exit from a maze-like murder mystery. Or to demetaphorise this statement: a clue is a piece of information whose correct interpretation, along with that of other clues, together with which it forms a pattern, enables the detective to identify the murderer (Gulddal 2020, 195).

Jesper Gulddal adds that the clue "is the means by which the detective solves the mystery, the device that keeps the plot together, the interface that draws in the reader" (Gulddal 2020, 194). Gulddal's analysis of the clue is primarily based on the detective novel which represents the clue in a text format on a page. In the three *screenlife* films, clues take form within individual media such as video, photo and text on the screen, as well as speech within the sound. And while these *screenlife* films use text extensively to reveal clues and red herrings like the novel, the use of text much like the video, photo and speech are all formed by the characters and their devices in each film. The details within individual media are defined by the representations of the mouths, bodies and hand gestures of individual characters that manipulate the interfaces of their devices rather

than by representations from a less subjective, more objective point of view that is common in more traditionally shot films where the camera does not represent a device within the diegesis, it exists outside of it.

Regardless of individual media, all clues share a unique characteristic. They are the pieces of evidence that either directly or indirectly point to a character's involvement in a crime, often a murder. Marie F. Rodell summarizes clues as "the traces of guilt which the murderer leaves behind him" (Rodell 1946, 264). The clue is therefore an object or an action, if interpreted correctly, that shows or could suggest that a suspect is guilty of a crime. The fact that the spectator can watch, read and listen to the clues shown on a computer screen in a very similar way as the detective, in the *screenlife* film, means that he or she is granted the opportunity to interpret them in a similar way as the detective might do in the story. This tradition, within mystery fiction, of putting the clues, also referred to as interactive clues, into the story so that the reader can try to solve the mystery reflects a genre convention known as "fair play" that also originates from the English and American detective novel of the 1920s.

> In spite of Doyle's experiments, it is not until the interwar period, in the so-called Golden Age of detective fiction, that the interactive clue reaches its mature form and becomes the central device of the genre. The detective story as a result acquires a new, ludic dimension. Captured in genre designations such as the "whodunit" and the "clue-puzzle" as well as in frequent comparisons of detective fiction to crosswords, this understanding implies that the storyline is a game devised by the author as a challenge to the reader, and that the reader is given an active, investigative role, competing to reach the correct interpretation of the clues before the detective. "Fair play" thereby becomes a core value of the genre. The attempts in the 1920s to codify the detective genre stress that no clue must be withheld from the reader (Gulddal 2020, 196).

This convention of giving the spectator access to the same clues as the detective is in part ensured by the fact that the spectator is looking at the protagonist's screen. The protagonist in each of the three *screenlife* films takes on a role as an amateur detective, to varying degrees, at various points in each story. Regardless of whether or not the protagonist is investigating the same mystery that the spectator is trying to resolve, all clues that the spectator can see can also be seen by the protagonist, unless, of course, he or she is not looking at their screen or the clue is of an extra-diegetic nature, meaning it is uniquely meant for the spectator. These onscreen interactive clues, if interpreted correctly (which is the main challenge), often, but not always, offer the spectator

an opportunity to solve the mystery before the solution is revealed at the conclusion of the film. However, to make detection challenging for the spectator, the correct interpretation of each clue is often intentionally made difficult by attempting to hide its true meaning from the spectator. Mary F. Rodell insists that a good clue is "one which does in fact point in the right direction, but which seems at first to point in the wrong direction, to mean something other than it does, or to point nowhere at all" (Rodell 1946, 264-265). This encourages the idea that a good clue should not necessarily communicate its true meaning at first glance. Gulddal insinuates that this type of misleading clue can be better understood if it is interpreted as a linguistic sign by suggesting that the author can alter what is initially being signified from a signifier whenever presenting a clue in order to camouflage its real meaning. "The clue is seen as analogous to a linguistic sign insofar as it combines a physical form (signifier) and a meaning (signified) that needs to be uncovered (e.g. Malmgren 2001: 13–25; Moretti 1988: 145–46)" (Gulddal 2020, 195). Gulddal adds that the interpretation of a clue is a contextual operation that requires the detective or the spectator to make connections and comparisons between a given clue and other clues as well as all other details that relate to the crime such as the suspects, their biographies, their psychological profiles, their alibis and their schedule (Gulddal 2020, 195-196). This contextual operation, according to Gulddal, is a process that reflects abductive reasoning on behalf of the detective in an attempt to better understand the true meaning behind a clue.

> From within the semiotic tradition, Umberto Eco has acknowledged this point by suggesting that the interpretation of clues must be understood as an instance of what Charles Sanders Peirce calls abductive reasoning. As Eco argues, the clue cannot simply be decoded or, as Sherlock Holmes would have it, deduced, but allows the detective to posit, in the manner of an educated guess, a hypothesis that explains it (1983) (Gulddal 2020, 195).

In *screenlife* films, the contextual operation that involves abductive reasoning with the goal of deriving a hypothesis about the meaning of a clue is not just about comparing it to other clues or relevant information in the moments preceding and proceeding the appearance of the given clue onscreen. The contextual operation is also pertinent to the screen space, the mise en scène, within which the clue exists while it is displayed, most notably because of the GUI environments used to embed a clue are typically characterized by the multiple and the simultaneous (Friedberg 2006, 243). The multiple and the simultaneous, in the case of *screenlife* films, are referring to the

other frames (video, photo) and text zones that are displayed while a specific clue is also shown within the GUI environments. These other frames and zones have to be taken into consideration while performing the contextual operation, the abductive reasoning. As mentioned in the previous chapter, the juxtapositions between frames (video, photo) and text zones within virtual windows can create new meaning, can make it possible to transpose certain cinematic conventions onto the computer screen. Thus, a contextual analysis of the GUI environment could also be important when trying to correctly interpret clues contained within an individual media situated amongst other media within the same screen space because juxtaposition between individual media can change meaning, can create new significations.

Tangible clues

Clues are typically presented on a computer screen within one or more of its three principal visual media: video, photography or text. Within any given media, a clue can function in a variety of ways. In the three *screenlife* films, tangible, intangible and extra-diegetic clues are the three main clue types that will be described and analyzed. A tangible clue, according to Rodell, is often a material object, but sometimes an action, which are "those actual objects the forgetful murderer leaves behind him, and any other things which can be detected by any other senses. A scent of a particular perfume, a tune whistled at a significant moment, a strange taste to a bit of food, or something odd about the texture of a cloth or leather — these may all be clues. (Rodell 1946, 265)." This definition of a tangible clue that Rodell proposes comes from her analysis of the mystery novel. The written format of the novel can effectively transmit the inner thoughts of the detective to the reader, notably concerning what he or she thinks about a clue. The detective's perceptions or interpretations of a clue, which are filtered through his or her senses, are transposed into words on a page by the author. Rodell elaborates on this aspect of how tangible clues can be represented within the novel from a subjective point of view.

> The reader sees, hears, tastes, smells or feels these clues only as they are described to him. A whiff of perfume must be characterized if it is to mean anything to the reader, who cannot smell it from the page: it may be pungent, or sickeningly sweet; it may be rose or jasmine or carnation; or more subtly, it may evoke certain reactions in the detective, which are always the same whenever he smells that particular perfume. In

> that case, the reader recognizes the recurrence of the clue by the way in which it affects the detective, not by the aroma of the clue itself (Rodell 1946, 265).

Having this insight into what the detective thinks as he or she reacts to a clue means that the meaning of a clue can be altered in a significant way in the novel by the expressed perceptions of the detective. In *screenlife* films and more traditionally shot films, the voice-over can serve a similar purpose by offering a vocalization of a character's inner thoughts, but in the three *screenlife* films, voice over is not used. However, certain verbal and written reactions to clues and red herrings can offer insights into how a clue or red herring is perceived by the amateur detective character of the *screenlife* film. How this character interprets a clue can ultimately change how the spectator interprets the same clue. For example, the protagonists in each of the three *screenlife* films who play the role of an amateur detective in varying degrees share their thoughts or opinions about a specific clue or red herring when speaking with other characters during a *Skype* or *FaceTime* video call, or when typing messages in an instant messenger such as *Messages*. In *Searching*, David, the amateur detective, is told verbally by Detective Vick during a phone call that his daughter had sent $2,500 dollars to herself using a *Venmo* account (fig. 89).

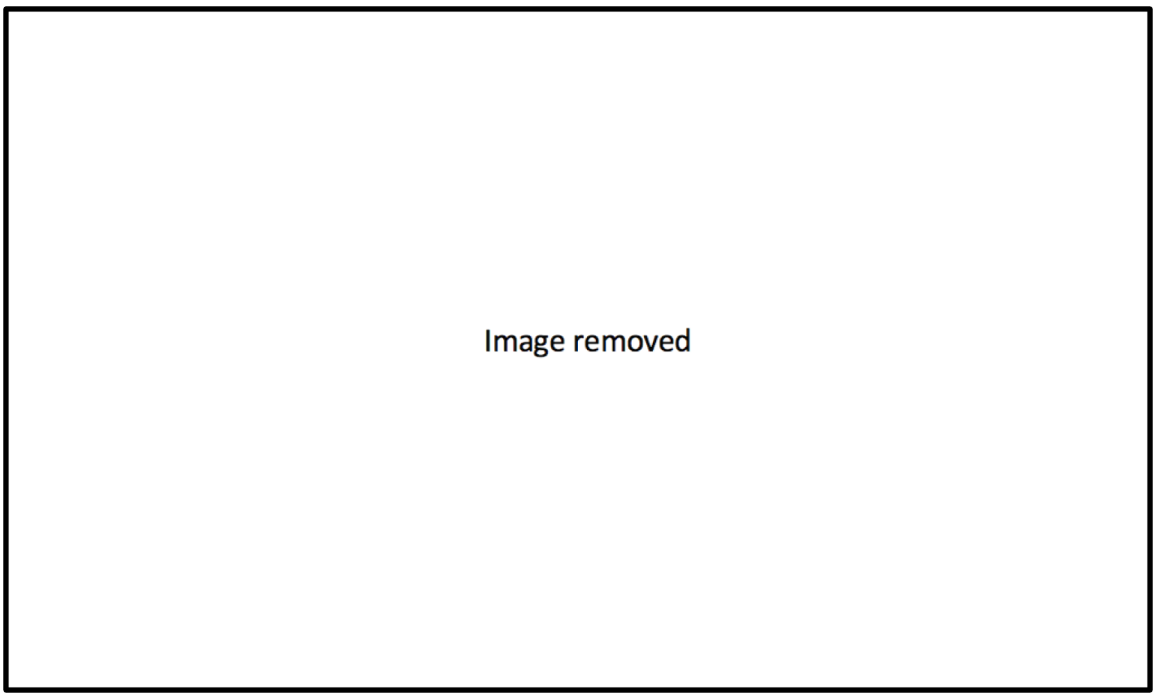

Figure 89. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 38 min 42 s. David's reaction to information related to the mystery can change how this information is interpreted by the spectator. ©Screen Gems.

He replies to her, "What was she doing, running a laundering scheme?" David's reaction to what appears to be a tangible clue (that turns out to be a red herring) reveals that he thinks that his daughter might have been involved in a nefarious money operation. He could have shown more skepticism toward this information, he could have asked to see more details, but instead his first reaction is that he thinks Margot could have been involved in a criminal activity involving cash. This example shows how the amateur detective's interpretation of a clue or red herring can alter how evidence can be perceived. This example, however, is not rooted within a visual media such text, photography or video that appears on the screen. The amateur detective, David Kim, is shown within a *FaceTime* video frame on his *MacBook* display interface, but it is his speech within the audio track that could alter how the spectator could interpret the information about his daughter from Detective Vick. Speaking verbally is how detectives in films have traditionally expressed their thoughts externally that could influence the spectator's interpretation of information, notably clues or red herrings.

However, with the three *screenlife* films, much more communication between characters is expressed through text messages, a visual, not aural, medium. An example of this occurs in *Unfriended* after Blaire unfriends the Laura Barns' *Facebook* account. In response to the unfriending, Blaire receives a message from Laura's account stating, "u should not have done that Blaire. I want your help" (fig. 90). However, because Laura Barns had already committed suicide, Blaire suspects that it might have been Val Rommel who sent this message. Blaire writes back asking, "Val is this you????" This message reveals that Blaire thinks that it could have been Val who is sending the message when in reality it is Laura's phantom, a ghost-like figure who has the ability to alternate between a physical and invisible presence. The origin of the message from the Laura Barns *Facebook* account is misinterpreted by Blaire which ultimately alters the perception of who the mysterious person behind this social media account could be.

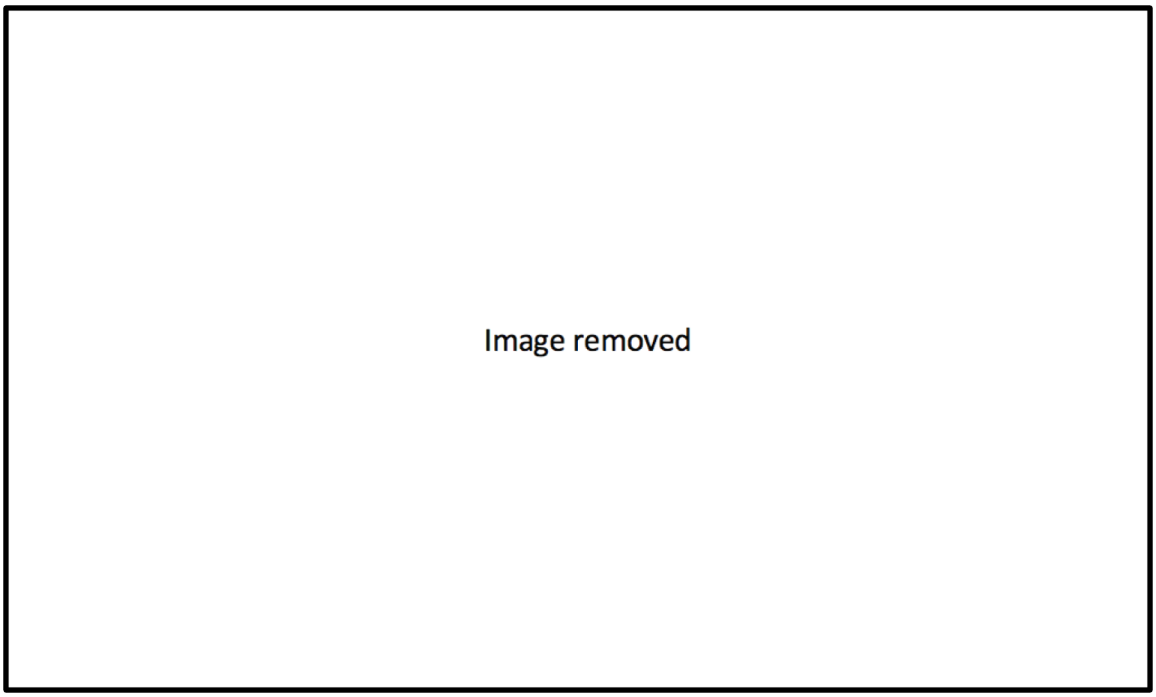

Figure 90. – Frame from the film *Unfriended* (Leo Gabriadze, 2014) at 19 min 02 s. How Blaire interprets or misinterprets text messages from the Laura Barns *Facebook* account can change how other characters are perceived. ©Bazelevs Company.

This example shows how inner thoughts of characters can operate purely on a visual level on the computer screen. The use of text is much like the novel where dialogue is not spoken, but written on a page. However, unlike the novel, this example is a representation of a text message rather than speech. The text operates visually on the first level of the *screenlife* mise en scène because Blaire's text message is located within a text zone, but it also operates on the second level because of the prior messages sent by the Laura Barns *Facebook* account are simultaneously located in other text zones within the same *Facebook* virtual window. These prior messages displayed simultaneously in separate text zones are essential in setting up the response from Blaire that potentially derails the investigation away from the real antagonist.

Regardless of how the tangible clue is interpreted by a detective character, Rodell's definition of this clue type can be transposed from the detective novel into the GUI environment of the *screenlife* film as long as these clues retain their characteristic as "actual objects the forgetful murderer leaves behind him" (Rodell 1946, 265). For *screenlife* films, these objects that Rodell

talks about are not exactly the traditional physical objects directly left behind by a "forgetful murderer," rather they are objects both physical (analog) and digital that have either been filmed, recorded, photographed, copied or typed into a digital format and then displayed onto the screen space of the protagonist's (or another character's) device such as a laptop or cellphone. These onscreen mediated objects are signifiers that refer to what the murderer (or criminal) has left behind once they have been transposed onto the screen. Thus, the clue is always a mediated form of the original object or action that represents the tangible clue because all of the imagery, text and sound in these films are produced by the digital devices used by characters in the stories.

One of the first tangible clues presented for the mystery in *Unfriended* involving the identities of the classmates who filmed and distributed the embarrassing video of Laura Barns is when a *YouTube* video is played at the start of the film on Blaire's computer screen. The video shows Laura pushing another woman (fig. 91).

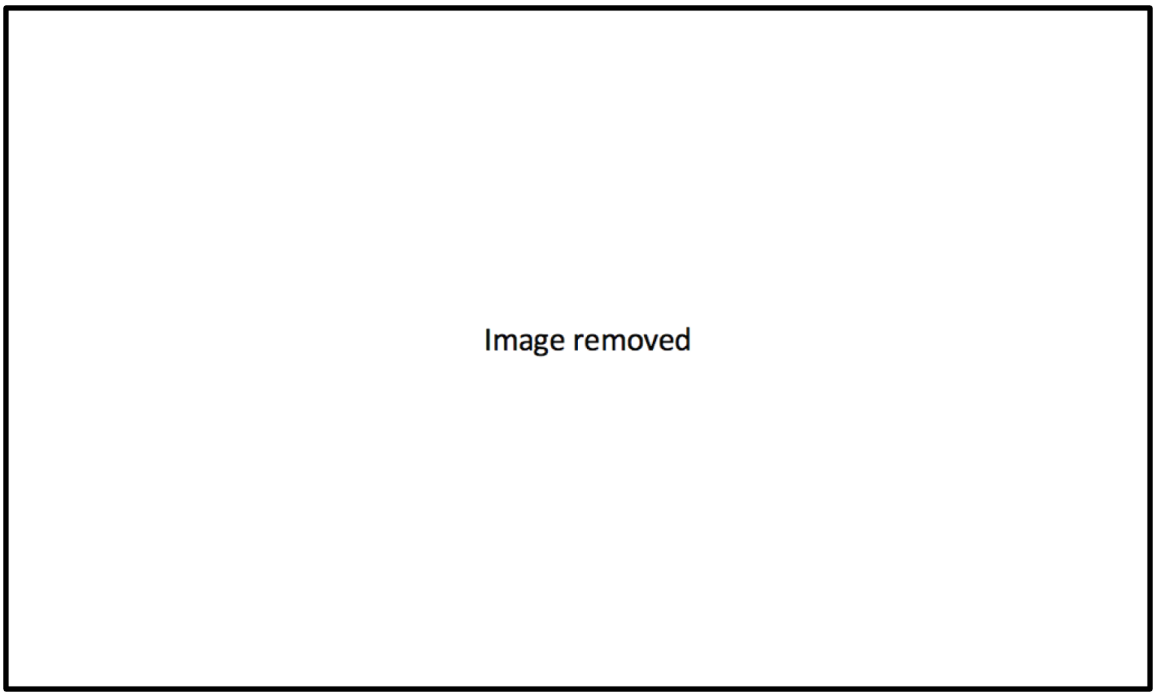

Figure 91. – Frame from the film *Unfriended* (Leo Gabriadze, 2014) at 1 min 39 s. The shaky amateur style of the video filmed from a cellphone camera prevents the spectator from clearly seeing who is in the image. ©Bazelevs Company.

It is not obvious who the woman is because she is shown very briefly in shadows from a side angle that does not clearly show her face. As well, up until this point less than two minutes into the film, the spectator has yet to see an image of Blaire's face because she is physically positioned in front of the screen being shown that has yet to display an image of her face. The spectator sees what is on this screen, but not who is looking at it within the diegesis at the same time. The identity of Laura also has yet to be established. The video just shows one teenager pushing another, so the two people involved in this altercation and the meaning behind it is not clear. However, once it is revealed that Blaire filmed Laura's embarrassing video later that night, one can reinterpret this part of the *YouTube* video showing the altercation between Blaire and Laura as an important clue. It suggests that the motivation for filming the video could have been an act of revenge because Blaire was perhaps embarrassed by the fact that she was pushed by Laura in front of her friends during a party. This clue which is shown in the video works well as a clue for the mystery because its meaning is not obvious at first viewing, but it becomes more apparent after it is revealed that Blaire filmed the embarrassing video of Laura. This clue functions primarily in the first level of the *screenlife* mise en scène because it shows, for a very brief moment within the video, that it is Blaire who is pushed down by Laura Barns which establishes the motive. However, within the *YouTube* virtual window that this video is located within, the title of the video is "LAURA BARNS KILL URSELF" published by a *YouTube* account named "laura exposed." The association between the brief images of Blaire in a video that encourages Laura to kill herself in its title is another clue that links Blaire to Laura's death. Thus, this clue also functions on the second-level because of the juxtaposition between the video showing Blaire and the text revealing the title of the video are both located within the same virtual window.

What can also be addressed from this example of a tangible clue that also implicates all clue types (tangible, intangible, extradiegetic) is that because the *screenlife* films are representations of screen recordings that only show mediated subjects and objects, clues are never going to be physical objects in the traditional sense. Whether it is video, audio, photo or text, each of these media forms signifiers that have the potential to refer to physical objects. This is in contrast to most films that capture images and sounds from the physical world directly. While the traditionally shot film is directly referring to real physical objects, objects in the *screenlife* films

are referring to objects that have already been filmed, photographed or typed on the screen. This somewhat complicates the definition of a tangible clue because what is on a screen is not necessarily tangible in the traditional sense. The digital information that represents videos, photos and text can be touched, therefore it is tangible, but there is not the same physical analogous relationship between what is seen in the images and what one would feel if they touched the actual data that produces them. Therefore, it is very important to not get confused about the term tangible. And one must also not forget that the term tangible clue was published by Rodell in 1946 before digital images and sounds were a part of mainstream western culture.

Intangible clues

While tangible clues are the objects left behind by the criminal, intangible clues, according to Rodell, have more to do with observations of the behaviours of a suspect that might suggest that he or she carried out a crime. It is the interpretation of these behaviours in relation to other clues and contextual information that can help to correctly interpret the intangible clue and make the connection between it, the crime and the criminal. In 1946, Rodell points to the importance of the intangible clue in detective fiction because it was around the time when science had already been playing an important role in police investigations of objects at the crime scene otherwise referred to as tangible clues. To put the history of crime scene science into perspective, Hans Gross published the first book on forensic science in 1893 (Bell 2008, 192) and one of the first professional forensic science societies, the American Society of Questioned Document Examiners, informally began in 1913, but was not officially founded until 1942 (Bell 2008, 198). Thus, ever since the turn of the 20th century, the problem with tangible clues is that they can be analyzed at the microscopic level with forensic science technologies accessible by specialists to detect traces left behind by the criminal. These modern advancements in forensic investigative techniques make detection much less accessible for the reader to participate in the detection of clues in a story because they do not have physical access to the clues, they are typically not experts in this field of crime science and cannot use specific forensic investigative technologies on the clues that can detect evidence such as DNA. Therefore, as a literary technique, to maintain the concept of "fair play" within the detective novel, the use of intangible clues ensure that the detective and the spectator are at a more even playing field when it comes to detection and solving the crime.

> The intangible clues become more and more important in mystery fiction as murderers realize that fingerprints are dangerous and that science can unravel the secrets of even the most unpromising physical clues. Moreover, from the writer's point of view, the tangible clue grows less and less effective as science progresses, for if the laboratory unaided can deduce from a man's pockets where he has lived and what work he has done, too little is left to exercise the deductive capacities of both fictional detective and reader (Rodell 1946, 268).

If the tangible clues in the three *screenlife* films were analyzed in a laboratory, there is a strong possibility that forensic analysis would be able to identify who the criminals, murderers and antagonists are in each of the mysteries. In *Unfriended* and *Unfriended: Dark Web*, the young victims, protagonists, in both stories conduct their own amateur investigations because the police are not or cannot be involved for one reason or another. In *Searching*, the local police are carrying out the investigation, but it is being corrupted by its chief investigator, Detective Vick, the mother of the teenager responsible for Margot's disappearance. Vick tampered with evidence and altered facts to protect her son. Had there been a thorough forensic analysis performed on certain tangible clues by the police such as Margot's computer and the $2,500 found in her car, it is possible that Vick's son could have become a suspect because his fingerprints were likely on the money in the car and the *YouCast Now* account he used to communicate with Margot could have been traced back to his computer. Because the tangible clues in all three *screenlife* films were denied proper laboratory analysis, the intangible clues became more important. The tangible clues can still be interpreted by the detective (and the spectator), but due to the limitations and constraints of the audio-visual interface, the computer screen and speakers, the investigation can only be observed by the spectator with his or her eyes and ears. The fact that the interpretation of clues is limited to the observed sights and sounds of the screens and speakers means that the detective and spectator can participate in the investigation in a very similar way which is the foundation of "fair play." Thus, when the only tools to analyze the evidence are limited to what can be observed on the screen and heard from the speakers, the behaviours of each character become more important when trying to analyze clues, especially in this modern context where the analysis of tangible clues would normally be seen through forensic investigation techniques that permit investigators to see the traces left behind by the "criminal" much more clearly.

Intangible clues: Basic character traits

Rodell divides intangible clues into two groups, basic character traits and behaviour patterns. Basic character traits are the behaviours of a character in the form of specific actions, speech or written text that could potentially reveal a motivation for a crime or that this character could have been involved in it (Rodell 1946, 269). These types of intangible clues that show basic character traits, according to Rodell, demonstrate the "temperamental likelihood or tendency to kill" (Rodell 1946, 269) which means that for certain characters who are capable of murder, they could be revealed to have violent tendencies or an extreme lack of empathy for others. In the three *screenlife* films, the likelihood or tendency to kill someone is just one of several behavioural characteristics that can be linked to specific crimes or heinous acts where the identity of who did it is under investigation. For example, the potential likelihood to cyberbully is an important consideration in *Unfriended* when trying to figure out which character filmed the embarrassing video of Laura that led to her suicide. Rodell emphasizes that the behaviours and words that reveal certain character traits can help the detective and the reader make a more informed hypothesis about a character's motive and the likelihood that he or she could have been capable of committing a specific crime.

> A man who is jealous of his wife will be more apt to kill her lover than a man indifferent to his wife's behaviour; a man who tries to arrange other people's lives for them is more likely to kill out of rationalized conviction that he is doing good, than one who minds his own business. It is from the actions and words of such suspects, and their behaviour toward other characters in the story, that the detective and the reader deduce the probability of motive in the suspect (Rodell 1946, 269).

The basic character traits of the intangible clue are therefore the behaviours or words that show that a character is capable of either committing a crime or that suggest a motive for the crime. *Unfriended* (2014) and *Searching* (2018) display these behaviours and words coming from the characters responsible for a crime or bad act, so that when the solution to the mystery is unveiled at the end of the film, it is not implausible when a specific character is the person identified as the bad guy, criminal or murderer. How these intangible clues are revealed, especially during the first half or two thirds of a film is also important to note because they are not always presented in an apparent or obvious way. The words or behaviours that show basic character traits could be overlooked by the detective (and the spectator) on first viewing because they seem insignificant,

but when reconsidered at the end of the film when the solution to the mystery is revealed, they serve to demonstrate that this character could have actually done the bad thing or the crime. This is the case with the crimes/bad acts and criminals/bad guys in *Unfriended* and *Searching*, but not for *Unfriended: Dark Web* (2018) because it never reveals the true identities of any of the antagonists at the beginning, middle or end of the film. They remain an enigma throughout the film, so it can be said that this film does not show any intangible clues because the demonstrated behaviour of each criminal is made by the characters who are always hidden behind avatars.

To demonstrate how intangible clues work in *Unfriended* and *Searching*, one must analyze the behaviours and words of the characters guilty of the crimes or bad acts under investigation. During the final minutes of *Unfriended*, it's revealed that Blaire filmed the embarrassing video of Laura Barns, so if one notes her prior behaviours, her actions, what she wrote, what she said throughout the film, these acts reveal a pattern of behaviours and remarks that hint both at what her motive could have been as well as a lack of emotional empathy required to film the embarrassing video of Laura. The first basic character trait (intangible clue) revealed by Blaire is in the first scene when it shows the video of Laura Barns committing suicide with a gun on the *LiveLeak* website on Blaire Lily's computer (fig. 92).

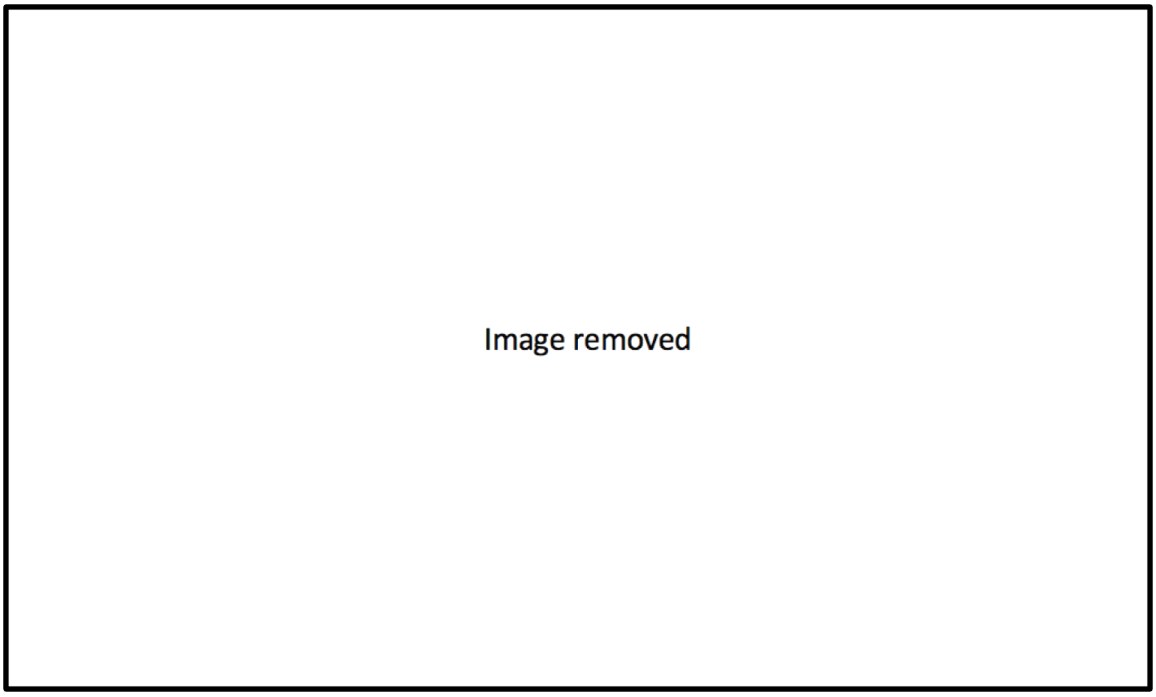

Figure 92. – Frame from the film *Unfriended* (Leo Gabriadze, 2014) at 00 min 59 s. This scene reveals that Blaire watched Laura's suicide on her computer. ©Bazelevs Company.

The spectator has yet to see Blaire's face or her relationship with Laura as a friend and classmate. Regardless, the scene demonstrates that Blaire looked for this video and watched it. It is a very brutal video that shows the teenager shooting herself. We later find out that Laura and Blaire were friends, so this scene reveals that it is very odd that a friend would want to watch the suicide of a friend. This example of an intangible clue is based on who is in front of the GUIs displayed on the computer screen as much as what is contained within them. The fact that the spectator watches the same pixel information that illuminates the protagonist's computer screen means that it is likely that the protagonist (Blaire) is in front of this computer interface. Thus, the protagonist watches the suicide of Laura Barns on her computer which is very suspicious behaviour that could be categorized as an intangible clue.

Another moment in the film that demonstrates behaviour that insinuates guilt is when Blaire deletes her internet history after watching the start of the Laura's embarrassing video (fig. 93). After receiving a message from Laura Barns' *Facebook* account asking her what she is watching, Blaire goes to the *Google Chrome* page that displays her internet history and she deletes the history showing that she visited the *YouTube* page containing this video.

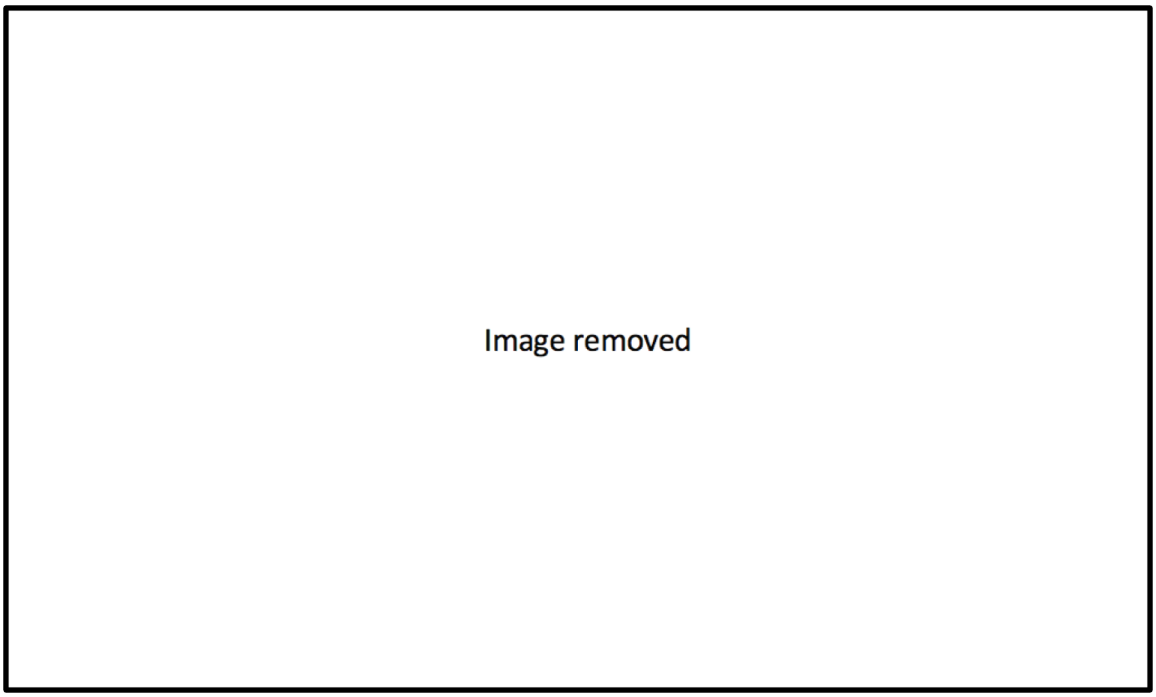

Figure 93. – Frame from the film *Unfriended* (Leo Gabriadze, 2014) at 11 min 28 s. Blaire deleting her internet history insinuates guilt. ©Bazelevs Company.

This reveals that Blaire was not comfortable with the fact that someone, possibly a hacker, saw that she watched the video that reveals that Laura defecated in her shorts when she was drunk. In this example, the GUI interface for the *Google Chrome* history page is relevant to the story because the 15 other webpages listed in the internet history that are displayed reveal that Blaire is much like any other teenager who is interested in popular culture and fashion. It shows that she has visited sites for women's clothing, the Teen Wolf TV series on MTV and a site that explains the lyrics for Johnny Cash's *Spiritual*. However, the one that is clearly inappropriate shows Laura's embarrassing *YouTube* video. This page suggests that Blaire retains an image of normalcy as a teenager for the most part, but within all of this normalcy is a trace of her dark side. Each of the sites that Blaire has visited could be interpreted as existing within a text zone, thus the intangible clue exists within the first level of the mise en scène, a text zone, but also within the context of the second level, a virtual window, that suggests that Blaire is not unlike many other teenagers interested in TV shows and clothing.

Searching also shows several examples of basic character traits within different media contained within GUIs. Throughout this film, two antagonists hide their involvement in Margot's disappearance. The first is Robbie Abolt, the son of Detective Rosemary Vick. Images of his likeness, video and photos showing his face, are limited in the story, but he leaves certain clues, notably traces of his activity on social media. He had written, “Your so good!” in a comment on a *Facebook* post by Margot that lasts for about a second on the screen (fig. 94). This comment within its text zone is not what is meant to grab the attention of the spectator within the shot, it is the "like" button on Margot's *Facebook* page that is clicked by her mother Pam. Thus, Abolt's comment, in the context of this shot during this early moment in the film, is not as important as Pam's "like" because Margot has yet to go missing. However, after Margot’s disappearance it becomes much more important.

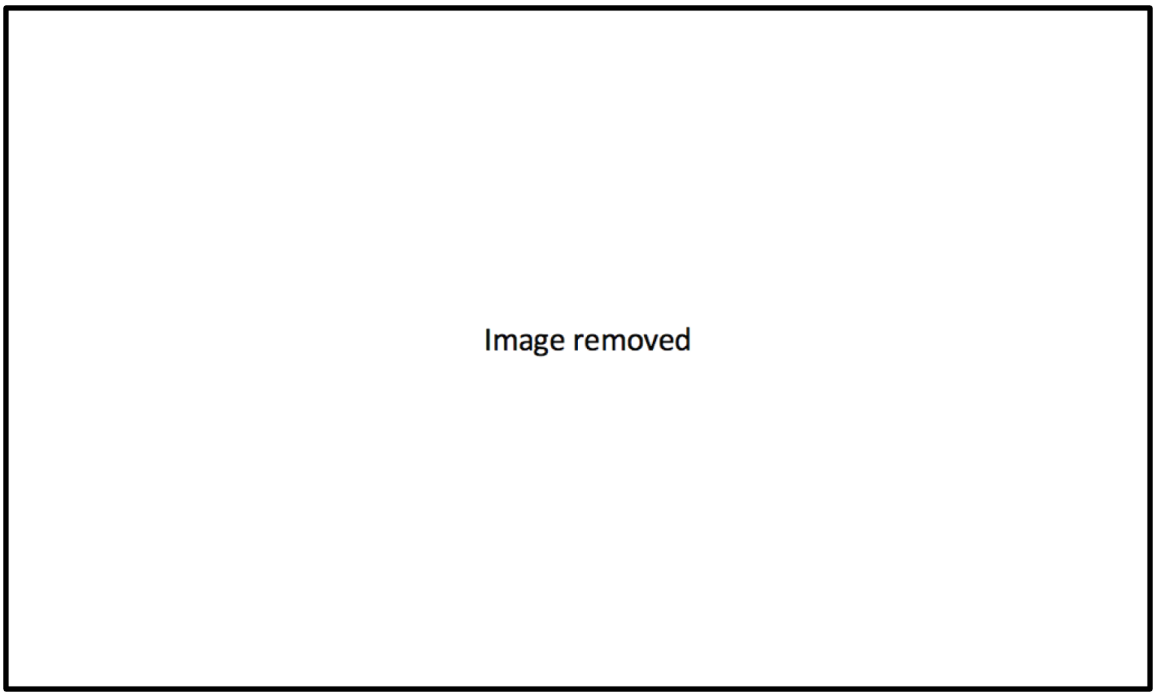

Figure 94. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 4 min 14 s. Robbie’s comment is displayed amongst other text zones and photo frames. ©Screen Gems.

Abolt’s comment shows that he knows Margot and that he left a nice message to show that he likes what she does. This clue doesn't contain this meaning when it is shown four minutes into the movie, but it can be read as basic character trait once it is discovered that Robbie Abolt is

Detective Vick's son and that his crush on Margot led to her disappearance. While the initial theme of the sequence that this shot is contained within is focused on Margot Kim's childhood and her family, the GUI for *Facebook* provides the visual layout, the structure to present multiple frames (video, photo) and text zones simultaneously to not only show Margot playing piano in a video, but also the likes and written comments from other *Facebook* users such as Robbie Abolt. The *Facebook* GUI also displays the names and profile pictures of users to identify them which is, in the context of a mystery story, a quick way of assuring that a suspect has been identified early in a film, so that when his or her name reappears when the identity of the bad guy is revealed, it does not come as a complete surprise.

Abolt is also implicated in another basic character trait, but this intangible clue is not left by Abolt, it had been produced by Pam, Margot's mother, before she died from cancer. On the afternoon of Friday, May 12, 2017, a day after Margot disappeared, Peter Kim asks his brother David by text message if there is anyone who knows Margot's friends, so that he can contact them to find out if any of them might know where she could be. David then boots up his family's old personal computer which has *Windows XP* running as the operating system. He clicks on Pam's account to search for contacts in the *Windows Address Book* application and then opens the "Sunwood Middle" folder which contains the contacts for Margot's classmates during her early high school years. David opens the first four contacts. He ends up calling the fourth student contact as the notes in this file indicate that he was Margot's best friend. However, the second contact, which is displayed in another small virtual window for about two seconds on the screen, shows information about Robbie Abolt. In the notes for this contact, Pam wrote "parent in SVPD, divorced family, had a crush on Margot" (fig. 95).

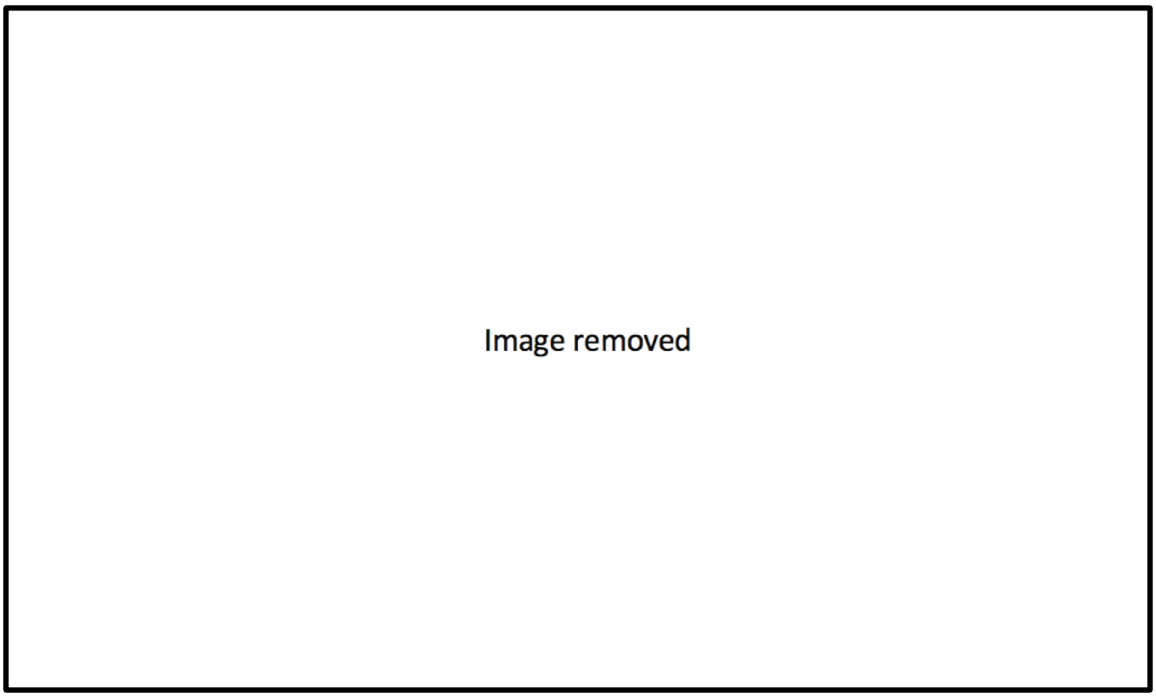

Figure 95. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 20 min 55 s. Pertinent information about Robbie Abolt is revealed in *Address Book*. ©Screen Gems.

This information becomes very relevant later on in the film because it supports the later revelation that Abolt liked Margot which helps to establish his motive to create a false identity in order to befriend her on the social media application *YouCast Now*. The other information in this contact demonstrates the connection between Robbie and his mother, Detective Rosemary Vick. It indicates that Robbie's parents are divorced and that one of his parents was a police officer. The divorce probably explains why Abolt does not have the same last name of his mother, Vick. As well, Vick is also shown as a police officer in a *YouTube* video approximately five minutes later in the film (fig. 96).

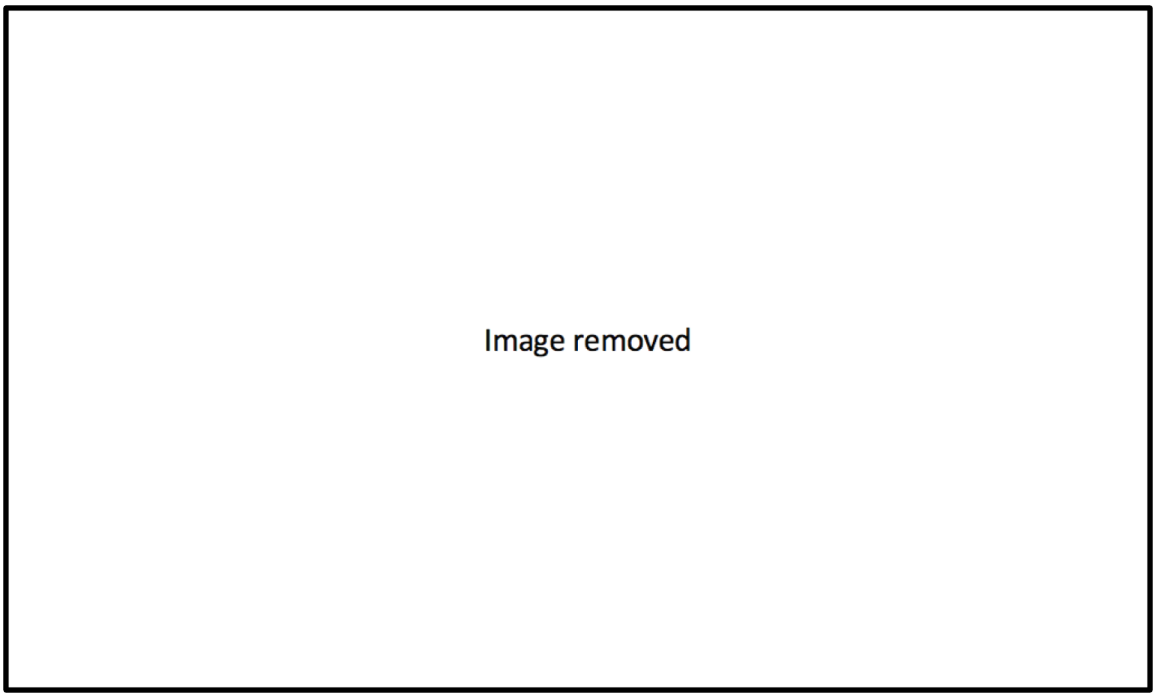

Figure 96. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 25 min 43 s. A text zone within a *YouTube* page confirms that Rosemary Vick was a police officer for the SVPD. ©Screen Gems.

Thus, the notes about Abolt left by Margot's mom help to establish the feelings he had toward Margot and that within a relatively small group of friends, it is likely that Vick is Robbie's mom because there are probably not very many other friends of Margot's that came from a divorced family with one of the parents being a police officer. The GUI for the *Windows Address Book* application that displays the contact information about Robbie Abolt is organized to reveal specifics about this character in a very clear manner by leaving a significant amount of negative space surrounding the most important details that are written in a simple, but efficient way. The contact information is displayed in its own virtual window and this information displayed in text zones is laid out in a logical descending order for it to be read quickly. The first main text zone in the body of the virtual window for Robbie Abolt's contact information reveals his name, the next just below provides specific information that hints at the identity of this mother (Rosemary Vick) and the fact that he had an apparent crush on Margot which helps to establish his motive. While the visual layout of the information for each contact within *Windows Address Book* is not by any

means innovative, this seemingly standard way to present contact information helps to reveal basic character traits about Robbie in a unique way because it is contained within a GUI for an application that had been replaced by *Windows Contacts* in 2007. Thus, it is presenting information within a GUI from another epoch.

Intangible clues: Behaviour patterns

The second type of intangible clue is a behaviour pattern. These types of clues are more or less the physical actions that have the potential to reveal a character's guilt because they match the description of a specific trait already demonstrated by a criminal when committing a crime (Rodell 1946, 269-271). These clues exist when there are certain details about the physical behaviour or appearance of a criminal observed by a witness. Once the detective has been made aware of this, he or she (and the reader) can be on the lookout for these specific details by trying to detect them in other characters. Rodell explains that the problem with this kind of clue in a traditional mystery story is that if the criminal shows a behaviour that implicates him or her in the crime, it could be disappointing for the reader because of the expectation that a criminal would not make such a simple mistake. Because of this, Rodell suggests that these clues are difficult to integrate into mystery fiction (Rodell, 1946, 269).

> The reader expects that the criminal will commit as nearly perfect a crime as possible, and that his behaviour thereafter will be always purposefully and latterly on guard against observation. If the criminal is caught in the end because he forgets at some moments to be alert, praise for the solution of the mystery cannot fairly go to detective or reader: the solution has depended on a weakness of the murderer's, not on a talent of the detective's (Rodell 1946, 269-270).

An example of this weakness of the antagonist occurs in *Searching* when Detective Rosemary Vick, the second of the two the antagonists in this film, has to hide her son's involvement in the crime. Vick helped her son Robbie after he pushed Margot into Barbosa ravine near Barbosa lake, so she knows where Margot was when she went missing. To ensure that no one will suspect her son, she became the detective for the investigation into Margot's disappearance. She creates false information about Margot to divert the investigation, but David, Margot's father, conducts his own research. He finds out that Margot enjoyed going to Barbosa lake in a photo in *Tumblr* and in a *YouCast Now* video. When he makes a comparison on a *Google* map between Barbosa

Lake and the last place Margot was seen, he realizes that Barbosa Lake is not very far from where she was last spotted by a security camera. In the scene when he is on his way to the lake, David leaves a voice message on Vick's voicemail. He says, “Vick. Wake up. I know why she was at that intersection. She wasn't leaving town. She was driving to the spot she's been visiting for the past five months. It's 3:45 a.m. I'm headed there now.” Here, David mentions that he is driving to the site Margot has been frequenting for the past five months, but he does not specify where exactly he is going. At 4:22 a.m., David calls Vick a second time on *FaceTime* (fig. 97). He holds his mobile phone camera in one of his hands from a low angle. During the video call, David's face and the branches on the trees behind him are visible. However, Barbosa Lake is not. In Vick's video frame, it shows that she is already awake and dressed when she speaks.

> Vick: “Hey. Where are you?”
>
> David: “You told me she ran away Vick.”
>
> Vick: “Are you at the lake?”
>
> David: “You told me she ran away.”
>
> Vick: “Okay, I’m heading there right now.”

Assuming that David and Vick had never discussed Barbosa Lake prior to this conversation (it could have happened during an ellipsis, but it was never shown or referred to in any prior scene), it reveals something potentially incriminating about Vick because when she asks if he's at the lake, it could be a moment when she accidentally reveals that she knows that David is at Barbosa Lake because she knows that Margot went missing near Barbosa Lake the night she came to help her son after he pushed Margot down Barbosa ravine. Vick has been covering up the fact that she was involved in Margot’s disappearance, but for that brief moment after she woke up, possibly in a state of fatigue, one could interpret that Vick accidentally indicates that she knows that Margot is near the lake. Vick did not even specify the name of the lake, so this is yet another failure on her part in her attempts to mask the truth because she knows that David is at Barbosa Lake. So the phrase “Are you at the lake?” is an intangible clue, as it does not come from the crime site, it was a very brief moment that suggests Detective Vick was not able to always change her behaviour patterns to cover up the truth, her involvement in the disappearance of Margot near Barbosa Lake. While this type of intangible clue is revealed in Vick’s speech on the audio track, it

is its juxtaposition to the images within *FaceTime*'s GUI that suggests that Vick has made a mistake in maintaining behaviour patterns that are meant to hide any of her involvement in Margot's disappearance. The interface on the smartphone screen shows her looking at David in one frame while in the other he is clearly filming himself with his *iPhone* camera from a low angle that is only revealing trees in the background, not a lake (fig. 97).

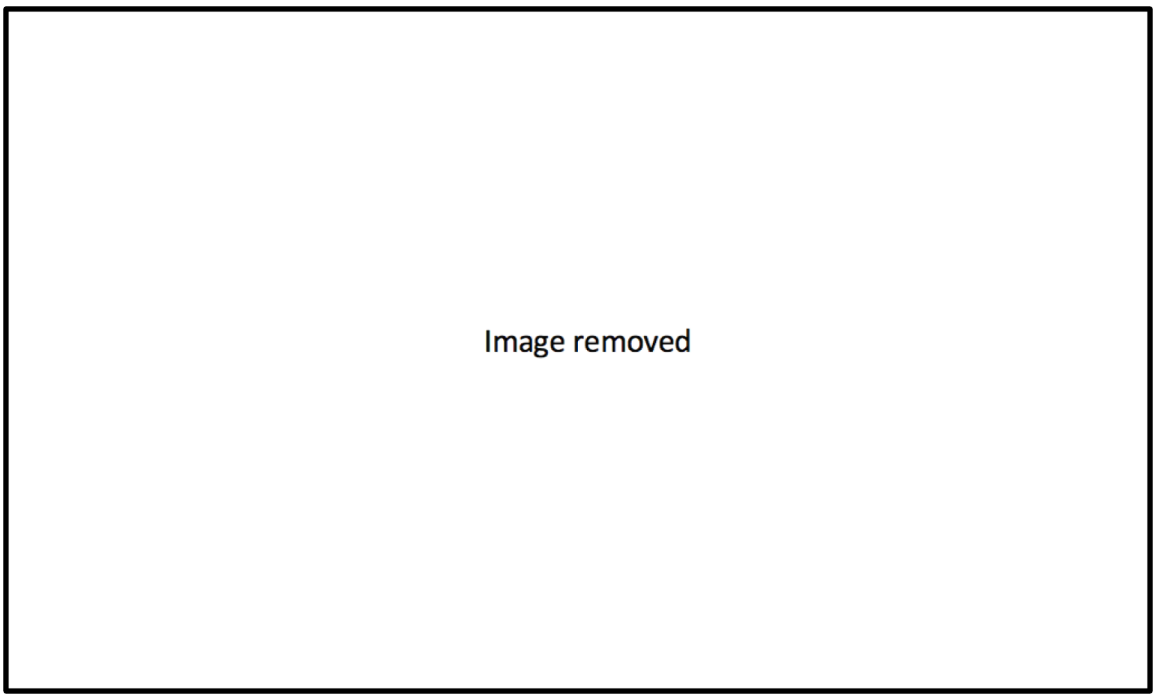

Figure 97. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 52 min 52 s. The two video frames show that Vick likely already knows where David is before he reveals his location. ©Screen Gems.

The *FaceTime* GUI shows both characters and their surroundings simultaneously in separate video frames. When she asks David if he is at the lake, Vick can even be seen getting ready to leave her house while she is frantically putting things into what appears to be a bag which is out of the frame. This suggests that she already knows where David is before asking. Thus, the GUI plays an important role in showing that Vick is likely aware of where David Kim is before he has even revealed verbally, visually or textually his actual location.

To avoid the detection of behaviour patterns that implicate a character in a crime, from a narrative technique perspective, Rodell highlights the importance of other behaviours that the

criminal can adopt to mask those that implicate him or her in the crime. She illustrates this strategy with a bank robber who habitually wore his hat on the right side of his head. In order to mask this behaviour pattern, Rodell suggests that he should make up a new one to camouflage the one that would give him away.

> The effective use of such clues in the regular mystery will depend on their absence or the substitutes for them which the murderer provides. He knows that he must stop tilting his hat to the right; that means that every time he puts in on, he must stop and think for an infinitesimal second — and the reader and the detective can note that hesitation. Or perhaps he will make doubly sure and go without a hat altogether, though the weather and the occasion demand it (Rodell 1946, 270).

In a similar, but different example in *Unfriended*, there is a text message conversation between Blaire and Mitch on *Messages* after they each had received separate instant messages from Laura Barns' social media accounts (fig. 98).

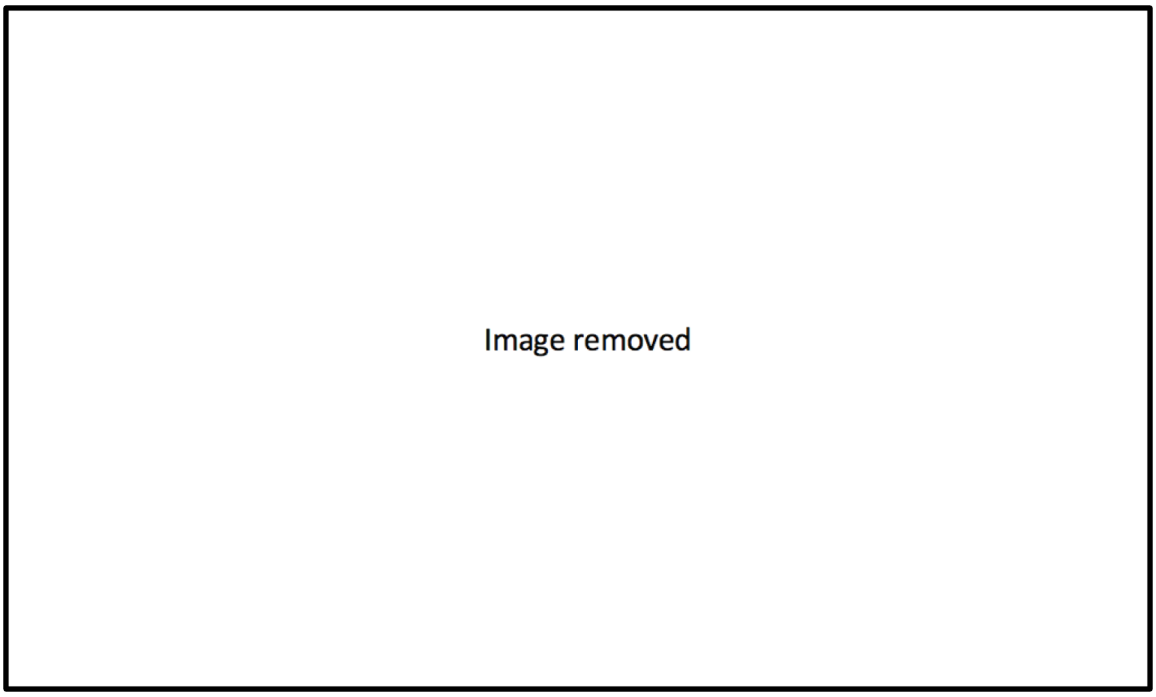

Figure 98. – Frame from the film *Unfriended* (Leo Gabriadze, 2014) at 13 min 38 s. The text message "…and what?" could be interpreted as an attempt to maintain behaviour patterns of an innocent person. ©Bazelevs Company.

Mitch writes, "today's the anniversary" … "Laura's." Blaire responds, "…and what?" The response "…and what?" could be read as an attempt to pretend that she has no idea why the anniversary

of Laura's death has any significance when it is mentioned by Mitch. It is later revealed that both Blaire and Mitch were involved in recording and publishing online the embarrassing video of Laura which led to her suicide. So, in this case, Blaire is not necessarily trying to hide the truth from Mitch, she just wants to hide it from herself and not even consider that the message she received from Laura's *Facebook* account is anything more than a coincidence. Blaire is trying to uphold behaviour patterns of someone who is innocent of the cyberbullying that lead to Laura's suicide by acting as though she had always been Laura's friend, so that any suggestion to the contrary, such as Mitch's insinuation that there might be a connection between the text message from Laura Barns' *Facebook* account and the anniversary of Laura's suicide, is absurd. The fact that Blaire received a message from Laura Barns' *Facebook* account exactly one year after her suicide is a coincidence that should be concerning to Blaire, especially since she was involved in the cyberbullying that led to her death. Therefore, by typing "…and what?," Blaire camouflages what she thinks, "and what?" is a lie to avoid confronting her involvement in Laura's death. And, perhaps more importantly for the spectator's experience, "and what?" makes it appear as though Blaire had nothing to do with Laura's suicide, so that it comes as somewhat of a surprise when it is revealed that she filmed the embarrassing video of Laura. Had Blaire admitted her involvement in Laura's suicide at this moment in the film, it would have ruined the mystery element for the spectator of who exactly was implicated in the cyberbullying that led to Laura's death.

The response "and what?" is also written in text within the *Messages* application which means that its meaning also retains a certain amount of ambiguity. Had Blaire said, "and what?" verbally to her boyfriend Mitch, perhaps her tone of speech and body language would have revealed more about how she was really feeling about the fact that she received a text message from Laura Barns' *Facebook* account on the same day as the anniversary of Laura's suicide. The ambiguity that text can provide and the ease with which it can be used to tell lies helps to achieve this masking effect that Rodell talks about when trying to employ strategies to ensure that a character camouflages any behaviours that could implicate them in a crime. The GUI for *Messages* also plays a role in the masking of Blaire's incriminating behaviours because it is the space that presents her written text messages that are meant to deceive the spectator by organizing them in relation to messages written by Mitch. While the GUI plays a role in laying out the text to make

it easier to understand who wrote what, it is the media that operates on the first level of the *screenlife* mise en scène, the text, that achieves much of the deception necessary to prevent the identity of an antagonist to be revealed, to avoid the mystery from being uncovered too soon.

Extra-diegetic clues

Diegetic clues, according to Michel Sirvent, are “addressed to a fictional investigator whom the reader tries to surpass, or to a fictional reader represented in the story” (Sirvent 1999, 173-174). According to this definition, tangible and intangible clues could therefore be classified as diegetic clues because they exist in the world of the story for characters such as the amateur detectives to detect and analyze. The reader may also be able to detect these clues in an attempt to solve the mystery before its revealed. However, Sirvent explains that there are also clues that “lie in the narrating discourse, not the narrated fiction,” which means that these are clues that cannot be interpreted by the characters even if they exist within their diegetic world. Clues in the narrating discourse, according to Sirvent, are exclusively for the reader to interpret because “they can only address the reader - not the characters” (Sirvent 1999, 174). Sirvent identifies *intertextual* and *infratextual* correspondences as two types of extra-diegetic clues that are defining mystery genre devices of the *post-nouveau roman* detective novel.

> Today, whether such narrative strategies are called "self-reflexive," "metatextual," "metafictional" or, preferably, "metarepresentational," [7] *post-nouveau roman* detective novels use *nouveau roman* textual devices while returning to what may appear to be a more conventional way of storytelling.[8] They offer the pleasures of reading (it is a clear return to the *romanesque,* or novelistic) and do not obviously subvert our expectations. Beneath their innocent surface, however, what supports these puzzles may be a very sophisticated network of infratextual as well as intertextual correspondences (Sirvent 1999, 158).

Infratextual clues

An infratextual correspondence is a clue that refers to another important clue within a mystery story on an extra-diegetic level. The link between these clues can help the reader to solve the mystery, but these links between the clues are not detectable by the characters in the story. Sirvent gives an example of an infratextual clue in the novel *La Bibliotheque de Villers* (1980) by Benoit Peeters. He explains that “each chapter starts with one of the victims' initials printed in

bold, in this precise order: 1. "**I**l … "; 2. "**V**etu ..."; 3. "**R**elier ... "; 4. "**E**dith ... "; and 5. "**L**a mort" This reading is confirmed by the town's name, "VILLERS," which contains, except for one (the *S*), the same letters" (Sirvent 1999, 169-170). It is clear that these clues are only detectable by the reader on this level because the clues are in the titles of the first five chapters of the novel. In *Unfriended: Dark Web*, there is a series of infratextual clues that are represented in text and in the speech that communicate on the extra-diegetic level because the meaning that is connected to these clues can only be interpreted by the spectator. The first infratextual clue is shown in a text message sent by Serena to Matias in *Facebook Messenger* about eight minutes into the film. She writes, "Looks like game night over Skype" (fig. 99).

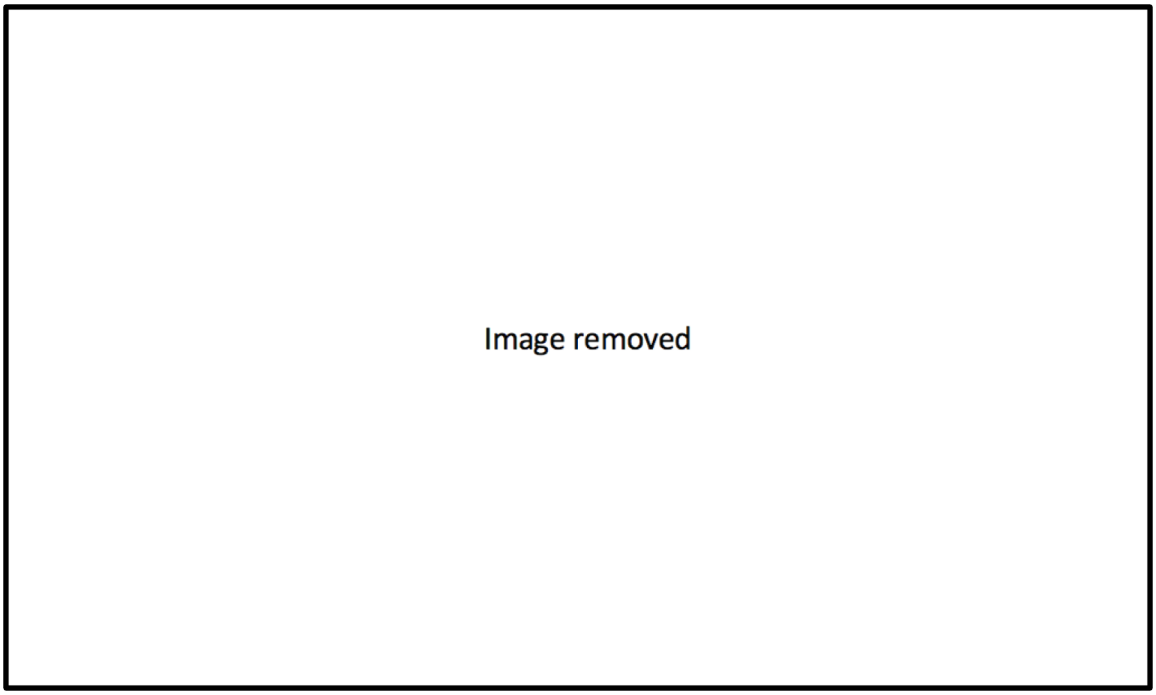

Figure 99. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 8 min 43 s. Serena's text message, "Looks like game night over Skype" is an infratextual clue. ©Bazelevs Company.

On the diegetic level, Serena is referring to the fact that she will be playing board games with her friends on the internet this evening, but on an extra-diegetic level, one could interpret this phrase within the context of the mystery because Serena and her friends will be baited into a deadly game called "game night" while they are communicating on *Skype* that will be broadcast to a

group of anonymous antagonists. The media (text), the GUI within *Facebook*'s virtual window and the GUI that defines the rest of the screen space (defined by the operating system) all serve to present this infratextual clue. The importance of the text "game night" is diminished because it is situated within a sentence that is part of a text conversation between Matias and Serena. The reference to "game night" appears in the fourth of four consecutive messages that Serena sends Matias, so the spectator is not necessarily focused on these two words presenting this infratextual clue located within this virtual window. As well, Matias responds to Serena's response almost immediately and then Serena replies to this message very quickly as well, so it really makes it difficult for the spectator to detect "game night" as an important infratextual clue because there is very little time when these two words remain the centre of attention within the frame. The font size of these two words is also relatively small making it appear equally important or unimportant as the other text displayed with the same font size and typeface within this virtual window. This typeface and font size are also used within another virtual window displayed at the same time that displays another text conversation between Matias and Amaya within *Facebook Messenger*. As well, there are titles for trending news stories and text representing other pages and popular links within this *Facebook* virtual window. This *Facebook* virtual window is also located within the screen space that includes other virtual windows including *Spotify* that is playing a song that can also distract the spectator away from the "game night" infratextual clue if he or she is focusing on listening to the lyrics.

Almost forty minutes later, another infratextual clue linked to the first one occurs when Matias makes another reference to "game night" when he lies to his friends telling them that all of the horrifying videos found on the hard drive of the computer he stole are part of a fictitious game that he made up. In order to convince his friends that this is the case, he says, "It is game night" (fig. 100). On the diegetic level, he says it, because one of the villains, using the username Charon IV, had told him that he will kill Amaya if Matias or any of his friends notify the police about the videos, in particular the one showing the disappearance of the teenager Erica Dunne. However, on the extra-diegetic level, the phrase "It is game night" refers to the fact that Matias and his friends have been baited into a deadly game online by the underground organization.

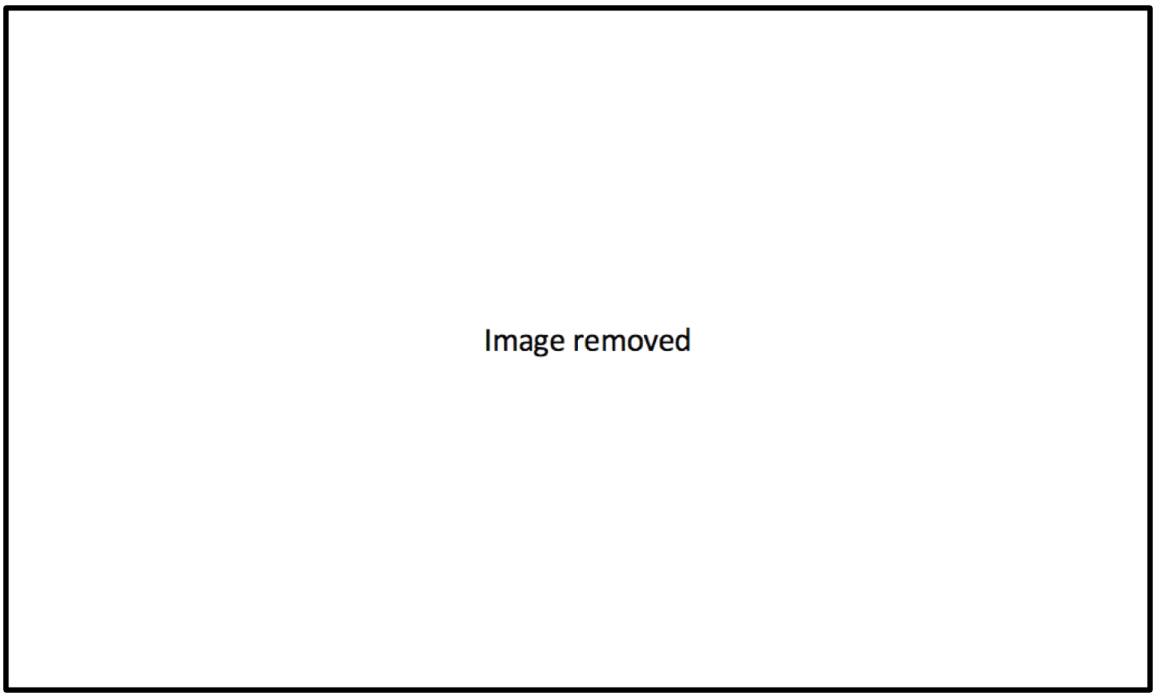

Figure 100. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 46 min 54 s. Matias saying, "It is game night" is another example of this infratextual clue, but in speech rather than in text. ©Bazelevs Company.

As opposed to the first instance when this phrase was used, this version is spoken rather than written meaning that “it is game night” is contained within the audio track and emitted from the speakers rather than encoded within the image track and displayed on the screen like the text. However, what is on the screen is important because it visually shows Matias saying these words while represented within a small video frame within the *Skype* video call with five of his friends while also being displayed in the small video frame within the *Facebook* video call that is linked to his girlfriend Amaya’s computer. Just before Matias says this phrase all of the video frames showing Matias and his friends can be seen in the *Skype* virtual window that is foregrounded. Matias then clicks on the *Facebook* video call virtual window showing Amaya’s living room to bring it into the foreground which places the *Skype* virtual window into the background. Almost immediately after this, he says, “It is game night.” With this composition within the entire screen space, all of Matias’ friends can still be seen in the *Skype* virtual window even though it is being overlapped. In the foregrounded virtual window showing the *Facebook* video call, Amaya cannot

be seen, but the door to the bathroom where she is located is visible within the frame as well as another door to a bedroom where an intruder is hiding after knocking her roommate Kelly unconscious. What is significant about this transition to this composition implicating Matias and all of his friends, girlfriend and intruder is that the phrase "It is game night," is said for the entire duration that this composition remains on the screen. After Matias says this phrase, he toggles back to the previous composition showing the *Skype* virtual window in the foreground which places the *Facebook* video call back into the background where only about a tenth of the video frame is shown, its left side, essentially omitting the two doors where Amaya and the intruder are located. When Matias had previously positioned the *Facebook* video call virtual window in the foreground, he was doing so in order to keep track of the intruder and his girlfriend located behind two different doors. This is what was happening within the diegesis of the story. However, on an extra-diegetic level, it is interesting to note that when Matias says "game night," it is a moment that shows all of the characters who will eventually become victims of the "Game Night" organized and executed by the underground organization. It is also worth highlighting that the intruder is hiding behind a door in Amaya's house. This intruder is a part of a wider network of members participating in "Game Night" that are all hiding behind the scenes as well, notably to digitally spy on Matias and his friends' computers, but also to lurk within the physical spaces of the group of friends including Matias in preparation to attack each one of them. Using this shot that displays two virtual windows to show the victims and the intruder hidden behind a door operates as a visual component to the extra-diegetic clue "It is game night" emitted from within Matias' speech in the audio track because this shot serves as a visual metaphor for the larger operation of "Game Night" that involves a much larger team of internet bad guys operating behind the scenes ready at any moment to kill anyone in the group of friends.

Two moments in the last three minutes of the film confirm that the phrase "It is game night" was in fact an infratextual clue. The first confirmation that this phrase was used as an infratextual clue is revealed in an implicit way. Once all of Matias' friends are killed, Matias asks the villains why they did this to him and his friends. The answer arrives on his screen in a short pre-recorded video of Matias which is displayed and played 13 different times showing Matias when he said, "It is game night" (fig. 101).

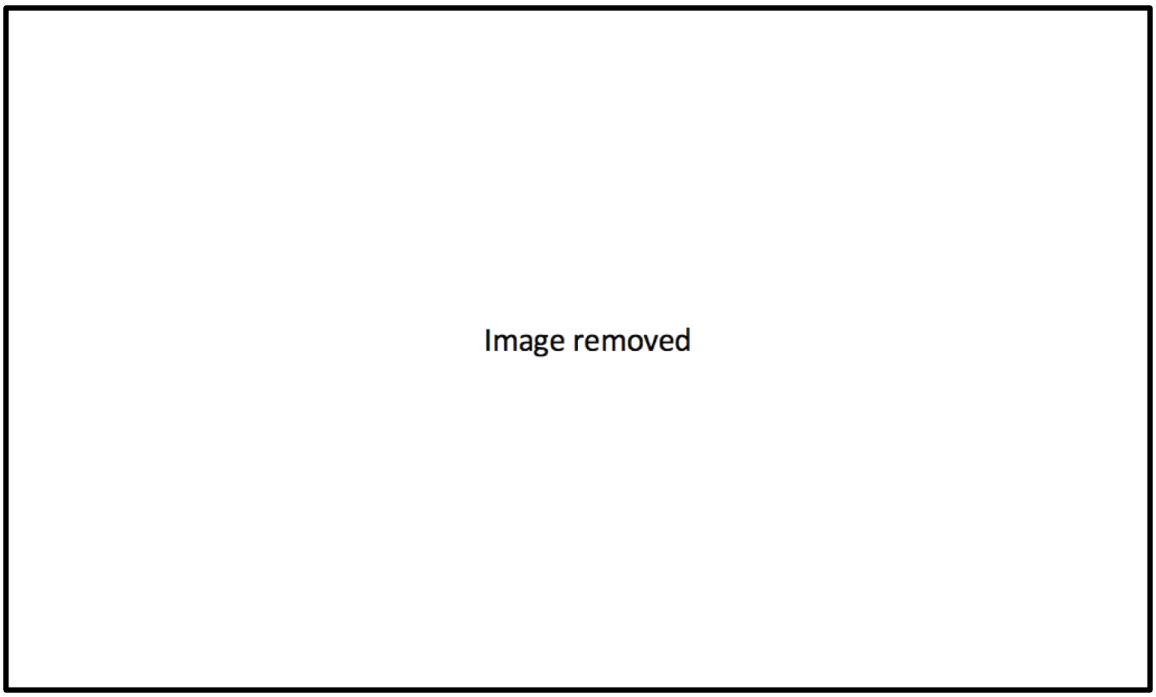

Figure 101. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 1 h 26 min 08 s. The antagonists reveal that Matias is in a deadly game called "Game Night" when they play a video clip of Matias saying, "it is game night" 13 times. ©Bazelevs Company.

This clip was recorded when Matias was talking with his friends on *Skype* earlier in the film. The second clue that confirms the solution to the two infratextual clues is shown more explicitly in the last shot when it displays that it is "GAME NIGHT XIV" on one of the virtual windows on a monitor in front of an anonymous person who seems to be coordinating this event with the other Charons (fig. 102).

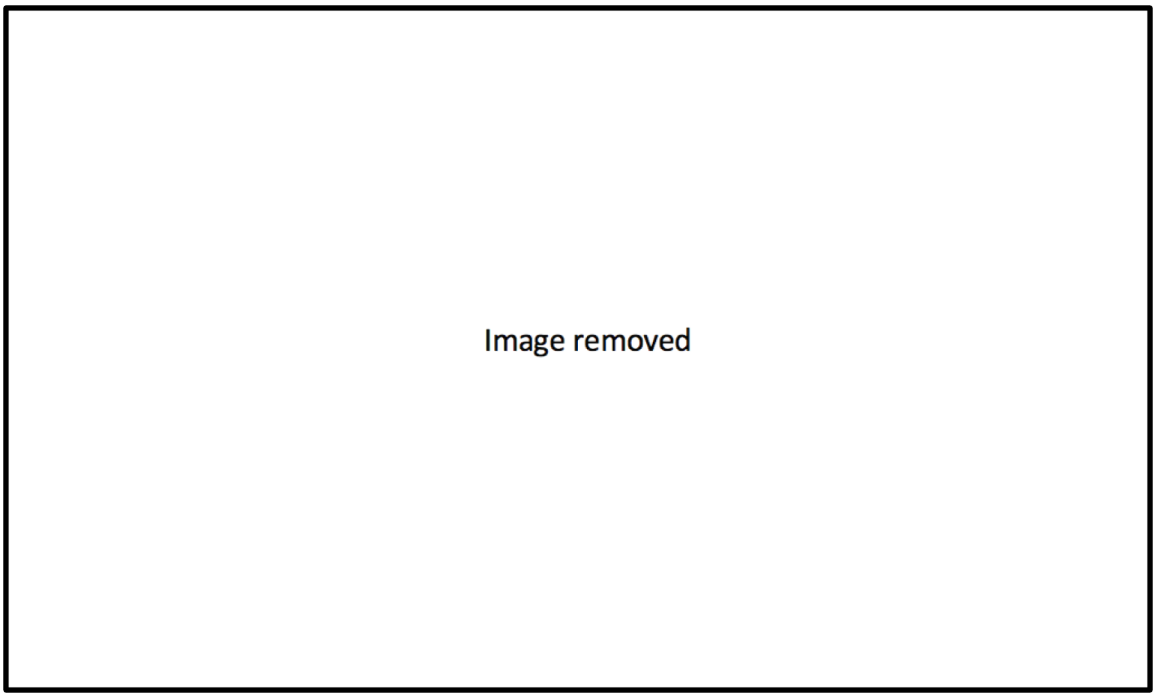

Figure 102. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 1 h 28 min 48 s. The last shot of the film confirms that Matias and his friends were all part of "GAME NIGHT XIV." ©Bazelevs Company.

This last shot is significant as well because it is the one shot that is not representing a computer screen of a character. It is showing a single perspective filmed within the physical space of what appears to be the headquarters of this "Game Night" operation organized by the group of antagonists, the Charons. In another virtual window on this same screen within the same shot, it reveals that members of this network can bet on certain events such as the number of times that Matias will cry or the number times that AJ is shot, so this information confirms that this deadly game involved gambling.

Intertextual clues

In his article "Agatha Christie's Secret Fair Play," Shosuke Kinugawa explains how Agatha Christie employed intertextual clues that operate on an extra-diegetic level in her short story *Strange Jest* (1941). *Strange Jest*, according to Kinugawa, reworks some of the dialogue and structure of Edgar Allan Poe's short story *The Purloined Letter* published in 1845 to construct intertextual clues (Kinugawa 2018, 166-169). One of the most important intertextual references in *Strange Jest* that

operates as an extra-diegetic clue comes from a letter found in a secret drawer that can be read as reference to the letter in *The Purloined Letter* that is altered by a thief making it unrecognizable as the stolen letter which is the object of the investigation. The letter in *Strange Jest* has also been manipulated by a character to deceive, but it is ultimately revealed by the detective that the stamps on the envelope containing the letter possess the solution to the mystery. Kinugawa also suggests that these stamps in *Strange Jest* are also an intertextual reference to a seal used to stamp the mark of the suspect in *The Purloined Letter.* "Moreover, making the treasure the stamps on an envelope of fabricated letters is probably an adaptation of Dupin's punning seal made of bread used on the envelope of the letter he fabricates, for a seal is essentially a "stamp" consisting of a piece of wax" (Kinugawa 2018, 169). To achieve these intertextual clues that only communicate to the reader, Kinugawa details how Christie sets up a connection to the Poe short story with several literary references at the outset of the short story, then ultimately hints at an object, a letter, that leads to the solution of the mystery much like the letter in *The Purloined Letter*. This intertextual reference operates exclusively on an extra-diegetic level because the reader of *Strange Jest* has to have a detailed understanding of *The Purloined Letter* in order to be able to draw a connection between the letters in both short stories.

As far as intertextual clues in the *screenlife* films, there is one in *Searching* that makes reference to the 2010 American documentary *Catfish*. After David Kim discovers that his daughter has not been going to her piano lessons for the past six months and that she has been keeping the $100 dollars he gave to her for each session, he opens the webpage for Evercreek High, the site for Margot's school, to search for its phone number to call to find out if she was present that day. However, for about two seconds, an illustrated image of the mascot for the school is shown in the logo for the high school in the header on the main page (fig. 103).

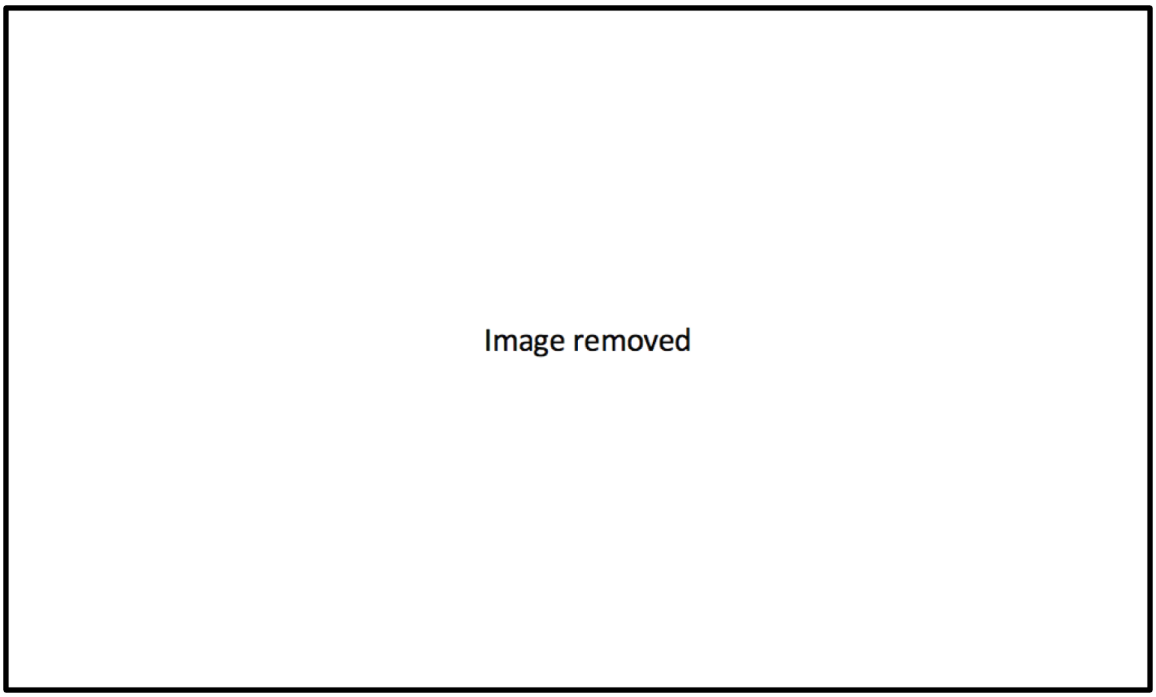

Figure 103. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 18 min 37 s. The catfish logo is an intertextual clue. ©Screen Gems

The mascot is a catfish. The term catfishing is "the practice of pretending on social media to be someone different, in order to trick or attract another person" ('Catfishing' n.d.). This term originates from the documentary *Catfish* that tells the story of Nev Schulman, a young man, who develops a relationship with a young woman named Megan on *Facebook* that turns out to be completely false. It turns out that a mother named Angela used personal details of her daughter Megan and photos of a professional model to create a false identity on *Facebook* in order to cultivate the relationship with Nev. Thus, in *Searching*, the logo showing the illustration of the catfish on Margot's school's website is a subtle intertextual reference to the film *Catfish* that serves as an extra-diegetic clue to the spectator. This clue, if read correctly by the spectator, is related to the solution to the mystery in *Searching* because it turns out that Margot went missing because she was a victim of catfishing. Robbie Abolt, the son of Detective Vick, used a photo of a stock image model and her real name Hannah in order to create a fictive profile of a struggling waitress on the social media application *YouCast Now* to develop an online relationship with Margot (*YouCastNow* is a fictitious social media platform, but it is a real application in the diegesis

of the film). This brief two-second glimpse of the catfish in *Searching* is seen by David Kim, but it does not serve as a clue for the amateur detective as it is exclusively operating on an extra-diegetic, intertextual level. The digital image of the catfish on the school's website, its logo, can be classified as an image within a photo frame even though it is not a photo, it appears to be a digital drawing. It is nevertheless a still image like a photo, so it can be classified as an image within a photo frame that operates within the first level of the *screenlife* mise en scène. The main principle of this term "photo frame," especially in relation to the video frame and text zone, is that it categorizes objects that are contained within this type of modular space that are still images. Still images can be a photograph or any other image that is limited to one frame, a fixed image such as the computer-generated drawing of the catfish. The square or rectangular shape of the frame might also not be evident with this example because the area between the outer boundaries of the frame and the drawing of the catfish are transparent, thus it is not clear where the outer edges of this frame are delineated. David ultimately uses the website's interface to copy the school's phone number that is also located in the header of the webpage, so the logo is not integral to the investigation within the diegesis of the story. It is only pertinent as an extra-textual clue.

Unfriended offers an intertextual clue that creates a link between a *YouTube* video created by the character Laura Barns (fig. 104) and a real *YouTube* video produced by Amanda Todd (fig. 105), a teenager from British Columbia, who committed suicide shortly after it was posted in 2012 after she had been repeatedly being bullied on-line and in person.

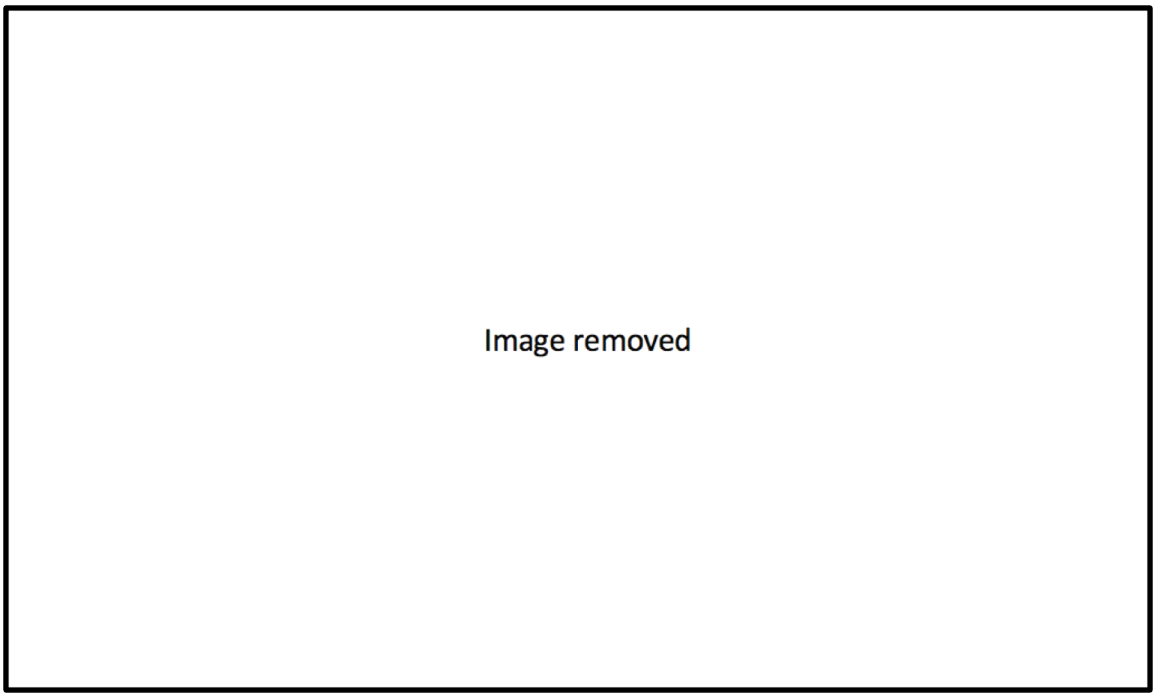

Figure 104. – Frame from the film *Unfriended* (Leo Gabriadze, 2014) at 31 min 06 s. This Laura Barns *YouTube* video is an intertextual clue that refers to a real *YouTube* video posted by Amanda Todd. ©Bazelevs Company.

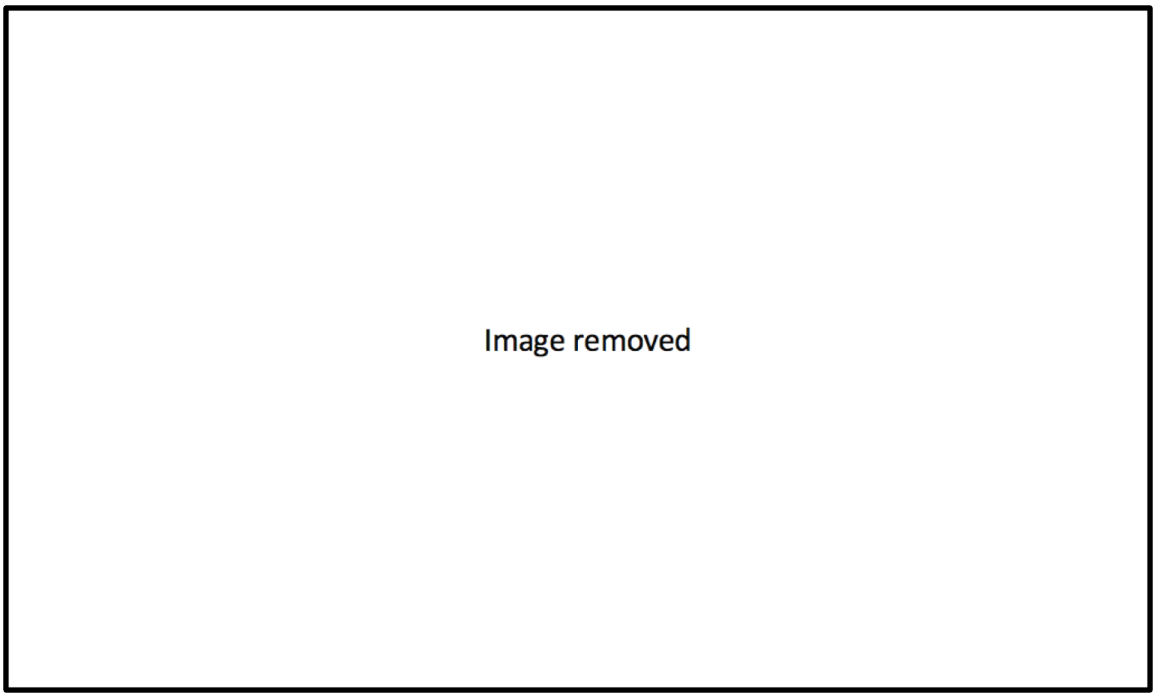

Figure 105. – Frame from *Amanda Todd – Bullying Video* (Amanda Todd, 2012) at 2 min 33 s. The *YouTube* video that is possibly being referred to in the Laura Barns *YouTube* video "fuck everyone" in *Unfriended*.

The links between the Laura Barns and Amanda Todd *YouTube* videos are established through both the content and form within the video frame as well as the layout and aesthetics of the GUI that defines the *YouTube* virtual windows containing the videos. These thematic and formal similarities establish the necessary links to classify this as an intertextual clue. The Laura Barns *YouTube* video in *Unfriended* is filmed in a very similar way as Amanda Todd's. The two *YouTube* videos each feature a side lit subject shown in black and white who directly addresses the camera. Each of the young women shows flash cards that have hand-written messages on them that recount their experiences of being bullied. The Amanda Todd video explicitly details her experience of being a victim of cyber-bulling after embarrassing images of her had been posted online to her colleagues at school. Todd also reveals that some of her classmates had bullied her in person. She committed suicide about a month after she posted her *YouTube* video. In *Unfriended*, Laura Barns commits suicide two days after she posts her video on *YouTube*. At the conclusion of *Unfriended*, it is revealed that Laura's classmates were responsible, notably Blaire Lily, for the filming and publication of the embarrassing video that led to her suicide. Thus, this *YouTube* video serves as an intertextual clue because it suggests that Laura Barns was also the victim of cyber-bullying by her classmates, by people that she trusted, people that she thought were her friends, people thought that she could confide in which also appears to have been the case with Amanda Todd. This *YouTube* video as an intertextual clue hints that the people who are claiming to be Laura Barns's friends are actually the ones who bullied her and who drove her to suicide. The meaning of this intertextual clue is made possible because of the establishment of very similar formal and thematic qualities that are reinforced within the video frame (first level of the *screenlife* mise en scène), but also within the second level of the mise en scène of the narrative *screenlife* film, the level that defines the organization of media objects within a virtual window. In this case, both videos are situated within GUIs defined by *YouTube*. Placing Laura's video within a *YouTube* interface makes the association to Amanda Todd's video much easier to make for those spectators familiar with it. This example suggests that the establishment of

intertextual clues can be achieved within the first level of the mise en scène (video frame, photo frame, text zone), but the reinforcement of formal qualities within the second level can add another layer to help establish or to make a much clearer link to an extra-diegetic reference to establish the intertextual clue.

Red Herrings

While there are tangible, intangible, infratextual, and extra-textual clues, there is another type of clue that is "intended to be misleading" or "a distraction from the real question" (Oxford English Dictionary, Red Herring). The red herring has the appearance of a clue in its form and content, but it functions differently as its meant is to distract "the attention of the detective and reader away from the guilty and towards the innocent" (Halsall 1991, 322). The ultimate goal of a red herring is to make it more difficult to solve the riddle, to make it more challenging for the reader to solve the mystery. Red herrings typically appear as diegetic clues (tangible, intangible), but regardless of what type of clue they imitate, they are meant to be "indistinguishable until the detective separates them by selecting those pieces of information on which the solution will be based, thereby writing off all other information as either irrelevant or deliberately misleading" (Gulddal 2020, 195). Red herrings are not only designed to derail the investigation, but they also exist to add another layer of engagement to the narrative experience because they "force us not to see the truth (so as to heighten our reading pleasure by delaying, but only delaying, the revelation of the truth)" (Rolls 2020, 180). They make detection more challenging, they force the detective to analyze and compare all the clues within the context of the investigation in order to solve the mystery. This means that the detective risks interpreting a red herring as a real clue because he or she is not necessarily able to interpret the deceiving nature of the red herring when it is initially observed, so further investigation must be done to properly evaluate the veracity of what appears to be a truthful clue.

In the three *screenlife* films, red herrings appear to be operating on the diegetic level because they are meant to fool the detective in his or her investigation into a mystery. These red herrings can thus be detected by the detective (and spectator) and therefore usually appear to be evidence coming from the crime scene or from suspects. Within the narrative, red herrings are often

fabricated by an antagonist or by another character that is then misinterpreted by the detective as not only being truthful, but also not misleading. It is typically the antagonist who creates red herrings to conceal the truth by placing them into the path of the investigation. While the antagonists are the main producers of false information in these three *screenlife* films, red herrings are also created by characters other than the antagonist whether it be intentionally or by accident. In order to have a better grasp on how certain characters are producing red herrings to have a specific deceitful quality, it will be important to isolate each of the individual media such as text, photo, video and audio (speech) representing red herrings with the specific goal of deceiving the detective (and spectator). These individual media that are used to produce red herrings by antagonists or other characters (intentionally or unintentionally) are also contained within the first level of the mise en scène of a *screenlife* film, the frames (video, photo) and text zones.

Communicating red herrings in individual media within the GUIs

The use of text in the three *screenlife* films takes several forms in both social media applications that have instant text messaging applications such as *Facebook Messenger* as well as more traditional text messaging programs such as e-mail applications like *Gmail*. These two types or categories of applications are employed primarily for communication between people, but text is also used within the text zones of an application's virtual window when characters must write their username or type their e-mail address into a field to login, for example. Social media and other applications such as e-mail also allow characters to send and receive notifications which display text messages on screen in separate smaller virtual windows from the main ones that contain the entire message. In *Searching*, there are two *Gmail* notifications sent by Detective Vick that are red herrings because they give the impression that she is trying to find Margot when in reality she knows where she is. The first *Gmail* notification, "County Hospitals: 0 Matches" received on David's computer screen suggests that Margot is not in a hospital (fig. 106), the second, "Nothing at Local Jails" indicates that she is not in a prison (fig. 107).

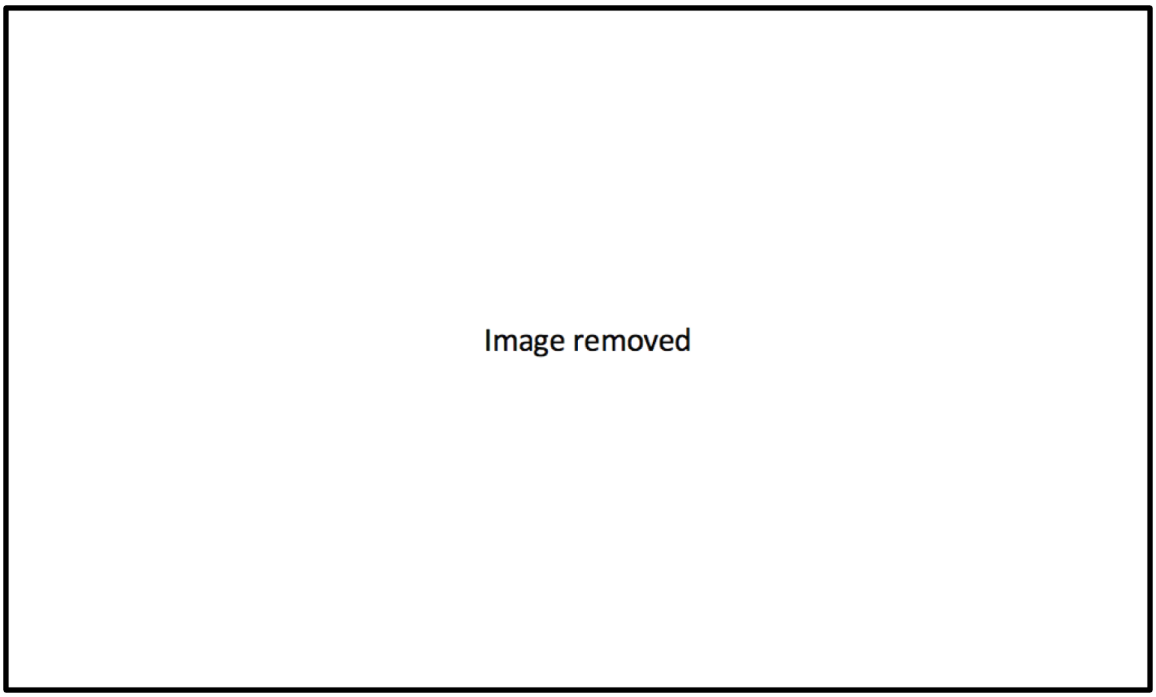

Figure 106. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 30 min 25 s. A *Gmail* notification serving as a red herring. ©Screen Gems.

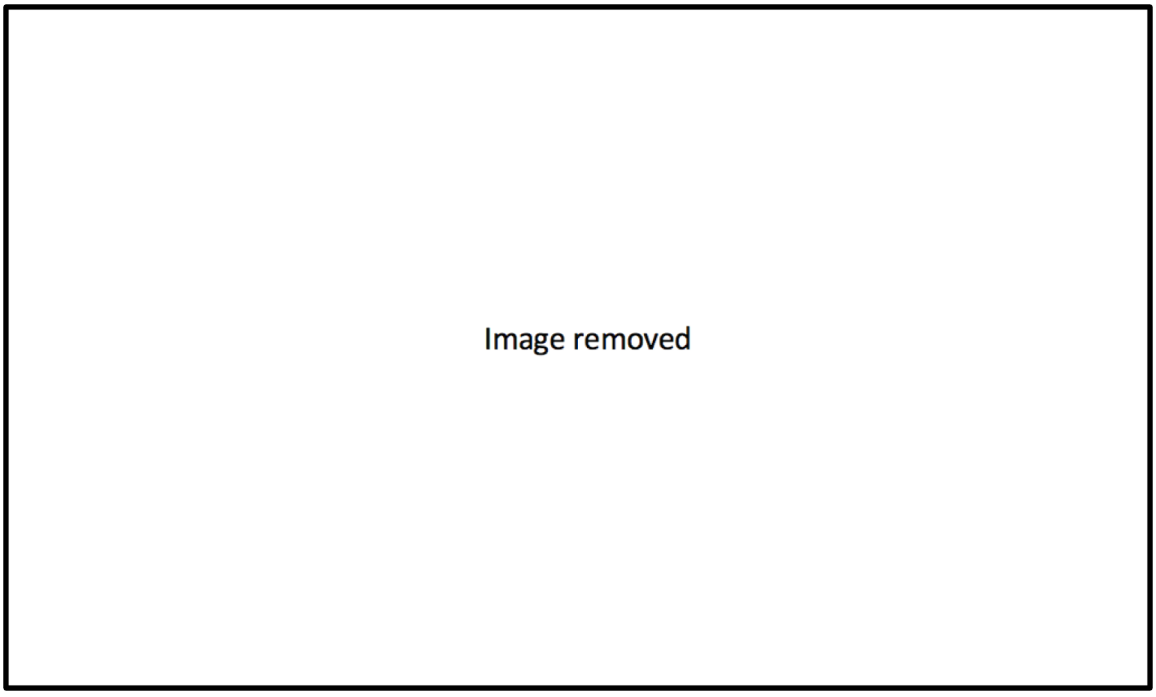

Figure 107. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 31 min 19 s. Another *Gmail* notification serving as a red herring. ©Screen Gems.

These are red herrings, even if the information is true, because these notifications communicate that Vick is working hard in all corners of the region to find David's daughter. At this point in the film, it would be very difficult for the amateur sleuth, David (or the spectator) to know that these notifications were created to deceive. What can also be deduced about these two examples of red herrings is that the text is the only information displayed within the shot other than a *Gmail* logo. This shot is a tight reframing of part of the screen space of the *MacBook*, so the text appears to be much larger than it would normally appear within the entire screen space. The text in each example has been isolated, eliminating the display of the other virtual windows, frames (video, photo) and text zones that are also displayed within the screen space. This is done to give the spectator the impression that these notifications are important. Overemphasizing information within a red herring is often a characteristic of this type of false clue because it is overtly trying to convince the spectator that this information is not only true, but pertinent. So, while this type of notification would be much less emphasized in relation to the rest of the screen, if the entire screen was shown, the reframings that *Searching* employs (that are not used in the other two *screenlife* films) ultimately distort the importance of the information within these two notifications. The text size, as demonstrated in these "close-up" like shots of the two notifications, would not normally take up two thirds of the length of the shot, it would be a fraction of that, about one tenth as demonstrated in the shot following the reframing or "close up" of the "Nothing at Local Jails" *Gmail* notification that shows almost the entire screen with the same notification still on display (fig. 108).

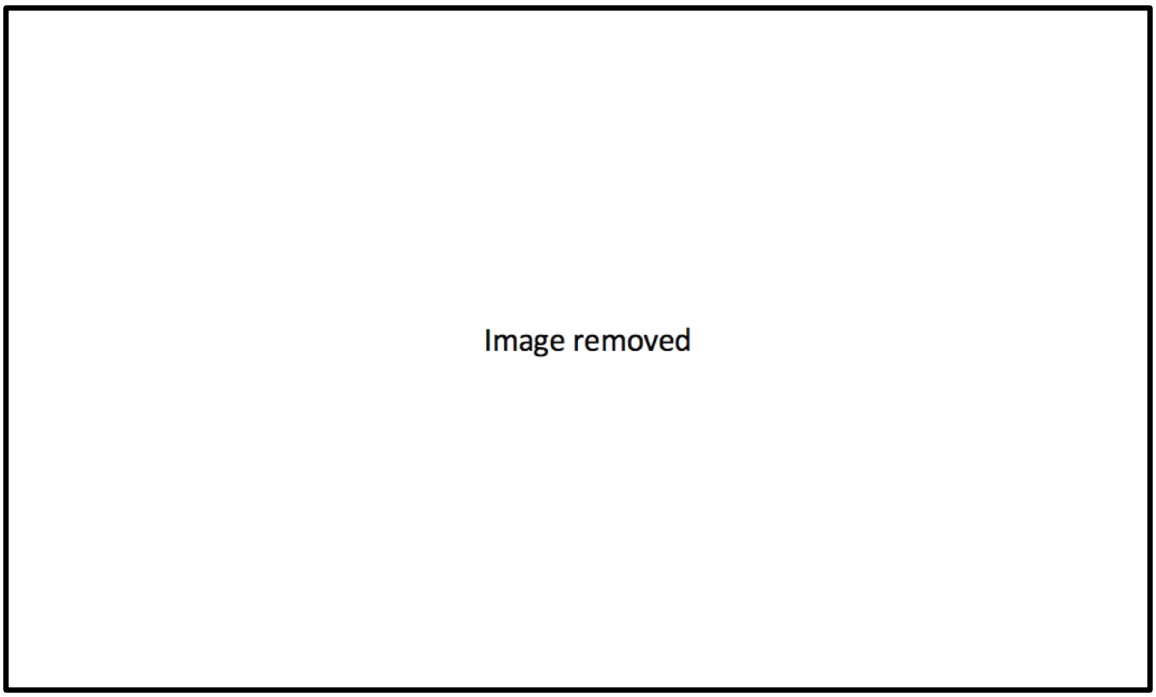

Figure 108. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 31 min 23 s. The *Gmail* notification representing the red herring is not as emphasized when shown within the entire context of the screen. ©Screen Gems.

Vick also uses an *iMessage* text message in an attempt to deceive David that Margot's kidnapper is in custody when she writes, "WE GOT HIM. Call me." (fig. 109). This is Vick's first attempt at trying to convince David that she has found the man who kidnapped Margot. In reality, this man is not responsible for Margot's disappearance, so Vick's text message is a red herring.

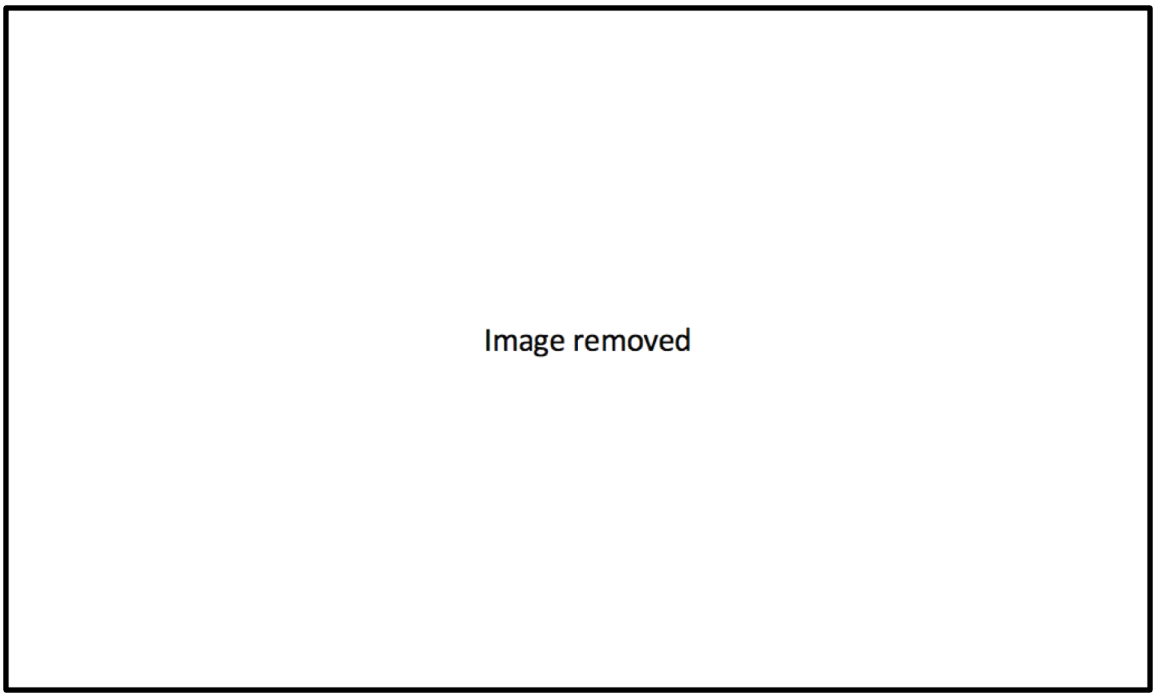

Figure 109. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 1 h 10 min 53 s. An *iMessage* notification delivers a red herring sent from Detective Vick. ©Screen Gems.

This message is actually revealed in a notification that displays the entire message for about 11 seconds in a text zone within in a small virtual window. This notification is displayed on the screen simultaneously with another much larger virtual window showing live security camera footage of David after he has just finished confronting his brother Peter about a suspected intimate relationship he had with Margot that turned out not to be true. Peter explained that he would just smoke marijuana with her. “We’d get high and talk,” he explains. When the *iMessage* notification "WE GOT HIM. Call me” is displayed, Peter says, “I swear. Look, I know how wrong all this sounds and I know I should have told you sooner, but… look, I didn’t think it had anything to do with this.” The role that the GUI plays between the virtual windows is important because while the virtual window that shows the conversation between David and Peter is much larger, Peter is off-screen while he speaks and David barely moves while he is filmed in a long shot. The heated conversation has already de-escalated as it appears that Peter is no longer a suspect in Margot’s disappearance. So, when this notification appears, that only the spectator can read, revealing that Detective Vick has “GOT HIM,” it becomes more pertinent in relation to Margot’s disappearance

than Peter. This shot is also a reframing of the top right quarter of the screen, so the notification is given more emphasis than had the entire screen been shown. This technique of revealing a red herring in an obvious way within the mise en scène that is reinforced through reframings of the screen is an attempt to convince the spectator that this information is important. The mise en scène changes when this reframing occurs because it makes the text within the notification virtual window clearly readable without many other competing images or text in the viewable screen space. In contrast to this, pertinent clues that offer truthful information are often revealed in ways that are not so obvious as a strategy to make them more challenging to interpret. As well, presenting the red herrings in text format denies the spectator the opportunity to evaluate the emotional tone of speech and the physical demeanour of body language had the character, in this case Vick, had to break this news over a video call where non-verbal information is easier to detect and evaluate in the moving images and sound.

Another example of text used to communicate a red herring occurs in *Unfriended: Dark Web*. The protagonist, Matias, in the opening scene manages to correctly guess the password to access the *MacBook* he has just stolen. He then starts to open applications. At this early point in the film, it has yet to be revealed that this laptop is a bait computer used to pull Matias and his friends into a deadly game. Immediately after Matias guesses the password for the computer, the first virtual window on the screen is for the *Spotify* application. In the field for the e-mail associated with the user account, the e-mail "Norah.C.IV@gmail" is revealed (fig. 110).

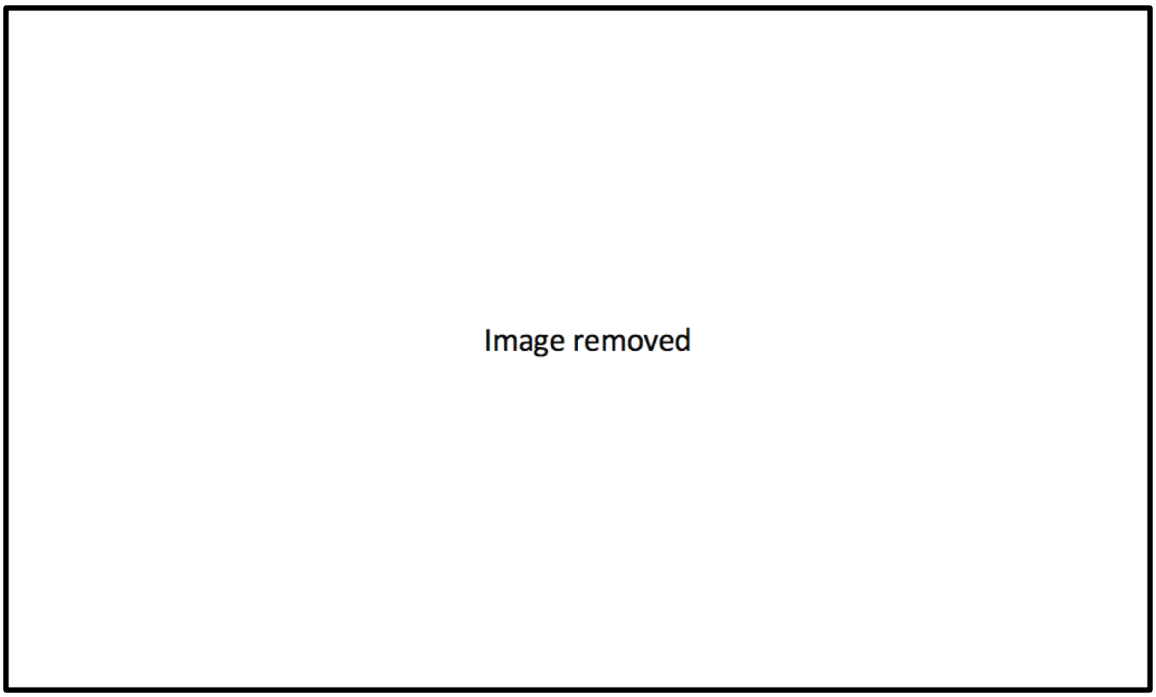

Figure 110. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 2 min 27 s. The e-mail "Norah.C.IV@gmail" is a red herring. ©Bazelevs Company.

This reference to a Norah C. is a red herring because later in the film it is revealed that there is no character with this name in the story. Norah C. is in fact Charon spelled backwards which is the moniker for each of the antagonists in the film. They are members of an anonymous underground criminal organization who can only be identified by the alias Charon followed by a Roman numeral. The use of this e-mail is also shown in the fields for *Facebook* (fig. 111) and for *Google Drive* (fig. 112), so during a period of about 40 seconds “Norah.C.IV@gmail” is displayed three times in three different applications which reinforces the impression that the owner of this computer is someone named Norah.

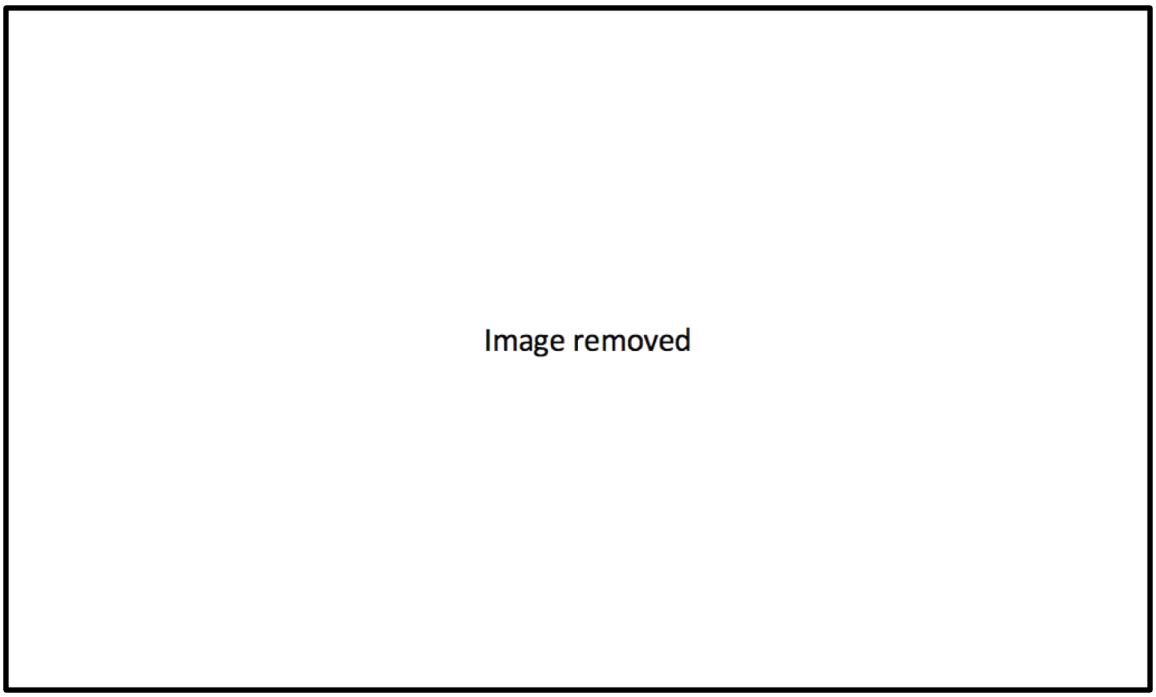

Figure 111. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 2 min 59 s. The e-mail "Norah.C.IV@gmail" is a red herring. ©Bazelevs Company.

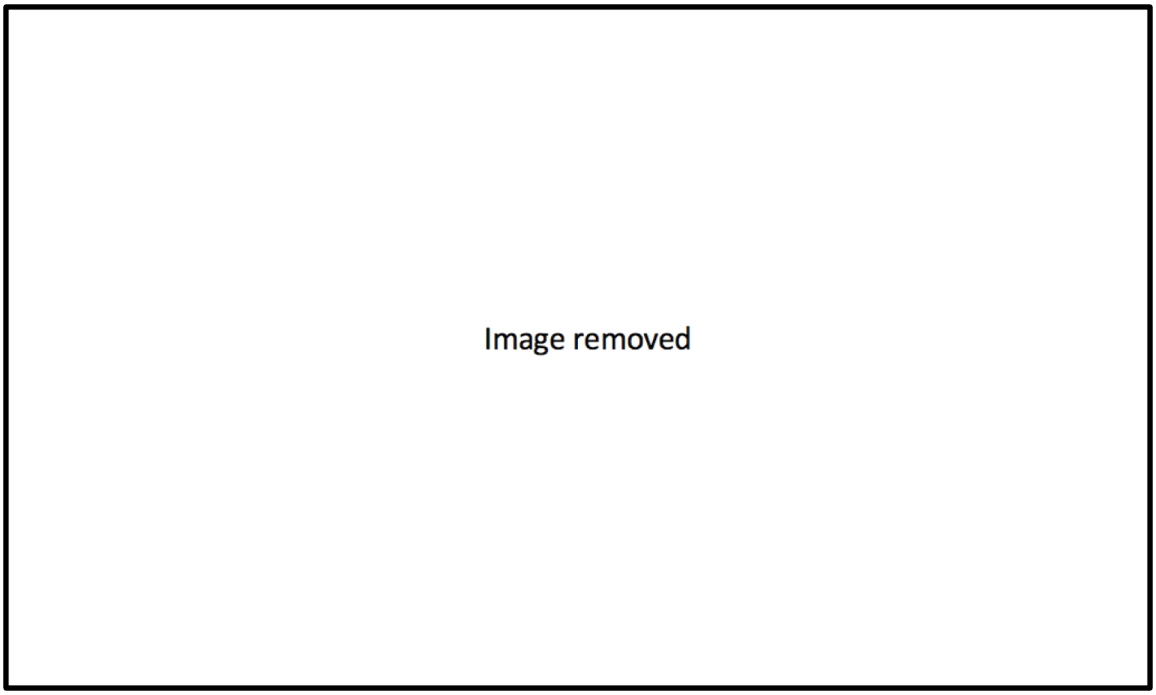

Figure 112. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 3 min 03 s. The e-mail "Norah.C.IV@gmail" is a red herring. ©Bazelevs Company.

This e-mail address operates as a red herring in a rather subtle way, yet it has grave consequences because the protagonist is not yet aware that it is part of the bait that draws him into the deadly game that results in his murder and the targeted killings of his friends. Each of these Norah.C.IV@gmail e-mail addresses are located within a text zone within virtual windows of applications such as *Spotify*, *Facebook* and *Google Drive*. So, these red herrings function primarily within the first two levels of the *screenlife* mise en scène to convince the protagonist (and the spectator) that a woman named Norah is the actual owner of this stolen *MacBook* laptop rather than a sinister syndicate of sadistic villains.

Characters other than antagonists also create red herrings in the *screenlife* films. There are some that are created intentionally and others that are created by accident. In *Searching*, intentionally created red herrings typically come in the form of social media publications and comments. In a *Facebook* post, a character named Derek Ellis states that Margot is with him. He writes, "Everyone stop freaking out, SHE'S WITH ME. $ was for her pimp. You know she love dat D lol" (Frame 113).

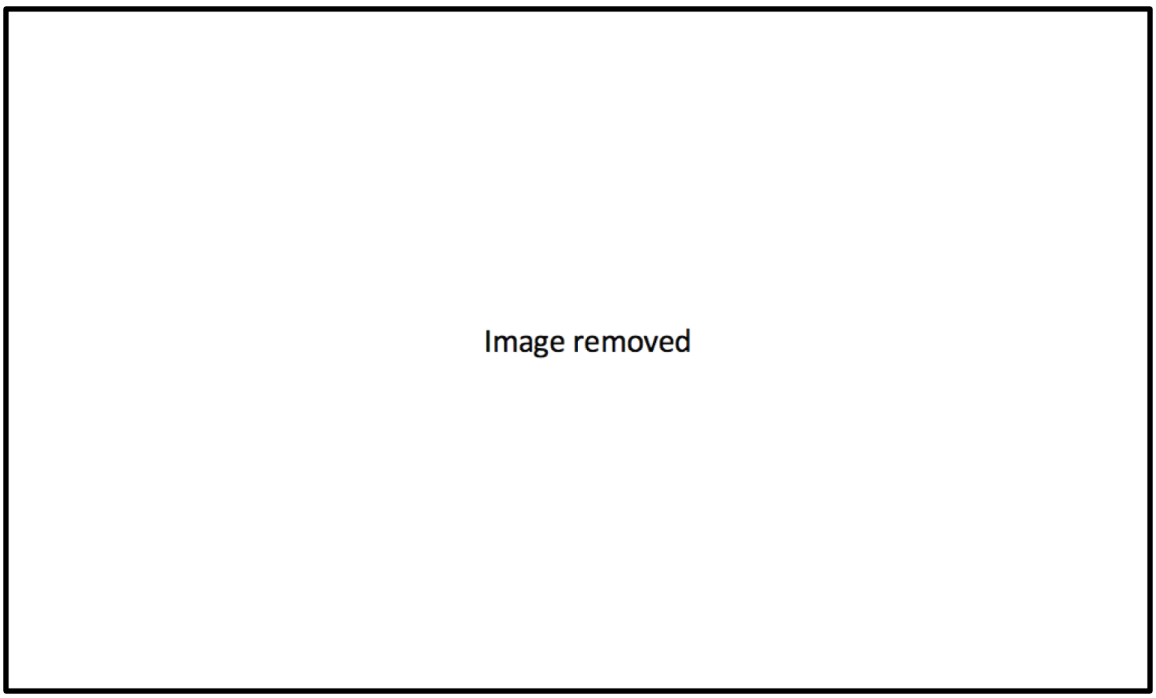

Figure 113. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 58 min 56 s. The capitalized text and reframing of this *Facebook* post demonstrate how red herrings are often communicated more clearly than regular clues. ©Screen Gems.

For a short period of time, it appears as though Derek Ellis might be with Margot, but within three minutes of this post it is revealed that he is not. This text, which is located within a text zone within a *Facebook* virtual window, operates within the first two levels of the mise en scène primarily because this shot is a reframing of the screen that only shows a portion of the *Facebook* virtual window. Another text zone within this window identifies "Derek Ellis" as the name of the account that has made this post, and a photo of the young man smoking from a hookah pipe is displayed within a photo frame. This shot is also situated within a sequence of shots that show various reframings of Derek Ellis's *Facebook* page. It is assumed that David is the person looking at this screen and that he is controlling the cursor that guides his viewing of this text. This red herring reinforces a couple of trends that are associated with this type of false clue using text. The use of text, as opposed to speech, can serve to diminish or make more ambiguous the emotional tone of language. In this case, sarcasm may have been more detectable had Derek said this phrase verbally within a video rather than writing it. Since there was a certain ambiguity about the tone of the message in the text, it was taken more seriously by the protagonist. The other characteristic that is associated with red herrings in this text is the overt way that it is displayed within the first and second levels of the mise en scène. Not only is the text reframed within the screen space to emphasize it, the words "SHE'S WITH ME" are capitalized to overtly express that Margot is with Derek Ellis. This is yet another example of the blatant ways that red herrings are presented.

Twitter is another social network used to display red herrings concerning the whereabouts and welfare of missing Margot in *Searching*. A character named Dr. Donald McRonald tweets, "She's at the bottom of the lake" with the hashtag #facts (fig. 114). This tweet works as a red herring because it presents a possibility that could be true as there is no evidence that can refute this statement, but it is false.

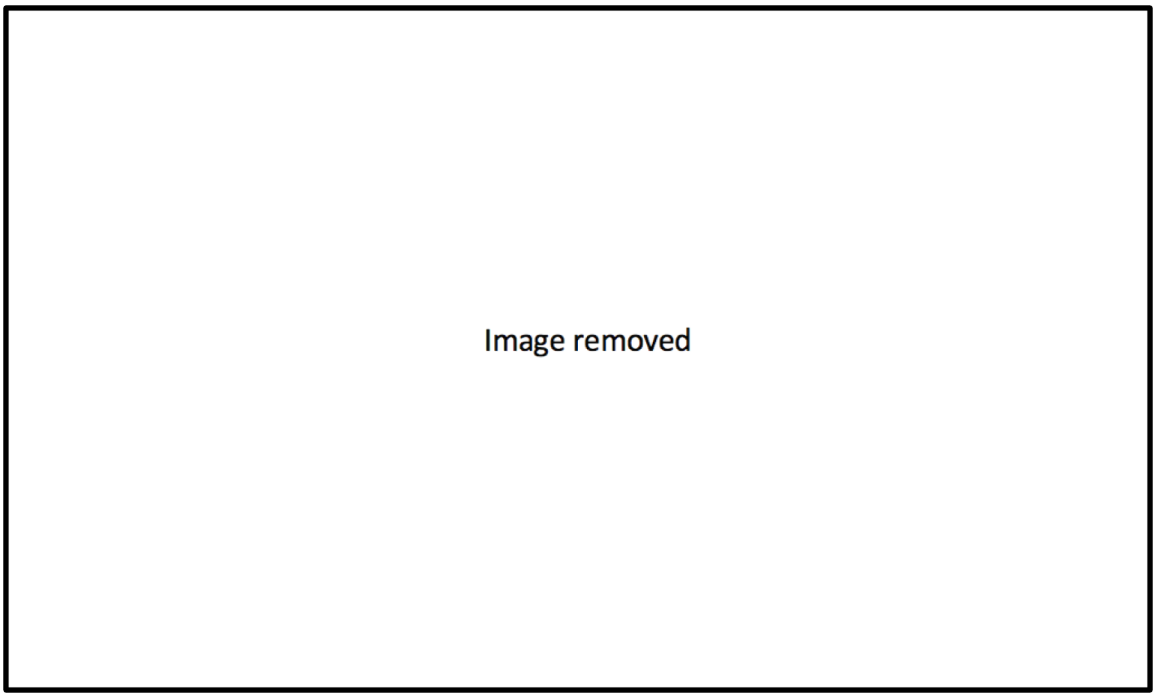

Figure 114. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 57 min 39 s. Tweets commenting on the mystery can serve as red herrings. ©Screen Gems.

Another tweet posted by the character Grover Dixon writes, “We all know how these things end. #DadDidIt” which suggests that it was David who was responsible for Margot going missing (fig. 115). After the entire message in the tweet is shown, it is reframed to magnify the hashtag “#DadDidIt” (fig. 116) in order to emphasize that someone thinks that Margot’s dad is the culprit.

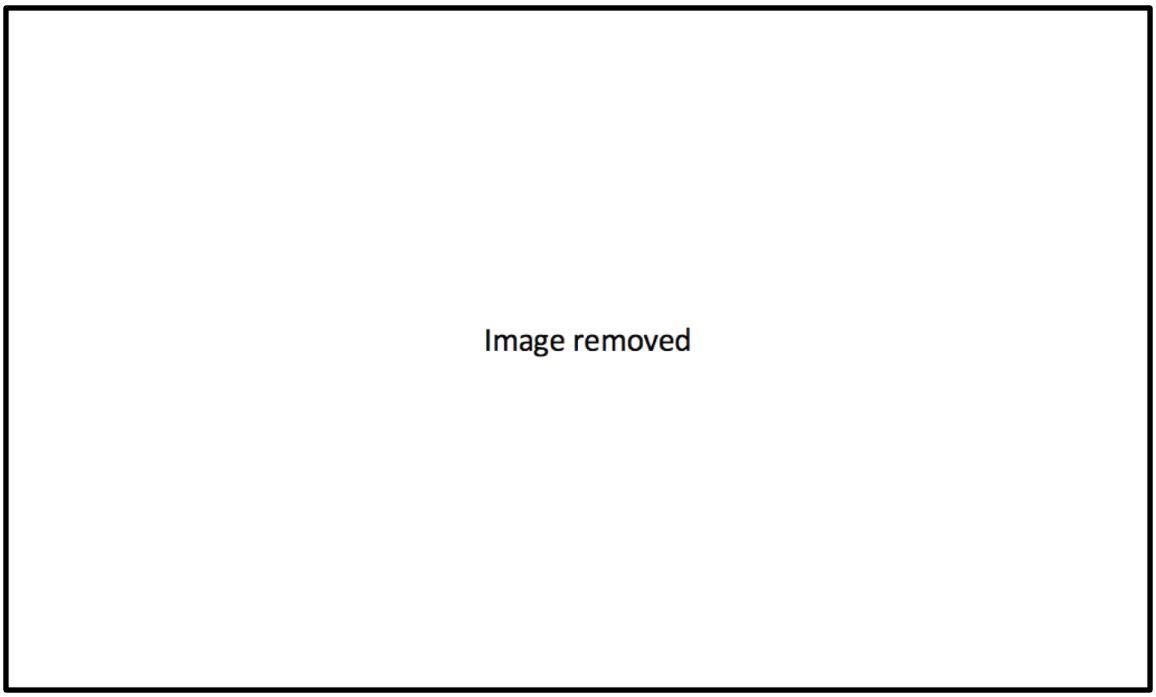

Figure 115. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 57 min 52 s. Another example of a tweet propagating information that is not true. ©Screen Gems.

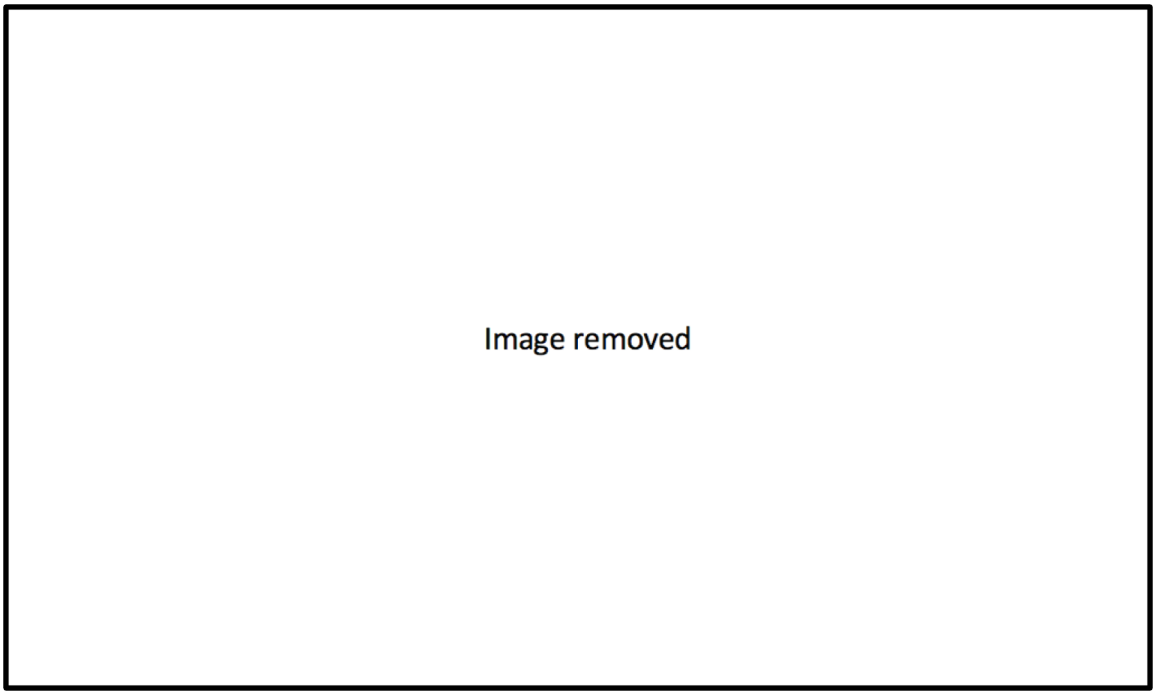

Figure 116. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 57 min 55 s. A reframing within a tweet to emphasize misinformation. ©Screen Gems.

Again, there is no evidence to prove this to be true or false, but the tweet serves as a red herring because it draws attention to Margot's father as a potential suspect. In both examples, these red herrings operate on the first two levels of the *screenlife* mise en scène. The text communicates a very specific message that is misleading within a text zone. The surrounding frames and zones within the same *Twitter* virtual window provide contextual information about who sent the message, when they sent it and within what application it was sent from. The shots that present this textual information are all reframings of the screen in the film *Searching* which is the one film out of the three that employs this reframing technique to place emphasis on certain information within a virtual window.

Other publications serving as red herrings in the Margot Kim investigation are also posted on *Reddit*. After David does a *Google* search on "margot kim investigation," he clicks on the "Margot Kim Mystery – Reddit" link. On this *Reddit* webpage, there are some hyperlinks related to Margot which include: "21 Reasons David Kim Would Murder Margot"... "Is Margot Kim 'Gone Girl' Crazy?" … "FACE IT: a random perv got to her" (fig. 117).

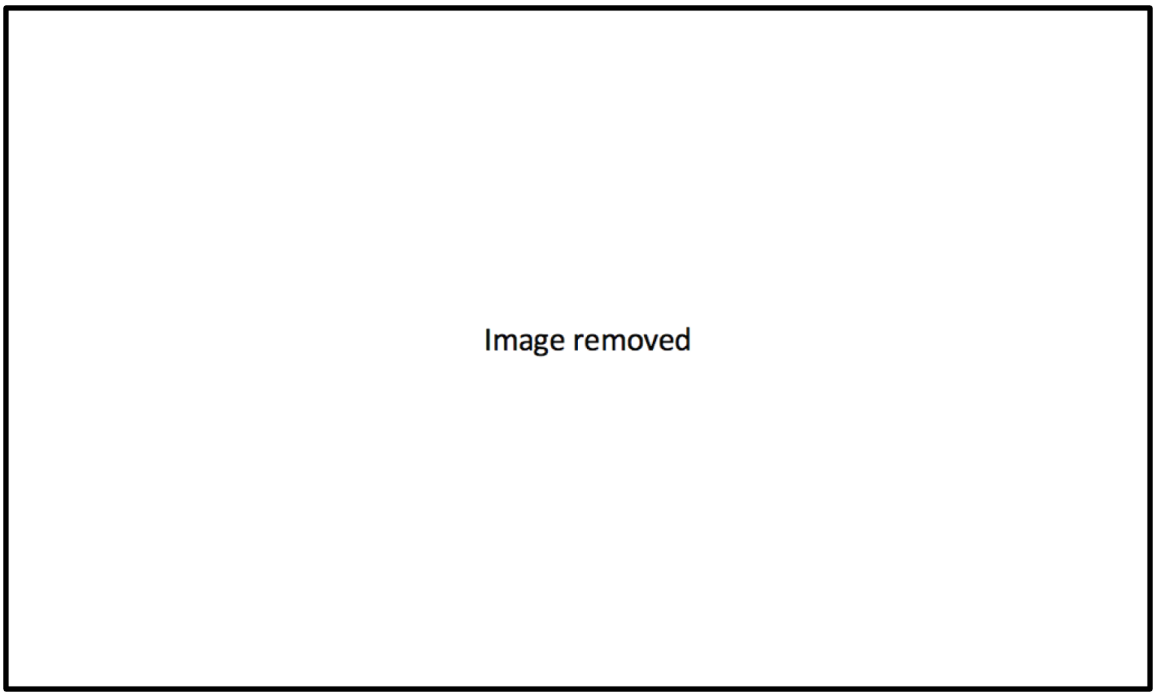

Figure 117. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 1 h 02 min 55 s. *Reddit* is another site where characters can spread misinformation. ©Screen Gems.

The first title “21 Reasons David Kim Would Murder Margot” offers several reasons why David could have killed his daughter. David doesn't click on that link, but just the title implies that David could have had some motives for murdering his daughter. The title “Is Margot Kim 'Gone Girl' Crazy?” suggests that Margot is pretending to be killed which in a way makes this red herring intertextual, yet still diegetic, because it refers to the film *Gone Girl* (David Fincher, 2014) which tells the story of a character named Amy Dunne who pretends to be murdered. While it seems unlikely that Margot did something similar to Amy in *Gone Girl*, it is not something that can be entirely ruled out, so it serves as a red herring. Finally, the hyperlink “FACE IT: a random perv got to her,” offers yet another red herring that declares that Margot was attacked by a pervert. These three titles of separate *Reddit* posts within the “Margot Kim Mystery – Reddit” webpage each provide separate red herrings located within the same virtual window. These false clues thus operate within the first two levels of the mise en scène because the shot is a reframing of the screen that primarily shows this *Reddit* virtual window. On the left side of the frame, there is a narrow column of text peeking through from a *Gmail* virtual window positioned behind the *Reddit* virtual window, but the information displayed is not pertinent to the overall shot as it is not in a meaningful juxtaposition to the information in the foregrounded *Reddit* virtual window, it mainly just serves to add depth to the composition. Thus, each individual title displayed in text makes up the first level of the mise en scène. The photos and other text zones that are in juxtaposition with the titles operate on the second level of the mise en scène.

There are also red herrings that are created with less intention to point the finger at a suspect that occur by accident or more innocently because of ambiguities of certain information that lead to misinterpretations. In *Searching*, David misinterprets an *iMessage* conversation between Margot and her brother Peter as though they had a romantic relationship. The conversation reveals that on January 17, 2017, at around 11:12 a.m., Peter had written to Margot, “You forgot your bio book at my place… PS. Good talk last night.” (fig. 118).

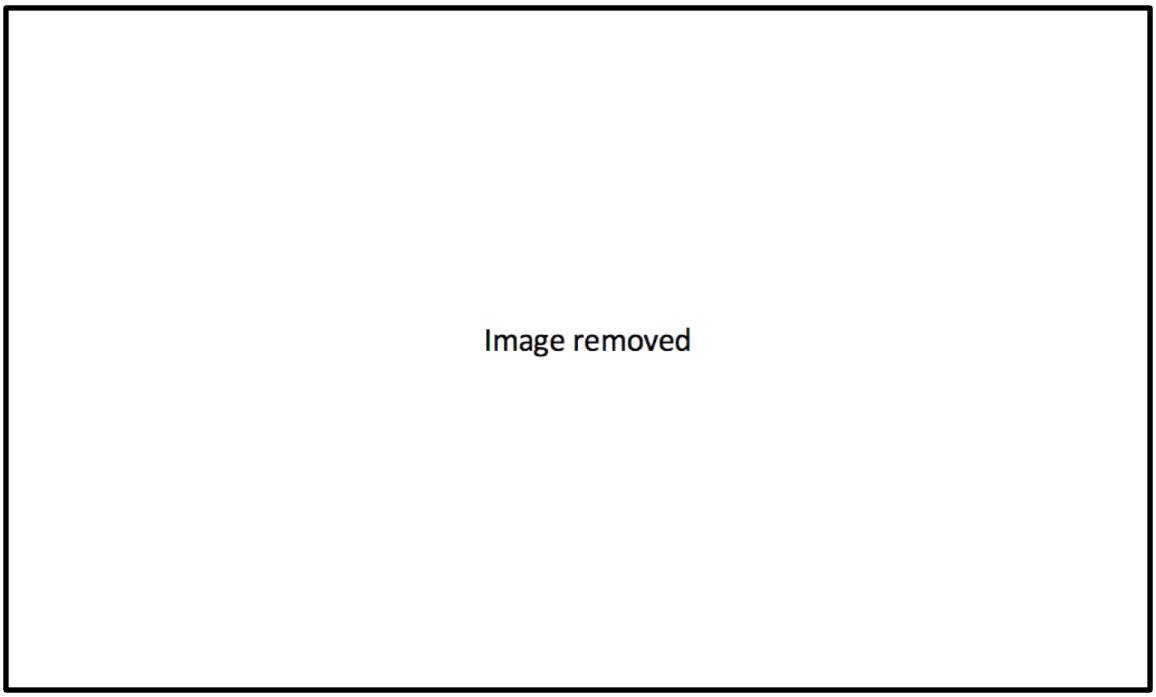

Figure 118. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 1 h 04 min 19 s. Ambiguous texts creating red herrings sequence (1 of 12). ©Screen Gems.

Then, on February 2, 2017, at 3:01 p.m., Peter wrote, “Last night was fun.” Margot replied, “I feel so weird doing this.” Peter added, “I mean, yeah it is kinda weird…” (fig. 119).

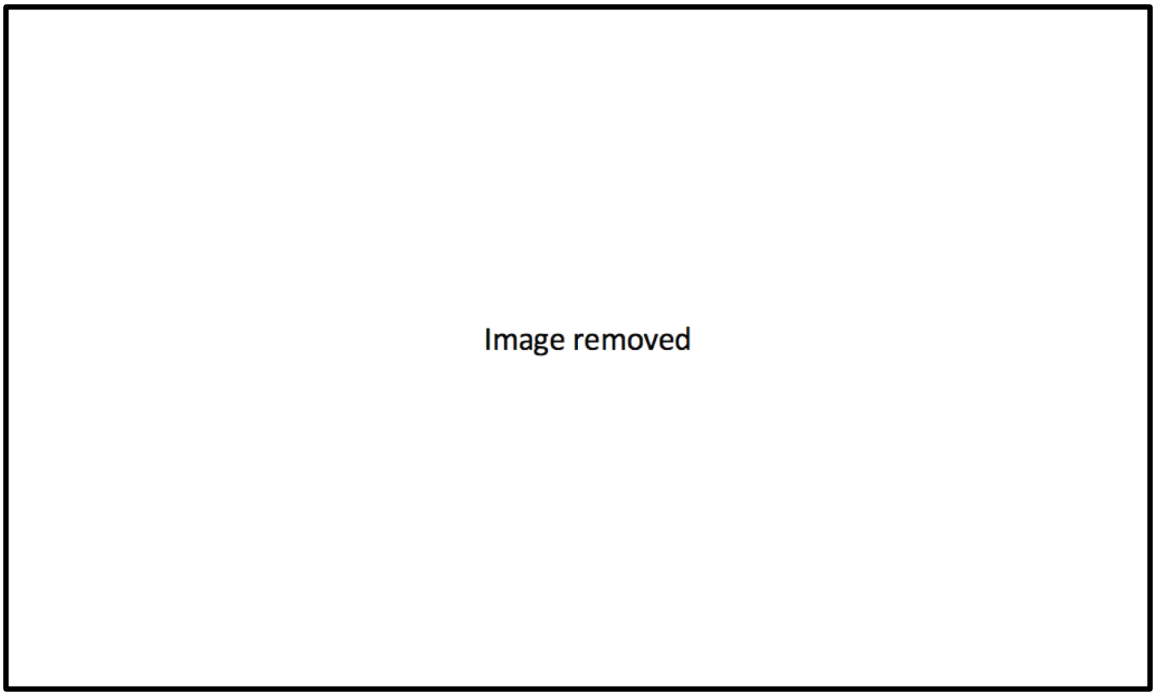

Figure 119. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 1 h 04 min 32 s. Ambiguous texts creating red herrings sequence (2 of 12). ©Screen Gems.

Then, on February 7, 2017, at 8:04 a.m. Margo wrote to Peter, “Hey” … “You good to chat later today?” Later that day around 4:12 p.m., Margo wrote to Peter, “Don’t tell my dad.” … “Pretty sure we’d both be dead.” Peter replied, “If he ever found out”… “he’d murder me” (fig. 120).

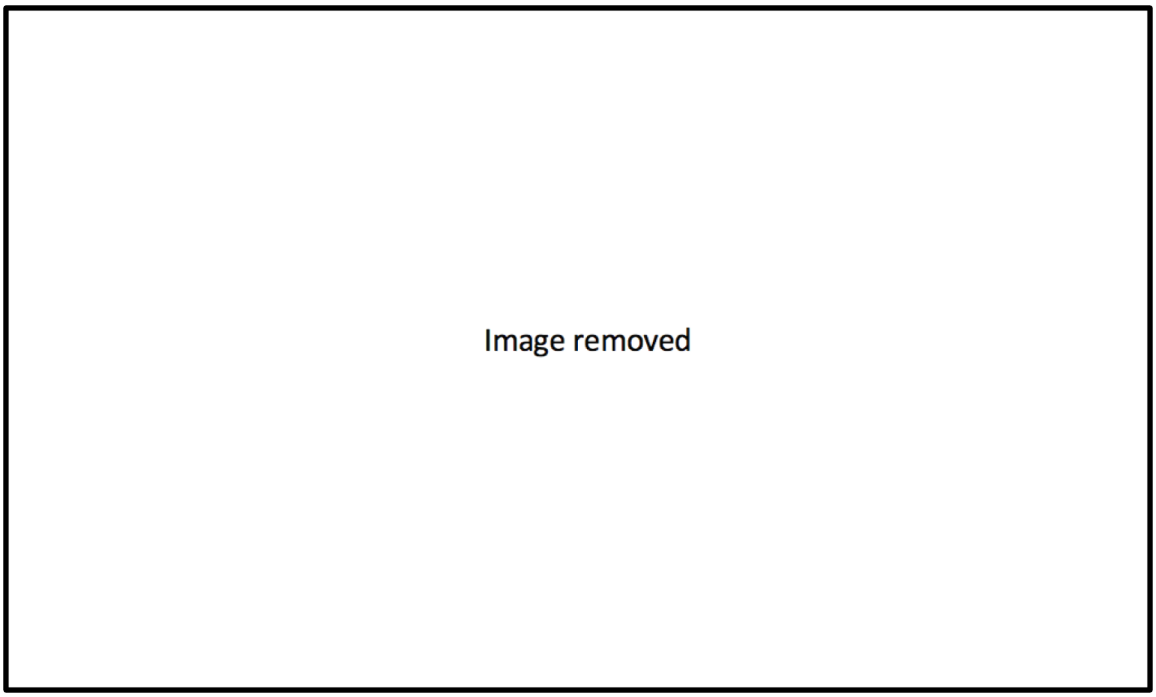

Figure 120. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 1 h 04 min 42 s. Ambiguous texts creating red herrings sequence (3 of 12). ©Screen Gems.

On March 11, 2017, Margo wrote to Peter, “Tonight?” Peter replied, “One sec lemme make sure”… “Yeah you good.” Margo replied, “Cool :)”… “See you then.” The next day, Margo wrote to Peter, “Yesterday was craaazyyy.” A few days later, she wrote, “Is this ok?” (fig. 121).

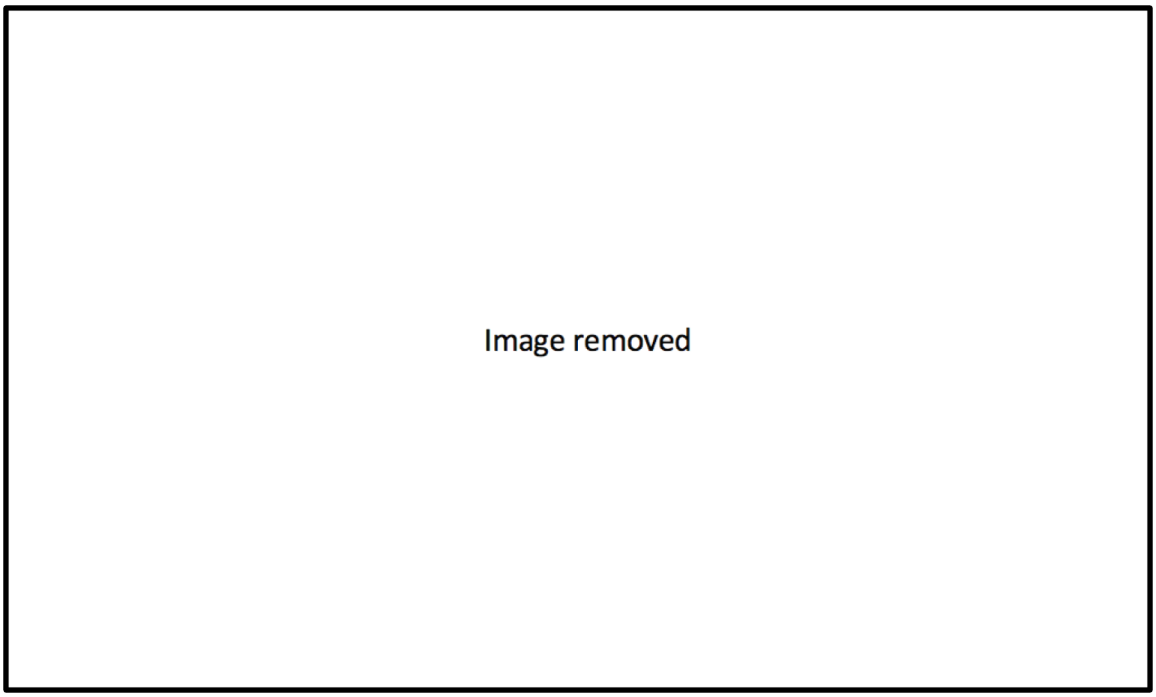

Figure 121. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 1 h 04 min 50 s. Ambiguous texts creating red herrings sequence (4 of 12). ©Screen Gems.

Then, on April 21, 2017, Peter wrote to Margot, “Cool. fig.d lol.” … “Don’t be nervous.” … “Seriously.” … “I’m sure I’ll see you soon.” (fig. 122).

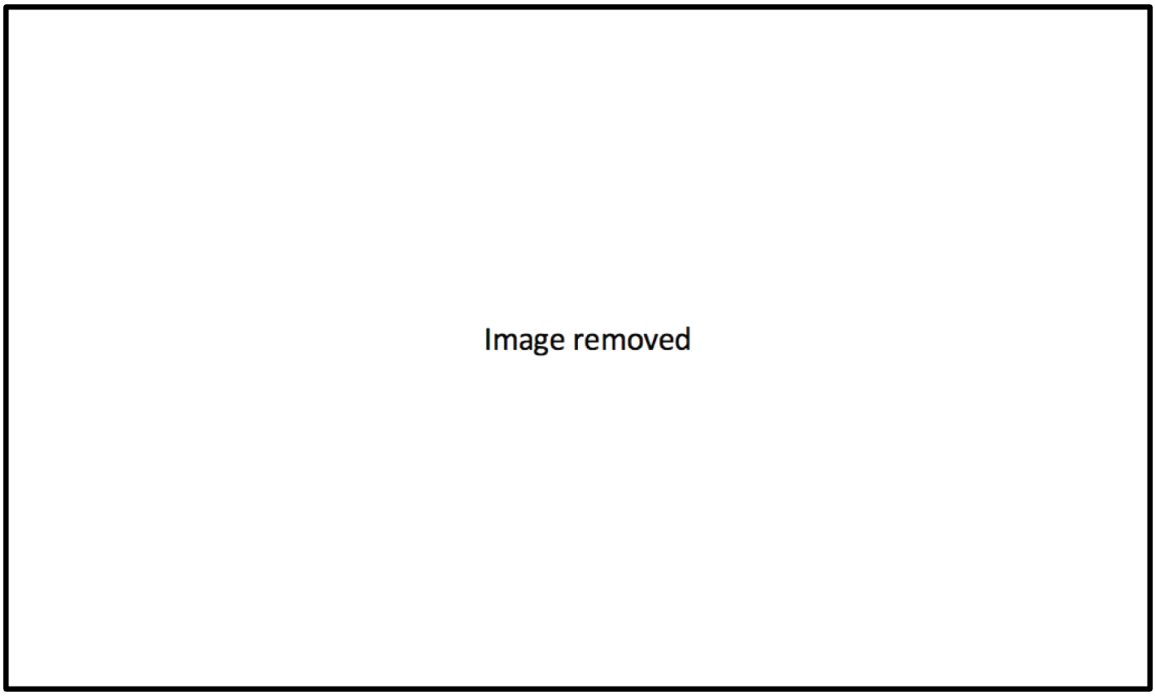

Figure 122. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 1 h 04 min 53 s. Ambiguous texts creating red herrings sequence (5 of 12). ©Screen Gems.

Finally, on May 1, 2017, Margot wrote to Peter, “Tonight?” Peter responds, “See you then.” (fig. 123).

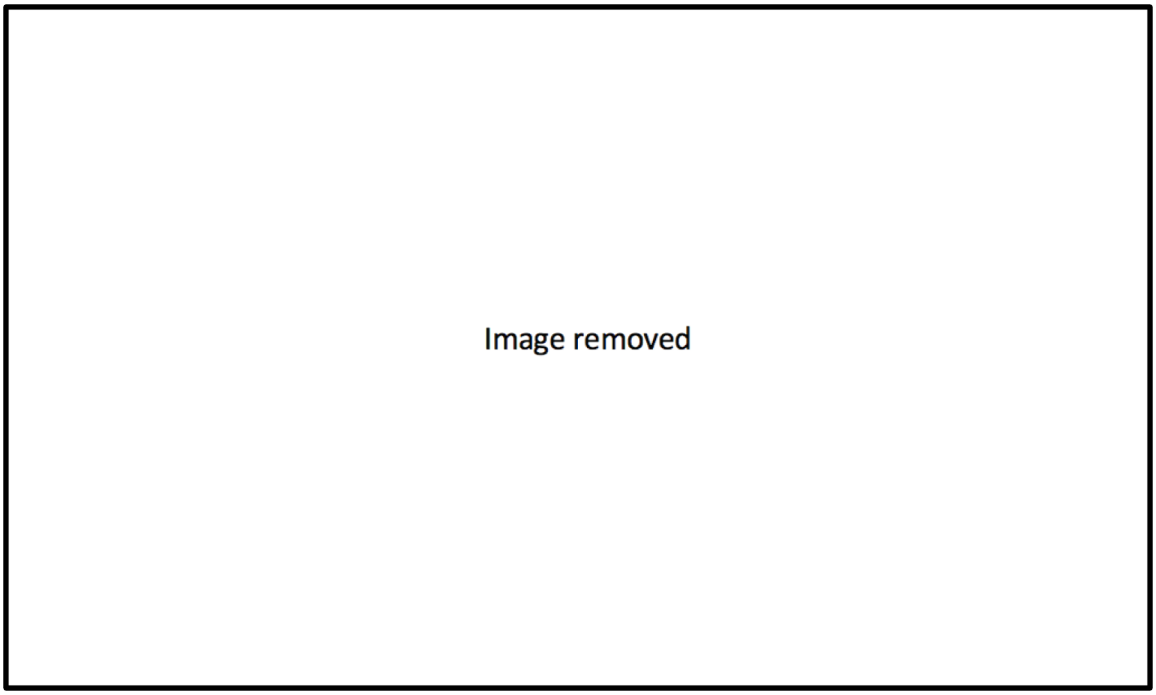

Figure 123. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 1 h 05 min 02 s. Ambiguous texts creating red herrings sequence (6 of 12). ©Screen Gems.

These messages, that lasted for a period of about three and a half months, suggest that there had been a hidden relationship between Margot and Peter, David's brother. It was hidden because Peter and Margot did not want to divulge to David that they were meeting up. However, it is later revealed that they met up to smoke marijuana together, not to cultivate a romantic relationship. The way the texts are framed on the screen within a very specific order and the fact that the messages have a certain ambiguity gives the impression that there could have been a romantic relationship between Peter and Margot. While this is not true, the presentation of the text messages and their ambiguity are two of the main reasons why these text messages work well as red herrings. The other technical element that helps to present this red herring is related to how the mise en scène is revealed. The text messages in *iMessage* are each contained within their own

text zones. Peter's messages are positioned on the left side of the virtual window and Margot's on the right. The sequence that really tricks David (and the spectator) into thinking that Peter is having a romantic relationship with Margot operates like a tracking shot. The shot starts on a reframing of the virtual window when Peter wrote to Margot, "You forgot your bio book at my place… PS. Good talk last night" (fig. 124) and then moves from one group of messages to another in a very quick manner, almost like a whip pan, stopping for a brief moment to display messages that are not only ambiguous, but also, at times, out of context. This tracking-like shot concludes when Peter wrote, "See you then." (fig. 125).

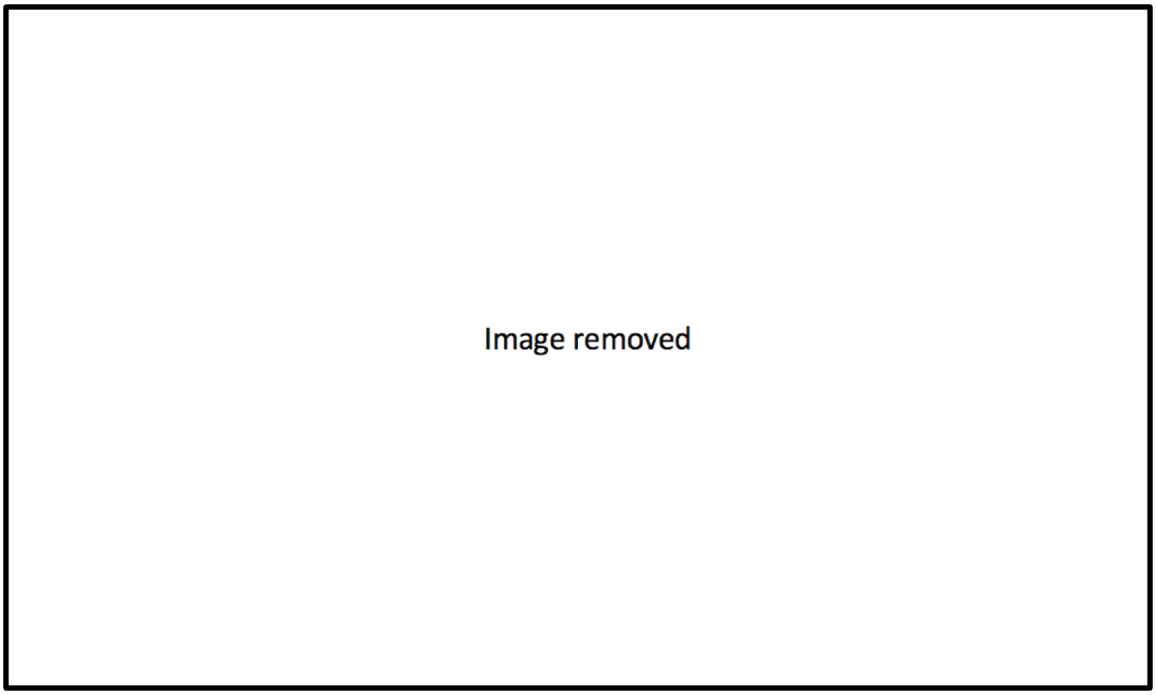

Figure 124. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 1 h 04 min 19 s. Ambiguous texts creating red herrings sequence (7 of 12). ©Screen Gems.

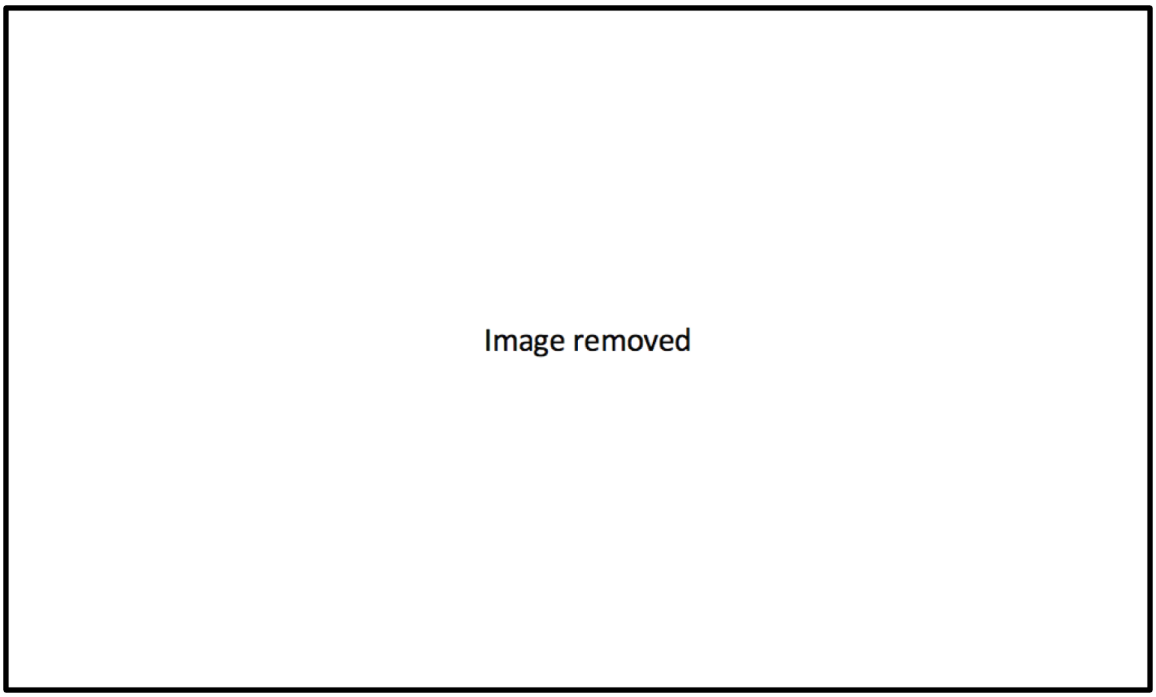

Figure 125. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 1 h 05 min 02 s. Ambiguous texts creating red herrings sequence (8 of 12). ©Screen Gems.

The reframings of each text message omit certain important information in messages located outside of the frame. For example, just before this tracking-like shot begins, there is a shot that shows the entire *iMessage* virtual window that displays a pertinent message from Margot, “Is it normal to feel kinda drowsy.” This message lasts on the screen for about a half of a second (fig. 126).

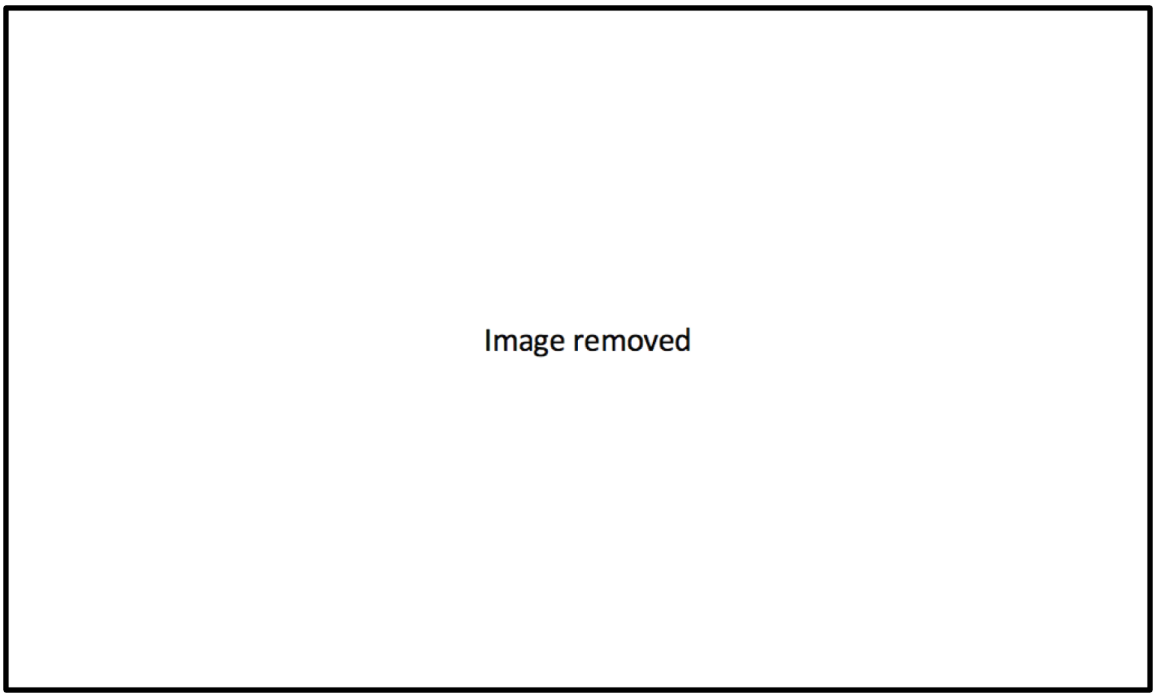

Figure 126. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 1 h 04 min 17 s. Ambiguous texts creating red herrings sequence (9 of 12). ©Screen Gems.

In total, there are 100 words displayed across 13 messages in this virtual window for the 12 frames that it is on the screen. The message from Margot is a reference to smoking marijuana with her uncle Peter. The following messages are all related to the fact that they have been meeting up to get high, but the tracking-like shot only reveals pieces of the conversations that suggest Peter and Margot had a romantic relationship. Had Margot's message, "Is it normal to feel kinda drowsy" also been reframed to emphasize its importance, perhaps it would have helped to better communicate what had actually been happening. Instead, the reframings of the text messages are executed in such a way that it only emphasizes certain information that suggests a romantic relationship while avoiding to display other information in other messages that would have helped to make clear the context of certain individual messages. An example of this occurs when the tracking-like shot zooms over some messages sent from Margot. The blurred text from a single frame during this movement toward the next text messages to be displayed reveals that Margot wrote, "Hey random update … probably can't hang out this week … Just nervous about bio … And every other final haha" (fig. 127).

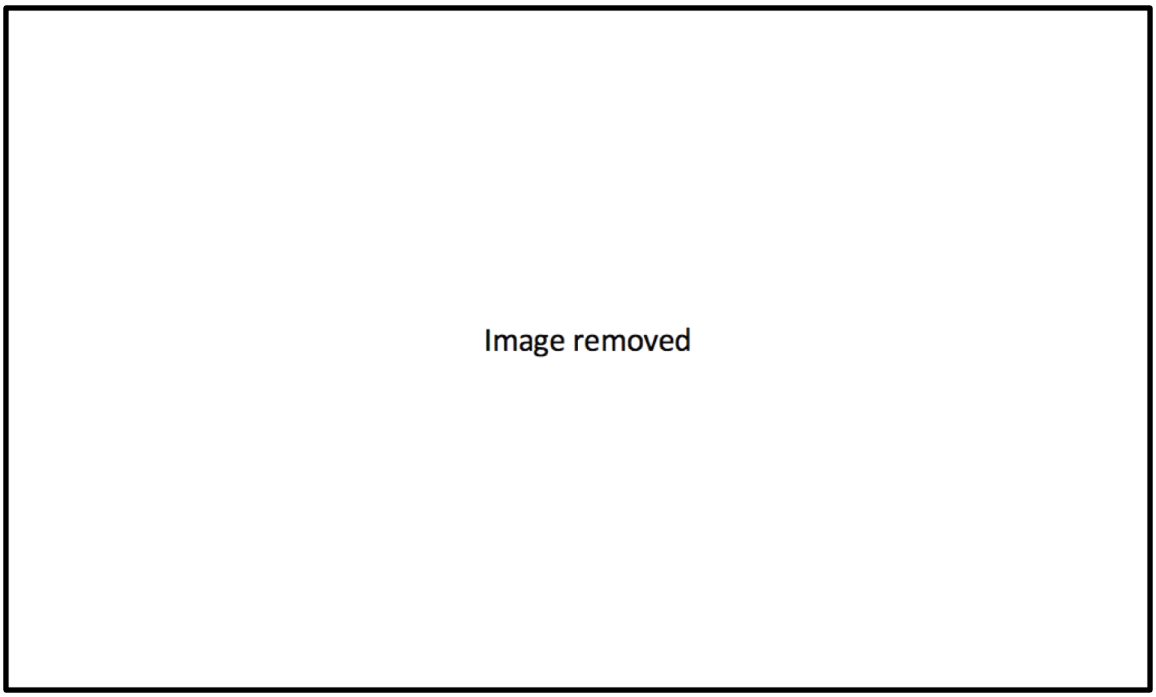

Figure 127. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 1 h 04 min 51 s. Ambiguous texts creating red herrings sequence (10 of 12). ©Screen Gems.

These messages are almost impossible to read as the text is blurred and these messages are only on screen for two frames, 1/12 of a second. What is relevant about these messages is that the next messages from Peter reveal his reaction to the fact that Margot is stressed out about school. Because Margot's messages are so difficult to interpret, the following messages from Peter, "Cool. Figured lol." … "Don't be nervous." … "Seriously." … "I'm sure I'll see you soon" (fig. 128) appear to be a response to Margot asking, "Is this ok?" (fig. 129).

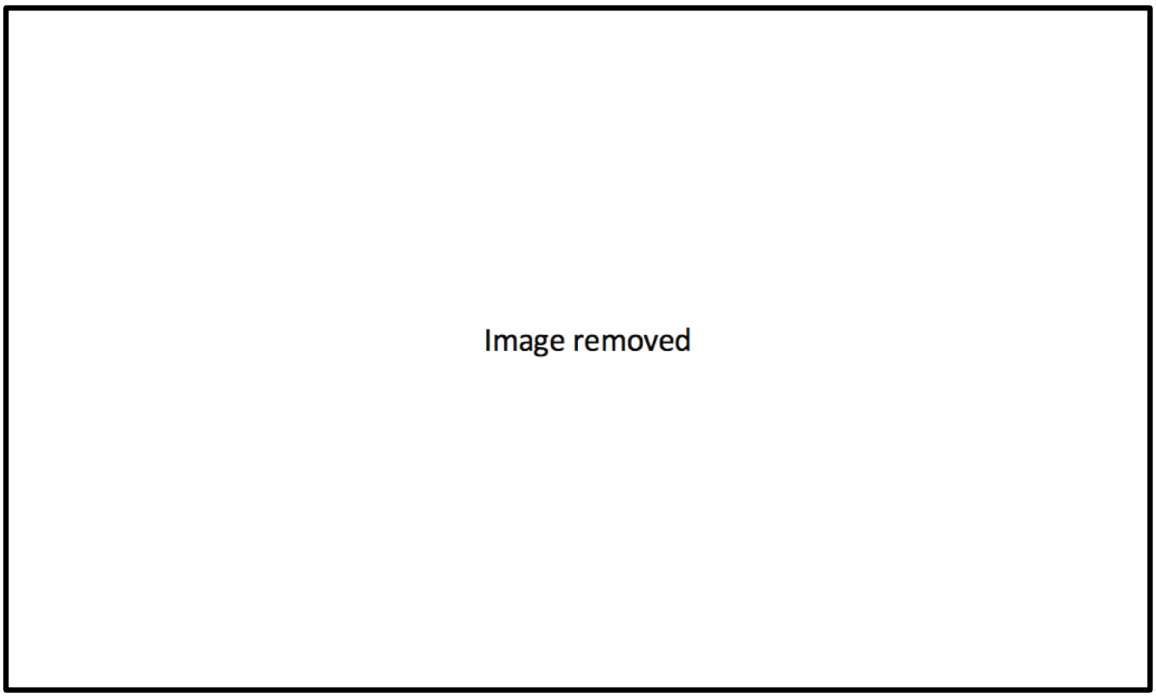

Figure 128. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 1 h 04 min 53 s. Ambiguous texts creating red herrings sequence (11 of 12). ©Screen Gems.

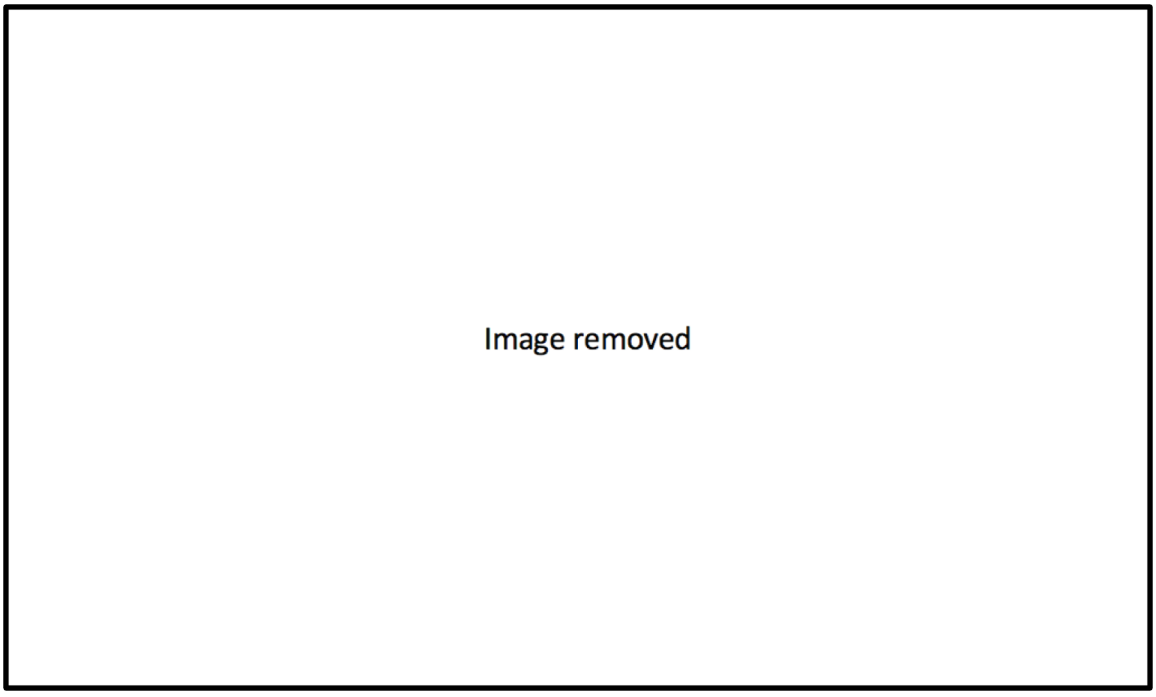

Figure 129. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 1 h 04 min 50 s. Ambiguous texts creating red herrings sequence (12 of 12). ©Screen Gems.

The juxtaposition between Margot asking, “Is this ok?” and Peter appearing to say, “Don’t be nervous” implies that they are talking about a romantic relationship when in reality Peter is trying to calm his niece before her biology exam. The quick panning and scanning of the text message conversation while only displaying reframings of certain messages is meant to fool the spectator into believing that something much more taboo, something much more transgressive has been happening between Peter and his niece Margot. The whip panning effect coupled with the use of the cursor that points at certain messages makes this sequence appear as though the tracking-like shot is a representation of what David is reading while he is navigating his way through the archived text messages. It appears that David ultimately interprets these messages as indicative of two people in a secret romantic relationship, but had he taken into consideration all of the information that had been displayed between the messages that are shown to the spectator, perhaps he would have been a little more skeptical that his brother was actually having an affair with his daughter. So, with this tracking-like shot over the virtual window, with its reframings and whip pans, to show certain messages while omitting others is a technique that takes advantage of the first two levels of the mise en scène, the text zones (first level) within the virtual window (second level). Thus, the representation of the screen recording has been modified in a dramatic way to guide the spectator’s eyes over carefully selected text zones that contain messages with enough ambiguity that a red herring is created to fool the spectator into believing something that is not true.

While most red herrings revealed visually on the screen space are contained in texts in these three *screenlife* films, videos and photos are also used to create them. In *Searching*, there are several photos contained in a slideshow within a virtual window for the TMZ website that show items found in Margot's car. One of the photos shows a hoodie with the logo of the Fins hockey team. This logo is revealed in a reframing of the computer screen space, but it is also made larger within the frame because David zooms into the photo on his computer screen using keyboard shortcuts. Once fully zoomed into and reframed, what remains is only a portion of one photo, a fragment of one photo frame, a piece of the first level of the *screenlife* mise en scène (fig. 130).

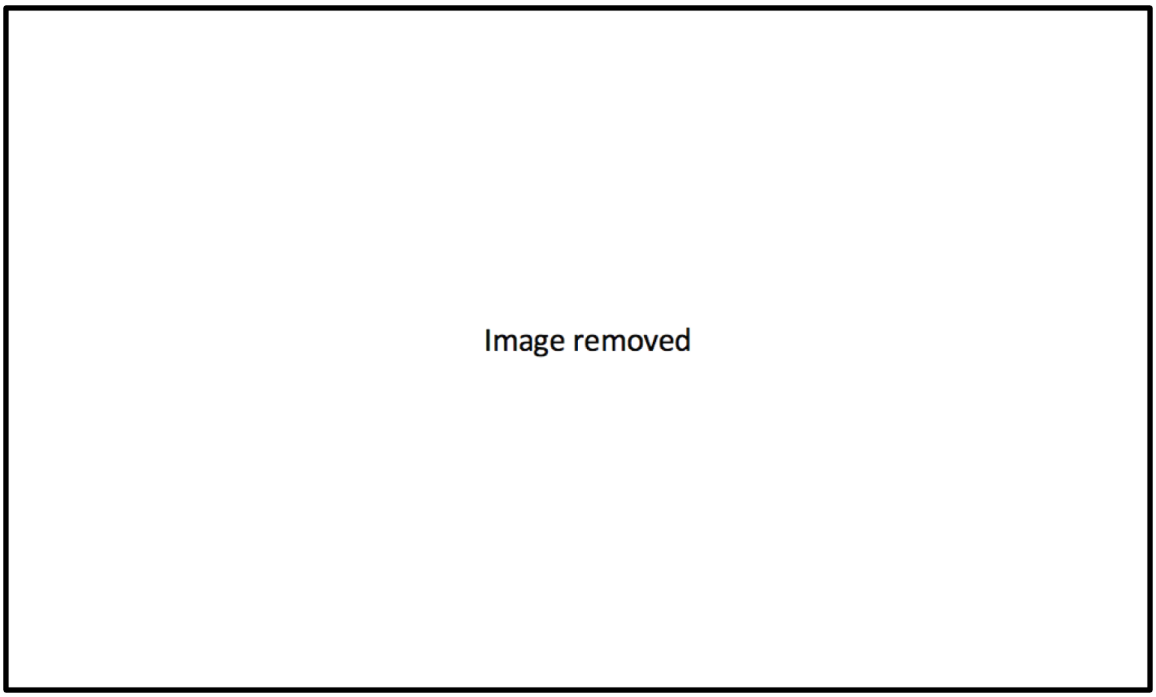

Figure 130. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 1 h 03 min 53 s. The zoom into a photo represents a portion of the first-level of the mise en scène. ©Screen Gems.

The hoodie belongs to David's brother, so this image that David is looking at suggests that Peter could have been involved in Margot's disappearance. This photo of the sweater therefore functions as a red herring to divert the focus of the investigation onto Peter. What makes the shot that reveals the logo unique in terms of the representation of the GUI is that only a portion of the first-level of the mise en scène is shown, the other two levels (virtual window, objects outside of the virtual window) are not shown. This shot alone does not reveal the GUI environment that it is contained within, but it had already been established a few seconds earlier just before David zoomed into the photo (fig. 131).

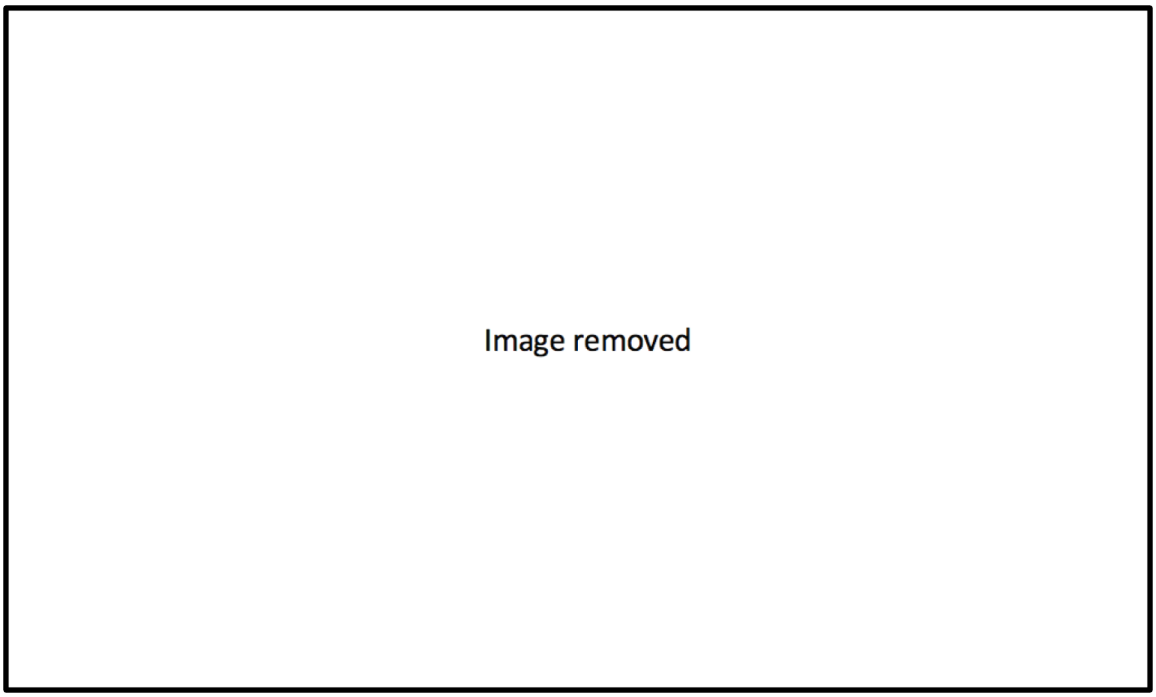

Figure 131. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 1 h 03 min 39 s. Shot revealing the context the zoomed-in photo is situated. ©Screen Gems.

Video is also used to show red herrings. In *Unfriended: Dark Web*, the protagonist Matias receives a video in a *Facebook Messenger* message from a fictitious *Facebook* account using the name Eva Thomatos (fig. 132).

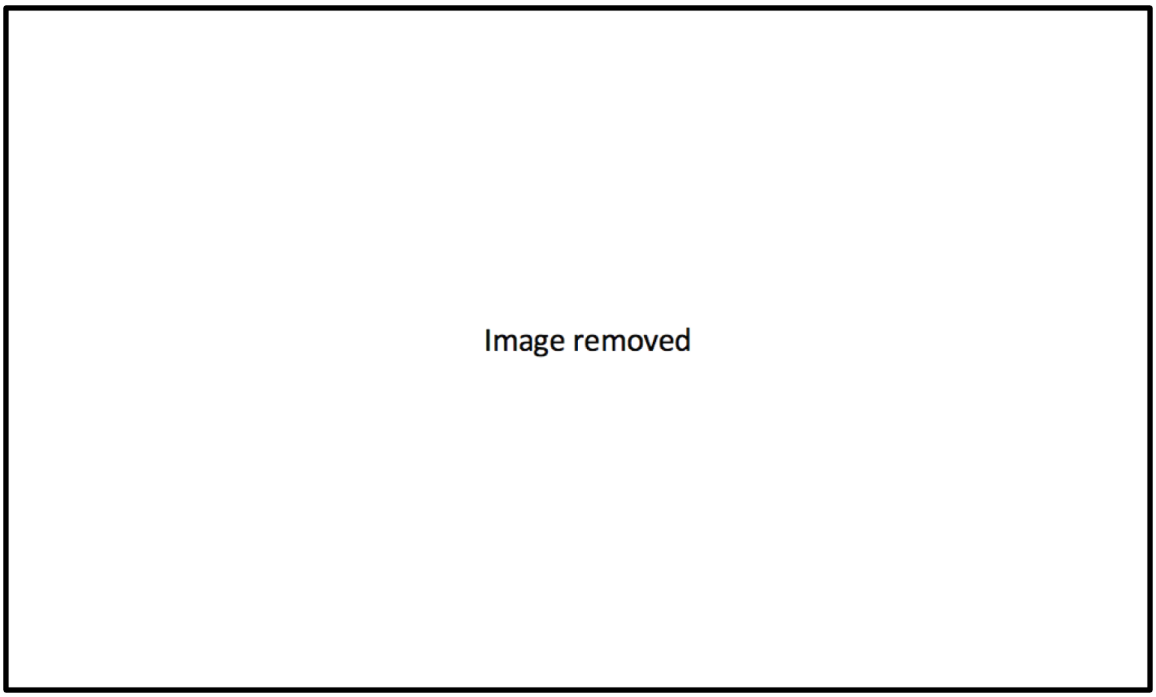

Figure 132. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 10 min 54 s. Video used as a red herring. ©Bazelevs Company.

The short 10-second video presents a woman who reveals her body in a way to sexually attract the apparent owner of the laptop that Matias stole, Norah C. IV. This red herring is primarily contained in the video because there is no speech or other significant sounds in the audio track while the video clip is played in full-screen. It is uniquely the images in the video sent by the Thomatos account that are meant to peak Matias's curiosity, so that he is given the impression that this woman along with several others are real people who are romantically interested in Norah C.IV. This video helps to build the image of Norah C.IV as a person that actually exists. In reality, the video exists exclusively for the eyes of Matias (and for the spectator) as it is meant to make it look like a real person owns the computer when in fact it is a bait computer designed to manipulate Matias and his friends in a deadly game. It is also worth pointing out that seven seconds of this 10-second video is playing in full-screen mode which means that it is taking up the entire screen space for about two thirds of its on-screen time. This suggests that the red herring operates uniquely on the first-level of the mise en scène during these seven seconds. However, the first three seconds of the video are played within a video frame located within the *Facebook*

virtual window that also displays a text zone suggesting the video has been sent by a user named Eva Thomatos. (fig. 133)

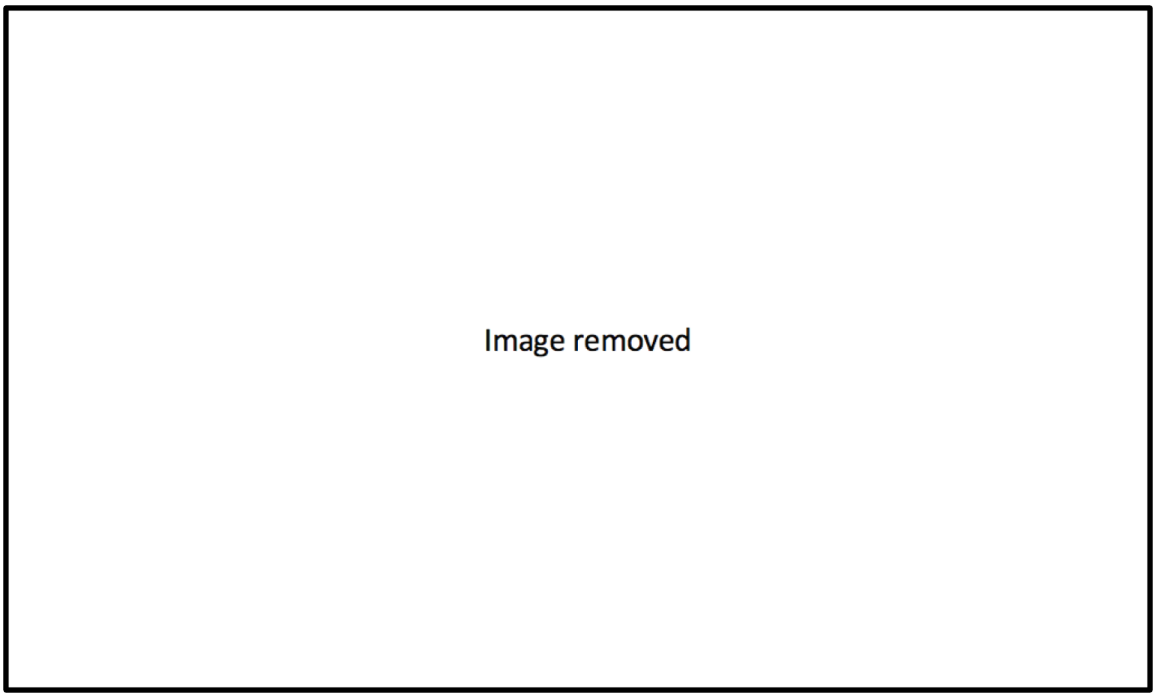

Figure 133. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 10 min 49 s. The video serving as a red herring is contextualized within *Facebook*. ©Bazelevs Company.

Thus, the red herring also relies on the second level of the mise en scène in order to establish who the video is sent from. As well, when the video is in full-screen mode, the *Facebook* virtual window is still present, it is just being completely overlapped by the Thomatos video. This example reinforces the relevance of the relationships between individual media simultaneously displayed within each GUI, especially in *Searching* when all three levels of the mise en scène are not always visible because of reframings of the screen space that only display portions of the GUIs or in situations (such as the last example) when video is in full-screen mode which effectively blocks out the visual display of other GUI objects (frames and zones) operating simultaneously. Therefore, it is important to be aware of objects that are not shown visually, notably frames (video, photo) and text zones, but exist in the background or outside of the film frame while operating simultaneously within the same screen space as other objects that are being foregrounded visually for one reason or another.

This last example also highlights that some red herrings are composites of different types of media operating within different levels of the *screenlife* mise en scène. *Searching* provides several examples of these types of false clues. In one scene when David Kim is talking with Detective Vick on the phone, she sends him an image of a fake driver licence in a *Gmail* message that shows Margot's photo and texts that display another name and information about an identity that is not Margot's (fig. 134).

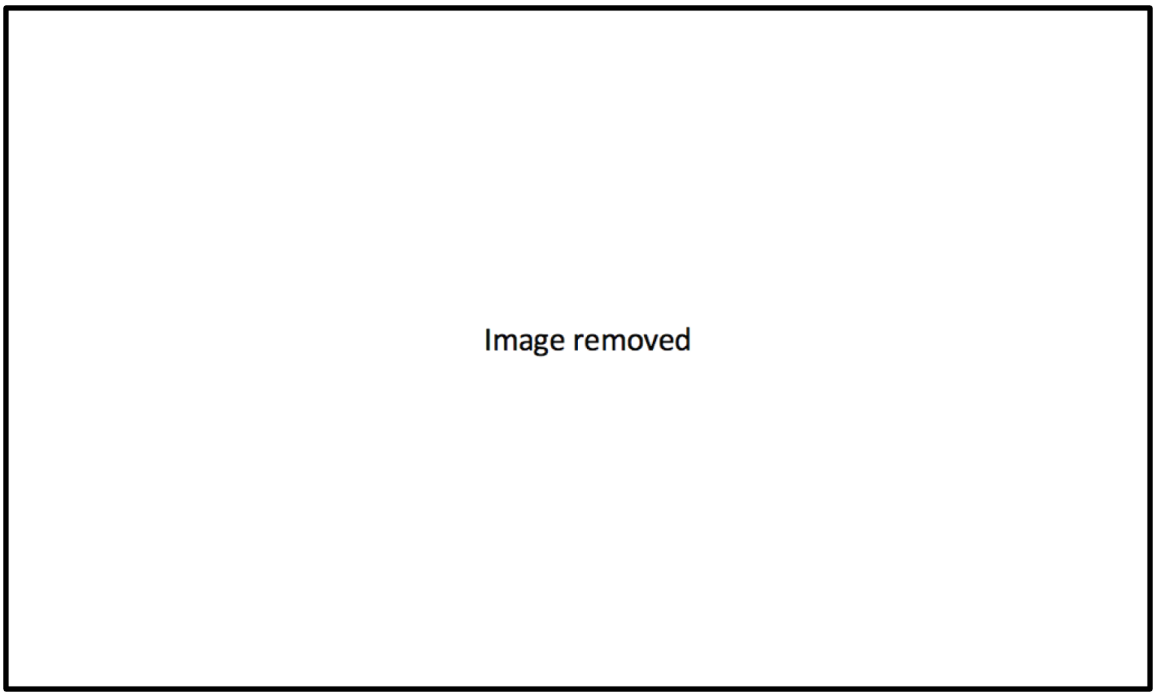

Figure 134. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 38 min 05 s. The red herring is a composite of text and photography within the driver licence as well as speech from Detective Vick. ©Screen Gems.

When this image of a fake driver licence is displayed on the screen, Vick's voice is also present in the phone call. She says,

> "You mentioned earlier she was acting like a different person, so I had our forensics team look through any deleted contacts on the copy of her hard drive. One of those contacts was a local forger. He said Margot picked up an ID a few days ago around the same time she withdrew all that money" (*Searching* 2018, 38:03).

Here, the audio that contains Vick's speech is one of the media used to construct this red herring. Vick is insinuating that Margot bought the fake driver licence to run away from home which is not

true. Two other media simultaneously displayed at the same time also add to the construction of this red herring, a photo and texts. The texts “RACHEL” and “JEUN” and the photo of Margot are contained within the image of the California driver licence. The entire image of the driver licence operates on the first level of the mise en scène because it occupies the space of a photo frame. While it has yet to be addressed, the mise en scène within a single image, such as the image of the driver licence, can contain its own internal frames (video, photo) and text zones. The speech operates outside of the three levels of the mise en scène because this three-level structure refers specifically to images within the visual screen space, but the audio, the speech, in this case is linked to the telephone call between David and Detective Vick that is filmed by the webcam on David’s computer and shown within the video frame of a *FaceTime* virtual window on the screen. This *FaceTime* video is located in a virtual window other than the one that contains the image of the driver licence, so one could consider this red herring to operate on all three levels of the *screenlife* mise en scène.

In another scene involving Vick, a red herring is produced by simultaneously presenting text, video and audio containing speech when Vick is shown within a video in a video frame on the *ABC-7* news website virtual window marking "Xs" with a red felt-tip pen over areas that are labelled zones 12 and 13 on a map that indicate the areas she has already searched for Margot (fig. 135).

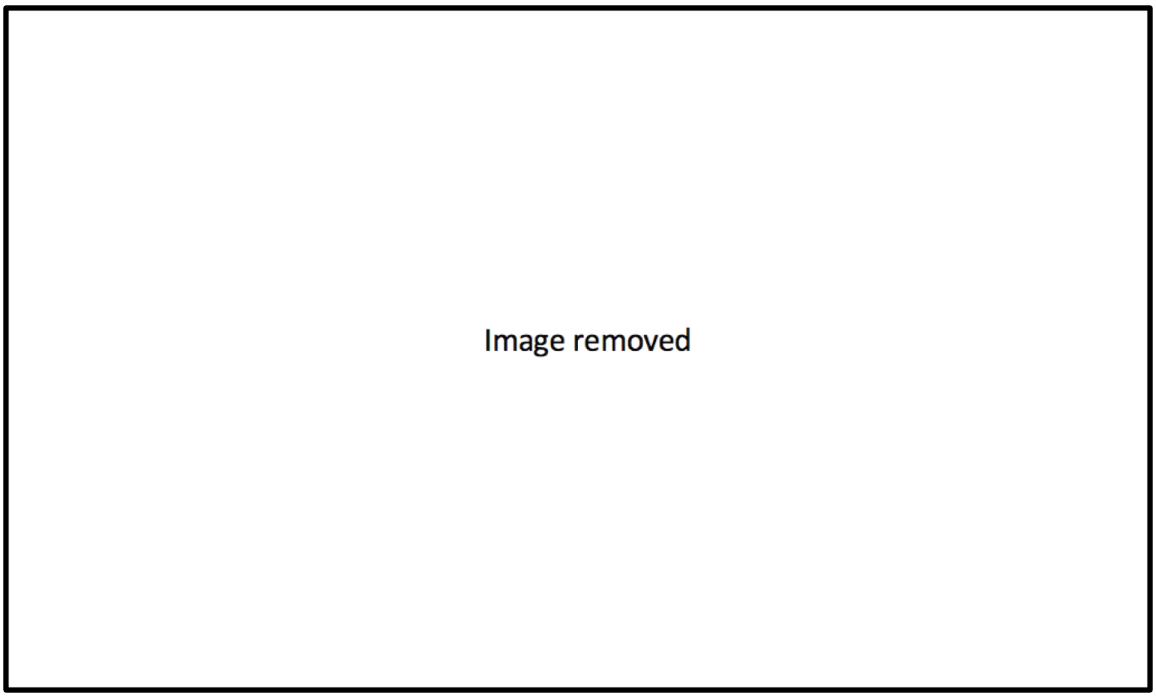

Figure 135. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 56 min 06 s. This red herring is a composite of video and text within the image as well as speech from Detective Vick. ©Screen Gems.

While she does this, she says, “because of the steep ravines and otherwise unsafe topography on the west side of the lake, we have already cleared the following zones, but still there’s lot of ground to cover.” This is another example of a red herring using more than one media. Video, text and audio containing speech combine to create the red herring. Vick attempts to derail the investigation by stating verbally in the audio track that zones 12 and 13 have already been searched when in fact Margot is still located within one of these two zones. Vick reinforces her deception in the video by marking on the map that these areas have already been searched. This red herring operates primarily in the first two levels of the *screenlife* mise en scène because the video showing Vick marking the X’s on the map is contained within a video frame, but a text zone within its virtual window, the second level of mise en scène, is pertinent because it reveals that the video is contained within a virtual window for a news website with the heading, “WATCH ABC7 EYEWITNESS NEWS.” The fact that the information comes from a legitimate conventional media news site makes the information appear to have a certain veracity, a certain believability

that is perhaps not associated with other websites, blogs or social media such as *Reddit*, *Facebook* and *YouTube*.

Clue camouflaging techniques

As demonstrated in the previous examples, red herrings are typically presented in a way that appears very obvious to the spectator. Since the main goal of the red herring is to communicate false information to derail the investigation, it makes sense that this information is shown in such an explicit manner to the spectator. In contrast to this, real clues that contain information that help to solve the mystery are typically not revealed in ways that make them easy to detect or to interpret correctly. In the traditional detective novel, Mary F. Rodell has identified three specific mystery fiction techniques used to conceal the significance of a clue, so that it makes it more challenging to make sense of one when it is presented. They are the conjuring, burying and concealing by timing techniques. These techniques are useful in constructing a mystery because they allow the author to show the clues in the story, but in a way that makes them more difficult for the reader to detect and to understand their true meaning (Rodell 1946, 271-272). To make clues more mystifying, harder to detect and to understand, the context they are displayed within is manipulated or constructed in a way to make them more challenging to interpret correctly. This manipulation is necessary within mysteries because otherwise clues would be too easy for the detective or the reader to understand their true meaning, thus making the mysteries too easy to solve. Rodell emphasizes that “the writer’s chief problem with clues is apt to be less their nature than the manner of their presentation. If a clue leads directly and unequivocally to the suspect, there is no room left for mystification” (Rodell 1946, 271). To make the mystery more difficult to solve, Rodell describes the three techniques that an author can use to achieve this “mystification” effect. The first is the conjuring technique based on the idea that an action immediately following an important clue can serve as a distraction to make the clue be forgotten in the mind of the reader not long after it is revealed. According to Rodell, the action should be something that is so captivating to the reader that it makes the clue disappear. This implies that the reader's attention is so consumed by the distractive nature of the action that the clue that preceded it no longer retains its significance in his or her mind because this new action is either so entertaining, bizarre, extreme, interesting or disgusting.

> He may use the conjuring technique, and immediately after presentation of the clue introduce a bit of action so exciting and important that the reader forgets all about the casual mention of the clue that went just before. The author is, in other words, distracting the reader's attention at the important moment, as the pretty girl on the other side of the stage distracts the audience's attention from the magician's hands (Rodell 1946, 271).

This conjuring technique is unique in *screenlife* films because rather than having the distracting action appear after the clue like in traditional detective novels and conventionally shot mystery genre films, the GUIs offer a visual structure to permit these distractions to be staged onscreen in a simultaneous way, rather than in a sequence. In *Unfriended: Dark Web*, an example of the distracting action being shown simultaneously with a clue is when there is an infratextual reference hinting at a crime that is about to be committed, one that implicates an underground criminal organization which is on the verge of using the internet to bait the group of friends unknowingly into their deaths. In a small *Skype* virtual window titled "Current Call," AJ goes on a rant about the menacing nature of the internet (fig. 136).

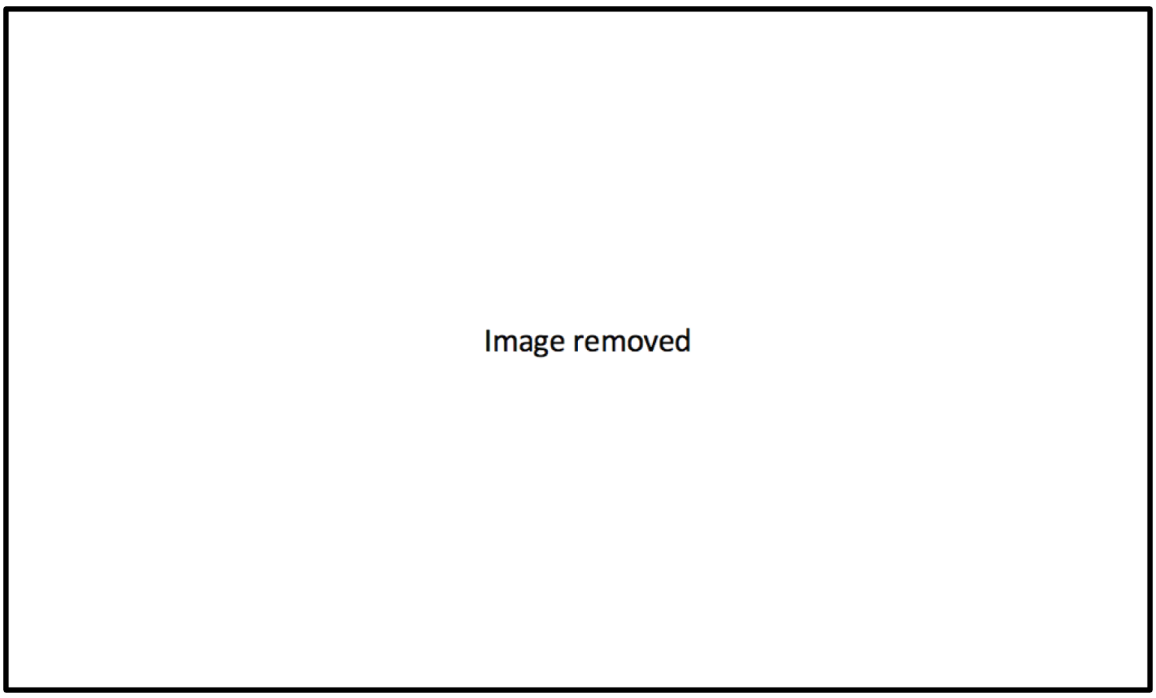

Figure 136. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 15 min 12 s. The conjuring technique is realized in a simultaneous rather than sequential manner. ©Bazelevs Company.

Using the shark as a metaphor, he explains that there are hidden dangers on the web. These allusions to an online threat serve as an infratextual clue to the antagonists that are going to kill the group of friends on the *Skype* video call.

> AJ : "The internet as you know it is just the surface. You guys are just like, oh you just fool around out there without a care in the world. And it is a deep goddam ocean. And there are sharks swimming below you. They're just gonna, they gonna come in from right up behind you when you don't even see it coming" (*Unfriended: Dark Web*, 15 :12 - 15:30).

These spoken words, this speech within in the soundtrack is synchronized with the video showing AJ in the much smaller *Skype* "Current Call" virtual window. The other much larger *Skype* virtual window shows the text conversation between Matias and Damon. While AJ pontificates about online threats, Matias creates the distracting action by stating to Damon that AJ needs to shut up, stop talking. This is followed by a joke that Damon makes about AJ's paranoia and his references to Cambridge Analytica. The text conversation then centres around a technical problem with Matias' computer (fig. 137).

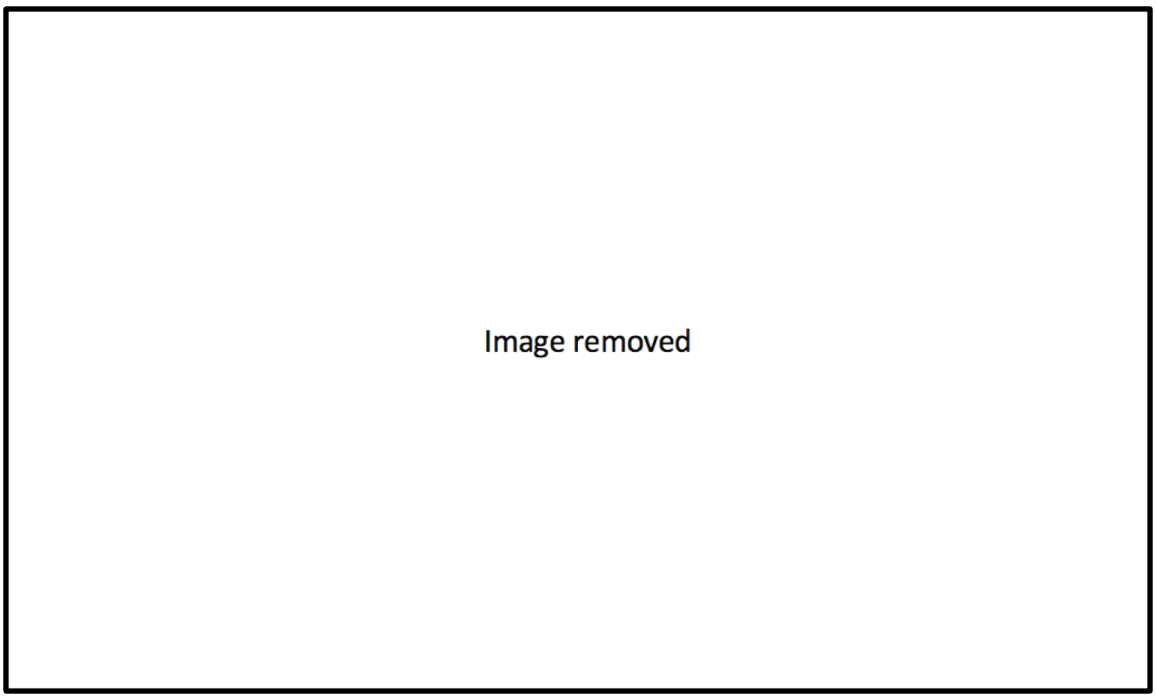

Figure 137. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 15 min 30 s. A text conversation is displayed while an infratextual clue is revealed in AJ's speech . ©Bazelevs Company.

Matias: “OMG will AJ STFU plz”

Damon: “It’s not paranoia if everyone’s really out to get him”

Damon: “if he says Cambridge Analytica one more time…”

Damon: “did you crash or something?”

Matias: “getting the beach ball of death”

Matias: “happened a few times now”

Matias: “that’s what I get from buying on craigslist”

Damon: “usually means the hard drive is full”

This text conversation on the screen serves as a distraction for the infratextual clue that comes from AJ's speech in the audio track. The large size of the virtual window, the layout that shows messages on both sides of the page to make clear who has written what, and the speed that Matias and Damon exchange messages are all part of the distraction. The formal elements of the two interfaces within each virtual window allow for this type of simultaneous distraction. The much larger size of the *Skype* virtual window gives the text conversation more emphasis onscreen because it dwarfs the smaller one showing AJ in a video frame in the bottom right corner of the screen. Within the text conversation window, the visual layout makes it simple to observe what Matias is typing and what each of the two characters has already typed in the conversation. The smaller virtual window showing AJ also plays a role in the distraction because while what AJ says is an important extra-diegetic clue, he is not always talking directly to his friends as his body is either halfway out of the frame or he has his back to the webcam. He is effectively making himself appear less credible by walking away from the webcam to monologue about his frustrations and conspiracy theories. This behaviour adds to his apparent paranoia. AJ eventually returns to speak directly to his friends into the webcam, but he becomes the butt of the negative comments and jokes between Matias and Damon in the text conversation that is simultaneously displayed on the screen, so it makes it difficult to take AJ’s warning about online threats seriously once he returns to his seat to address his friends. The small virtual window showing AJ does not show the clue, it shows AJ in the video which is important because it makes the link between the speech in the audio track that contains the clue and the person who speaks. The speech is potentially ignored or forgotten by the spectator because of the conjuring technique applied in a simultaneous way. The speech that contains the clue is rendered less important primarily because

of what has been written in the much larger *Skype* window that discredits AJ, but also because of the way that AJ speaks in the smaller virtual window which includes erratic arm gestures, positioning his back to the camera and moving himself within and outside of the video frame.

What is also important to note about this technique of showing two conversations at the same time using speech and written text is that these two separate types of media, text and audio containing speech, can be clearly read and heard at the same time without causing any perceptible interference with their communication other than the fact that the spectator could choose to observe one of the media over another. This technique works when mixing onscreen text conversations with one voice speaking in the audio track at a time. If there are multiple voices talking simultaneously in the audio track, it is possible that the words, the speech, could become less intelligible to a spectator because multiple voices simultaneously occupying the vocal frequency spectrum often become more challenging to discern, to understand. This is in contrast to a GUI interface because it makes it much more practical to visually show more than one conversation simultaneously on a screen because text can be allocated to specific space within a screen's dimensions, so separate textual conversations can occupy their own designated spaces without interference from other images. Whereas, with verbal conversations, it is not possible to allocate speech to a specific space within the audio spectrum aside from the frequencies that the voice is associated with. The problem that this limitation poses is that most voices fall within a similar frequency range, so it is very difficult to have two voices, two aural conversations simultaneously occurring if intelligibility is desired because any similar frequencies between voices in the audio track will blend, making the speech less intelligible. For multiple conversations to be presented simultaneously in a *screenlife* film, there should be a minimum of one conversation shown textually on the computer screen and a maximum of one conversation contained within the audio track at any given time in order to achieve the simultaneous distraction necessary for this conjuring effect.

Another example of simultaneous distraction that impacts the interpretation of a clue through a distracting action (conjuring technique) within the GUIs occurs in a scene in *Searching* that shows two text zones displayed at the same time in the same virtual window. This example occurs about four minutes into the film. An important clue is shown, a comment within a text zone from Robbie

Abolt on Margot Kim's *Facebook* page. This page also shows, within a video frame, a *YouTube* video that shows Margot playing the piano. Abolt wrote in the comment section just below this video, “Your so good!” (fig. 138).

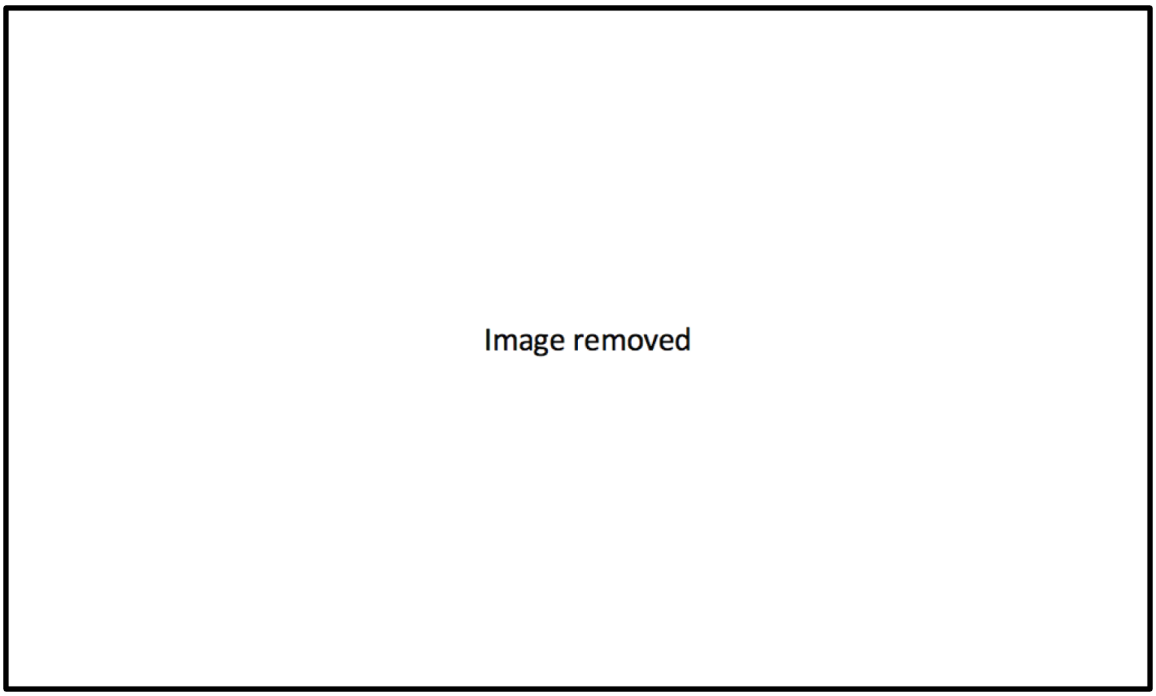

Figure 138. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 4 min 14 s. The click on the “Like” button creates a distraction to divert attention away from Robbie’s comment, “Your so good!” ©Screen Gems.

This message suggests that Abolt likes Margot, that he possibly has a crush on her. Another important detail is his misspelling of the word "your." It should have been "you're" which is also a subtle hint that Robbie has a learning disability, that he has special needs. This detail resonates when it is revealed at the end of the film by his mother, Detective Vick, that he followed Margot to the lake rather than addressing her at school because he was emotionally incapable of confessing to Margot at school that he had developed a deceiving relationship with her online using a false identity.

The significance of the simple comment, “Your so good!” from Abolt is not easy to fully understand at first glance because its real meaning becomes much more apparent later in the story when it is juxtaposed against other information. As well, this clue does not stay on the

screen for very long, about a second and a half. However, there is another reason why this clue is not easy to detect and to dwell on when it is shown. There is an action, a simultaneous distraction that happens when this comment from Robbie is displayed on Margot's *Facebook* page. This distraction is initiated by the mouse and cursor. Pamela, Margot's mother, clicks the "like" button for the *YouTube* video embedded on the *Facebook* page that is located just above the text zone that shows Robbie's comment. After clicking the "like," a message under the "like" appears. It reads, "Pamela Kim likes this" (fig. 139).

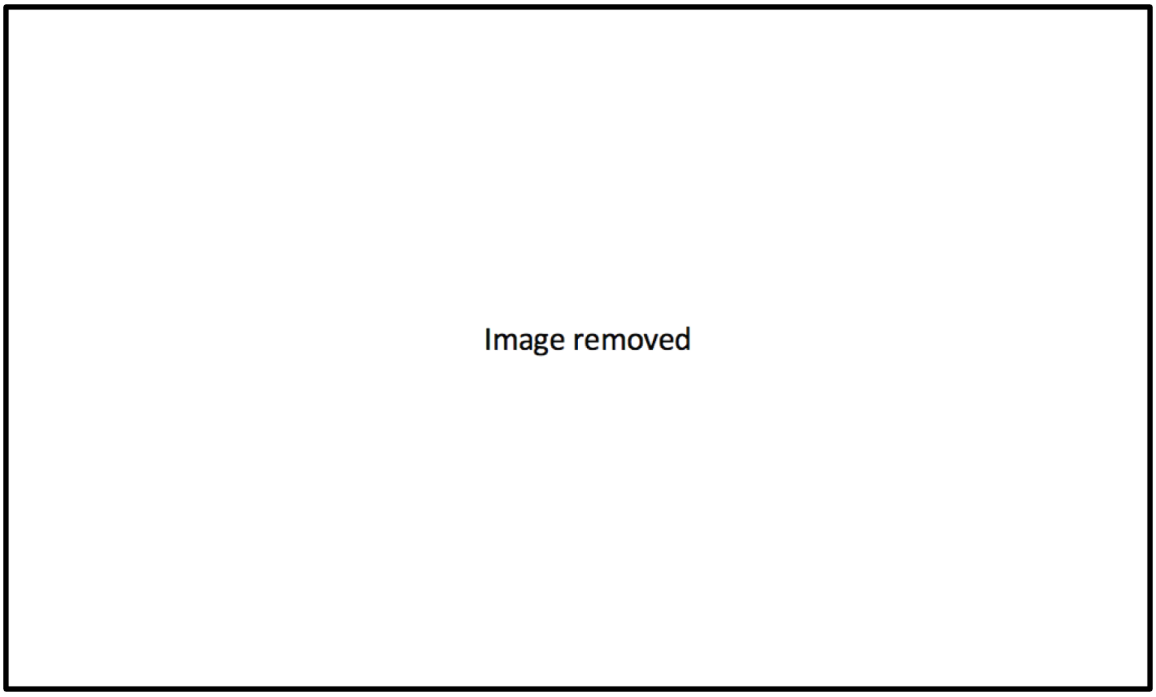

Figure 139. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 4 min 15 s. Pam clicking on the "Like" button creates an automated message that diverts attention away from Robbie's comment. ©Screen Gems.

In the context of the sequence, this short automated *Facebook* message is more relevant than Robbie's comment because this shot is part of a sequence which shows the life of Margot and her relationship with her family, especially her mother Pamela who died of cancer. Robbie, at this point in the film, has not been identified as an important character. His message, however pertinent it is, is therefore the victim of a simultaneous distraction because it appears on the screen at the same time that the "like" button – that has much more pertinence within the

context of the film at this point in the story – has been clicked by Margot's mother. This little animation involving the click and the message that follows it functions as the action that serves to distract the viewer from the clue. This is how the conjuring effect is achieved simultaneously. This sequence also demonstrates that the GUI for the *Facebook* virtual window that permits multiple text zones as well as clicks that display auto-generated messages are key formal elements that allow for the clue (text) and the distraction (text) to be shown simultaneously which ultimately achieves the mystification, in this case by employing the conjuring effect. When analyzing the three levels of *screenlife* mise en scène, it is clear that Robbie's comment and the autogenerated text (from Margot's mom clicking the "like" button) exist within autonomous text zones. These text zones operate on the first-level of the mise en scène, but the fact that these two text zones co-exist within the *Facebook* virtual window means that the conjuring effect also operates on the second level within a virtual window. And finally, the cursor that clicks the "like" button is an object that exists outside the *Facebook* virtual window that reflects the gestures of its user, so it functions on the third-level. Thus, in order for the conjuring effect to effectively operate in this example, all three levels of the *screenlife* mise en scène function in very specific ways, each serving a role in order to present a clue, but also to distract the spectator simultaneously with other more engaging or seemingly pertinent information.

While the conjuring effect uses distraction in an attempt to derail an investigation into a mystery, the idea of distraction is not new in film studies. Anne Friedberg refers to Walter Benjamin's link between film and distraction when he wrote in "The Work of Art in the Age of Mechanical Reproduction" that the spectator is in a "state of distraction" when he or she watches a film because of its "shock effect" and that watching a film does not allow for contemplation by the spectator because it "requires no attention" (Benjamin 1969 [1935], 19).

> Let us compare the screen on which a film unfolds with the canvas of a painting. The painting invites the spectator to contemplation; before it the spectator can abandon himself to his associations. Before the movie frame he cannot do so. No sooner has his eye grasped a scene than it is already changed. It cannot be arrested (Benjamin 1969 [1935], 17).

While the notion of distraction by Benjamin is not being used in the context of mystery or *screenlife* films, he seems to be suggesting that films in general are inherently distracting because

of their time-based nature by stating that images are presented in a sequence that is so rapid that there is just not enough time to reflect on what has been seen. While somewhat neutralizing Benjamin's perspective that film is inherently distracting by noting the existing skepticism toward this point of view from other film theorists, Friedberg suggests that it is perhaps images which show virtual windows, which show the multiple and the simultaneous, that may indeed put the spectator in a distracted state (Friedberg 2006, 232). Referring directly to Benjamin's expression "reception in a state of distraction" for films that traditionally have shown the singular and sequential, Friedberg proposes that "reception in a state of distraction" now seems to provide a prescient model for the multitasking computer user" (Friedberg 2006, 232). She suggests that the distraction derives from the fact that the spectator must alternate between programs displayed in virtual windows shown simultaneously on the same screen and that this changes the way the spectator can interpret what is within the frame.

> While a computer microprocessor can keep many programs running at the same time (parallel processing), the user still "crosscuts" between one or more programs in the selective sequence. Just as the instrumental base for the moving image – the retinal retention of successive virtual images – produced a newly virtual representation of movement and a complex new experience of time, the instrumental base for multiscreen multitasking poses new questions about the computer user's experience of time (Friedberg 2006, 233).

What is interesting about the last example in *Searching* that demonstrates the use of the conjuring technique in a simultaneous way is that it appears as though the spectator has to alternate between text boxes within the same virtual window, the same program, rather than between programs, between virtual windows. One could therefore hypothesize, based on Friedberg's logic of the spectator's attention alternating between virtual windows that the viewer has to, at times, alternate between distinct information blocks within a single virtual window, the frames (video, photo) and text boxes, so that he or she can observe all the relevant information while in a mode of detection searching for clues. Simultaneously showing the clue and the distracting action in *Searching* within two separate text zones within a single *Facebook* virtual window is just one example where the spectator might have to alternate, divide their attention, between individual media contained within separate modular spaces, text zones, within the same virtual window. The two other main visual expression materials, photography and video, also

provide many other creative possibilities for creating this type “conjuring effect” which relies on an action to distract attention away from a clue.

The second of Rodell’s clue concealing techniques is the burying technique which is a strategy that attempts to camouflage a clue within a group of objects possessing similar characteristics or within a space where it would be normal or not unusual for the clue object to exist, so that it appears to blend into its environment naturally. The key to this burying technique, it seems, is that all of these other objects that are not clues are not linked to the solution of the mystery. In Rodell’s words, it is a technique where “the author may bury the clue among a number of equally casual things which have no great significance” (Rodell 1946, 271). By burying the clue with other things that carry no connection or pertinence to the solution of the mystery, it can be difficult for the reader to detect the one object that is an actual clue, that is actually relevant, that can help to solve the mystery. Rodell points out certain obvious spaces that clues have been hidden within such as a pocket, purse, box, jar, or stack of papers. She highlights that these environments have been so overused that they have become clichés that readers “are accustomed to scanning the inventory with an eagle eye for the significant clue” (Rodell 1946, 271). While certain places have become overfamiliar, Rodell adds that there still exist other settings that can be used as hiding places to camouflage the clue.

> Just the description of a room may do it: among the couches, chairs, tables, bric-a-brac and pictures there may be one small item of importance. Perhaps it is only a small picture of a cat, and the inhabitant of the room has a phobia against cats; perhaps it is a bit of dust under the bed, and the inhabitant is a fantastic housekeeper (Rodell 1946, 271).

Rodell's examples function within the formal constraints of a novel, written descriptions of objects within a specific space which create the environment for burying the clue. The use of text in a novel means that clues are buried in a sequential manner. The clue is described within the same space as other similar objects, but it is referred to within a sequence that places it before and after other objects that are mentioned. *Screenlife* films like traditional films typically show the clues rather than describe them with words as is done in the detective novel. When transposing the way in which the burying technique can be implemented into *screenlife* films visually, one can observe that they offer the possibility to show multiple media within multiple

spaces simultaneously within the GUIs on the screen. Frames (video, photo) and text boxes can be displayed within a variety of virtual windows corresponding to specific applications. It is this visual environment that provides multiple spaces for the burying technique to be realized in a simultaneous way. Within the three *screenlife* films, it appears that text is the media that has been used the most effectively when burying a clue simultaneously around other objects within the same screen space. A virtual window's internal visual layout determines the environment, the modular spaces that a clue can be buried within. It appears as though a virtual window containing many text zones makes it particularly difficult for a spectator to pinpoint the exact text zone containing the relevant clue. In the physical world, camouflaging is a technique that has been used to blend an object, typically a human, into an environment, so that he or she is not easily detectable with the naked eye. For example, deer hunters will wear clothing that reflect the colours and patterns of trees, bushes and grass in a forest during a specific season, so they will not be seen by the animals they're searching for. When a clue in text format is hidden within the GUI environment in a *screenlife* film containing several text zones displaying text with similar sizes and typefaces, the clue can blend into this space on a formal, visual level. Video and photo frames within a virtual window could also be used to camouflage a clue, but from a visual perception perspective, it appears that text is much simpler to blend into a multiple text zone environment than a video into a multiple video frame environment or a photo in a multiple photo frame environment. Text containing a clue likely blends into a multiple text zone environment more effectively and more easily because of how similar words can appear together onscreen as it is very easy to select the same typeface and font size as other texts on screen which effectively camouflages a text-based clue amongst other non-pertinent onscreen texts. This is in contrast to generating similarities between videos or between photos which have many more variables that define their visual appearance. Thus, burying a video or photo within a screen space that simultaneously displays other video or photo frames could potentially be more challenging to achieve the camouflaging necessary to realize the burying technique effectively.

An example of burying a clue using text within the interface of a virtual window is demonstrated in *Searching* (fig. 140). In a *Gmail* virtual window, 21 e-mails from David Kim's account are shown in descending order, each taking up a row. One of the e-mails that comes from a character named

Sev Ohanian (which is also the same name as one of the writers and producers of the film) has the title “My Theory” which is followed by the first sentence of the message within the e-mail which reads, “It’s obvious what happened: Your daughter was catfished by this Fish_N_Chips character - who is no doubt the son of.”

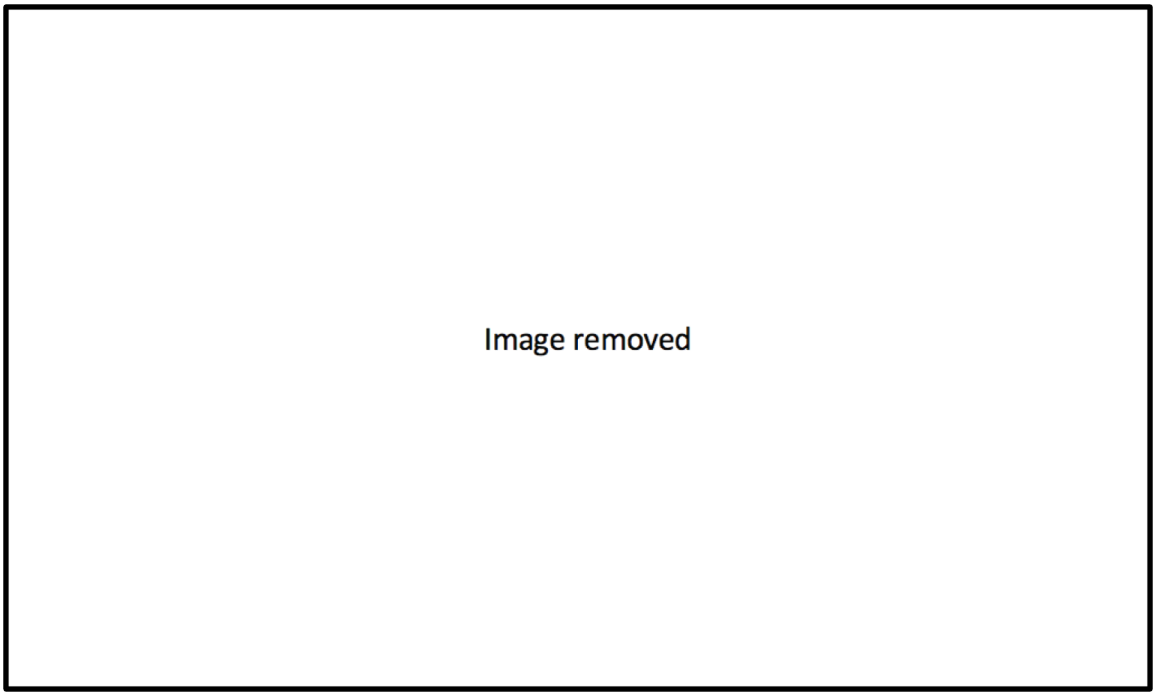

Figure 140. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 1 h 02 min 10 s. A clue is buried within one of the 21 e-mails. ©Screen Gems.

This sentence does not disclose who the parent is, nor the son, but it does state that Margot was "catfished" by the character "Fish_N_Chips" which is true. So, buried within the 21 e-mails is a major clue that has the potential to lead directly to the solution of the mystery concerning the disappearance of Margot because even though the parent and son are not named, the character of Detective Vick had already been portrayed as a parent who loves her son unconditionally. There are no other major references to sons in the film, so it would be logical to assume that this reference to a son is indeed Vick’s son. So, if David (the amateur sleuth) or the spectator had the time to analyze and make sense of this e-mail buried between the 20 others, perhaps Detective Vick would have become a suspect from this point forward in the film. However, because 20 of the 21 e-mails don't offer a relevant clue, it is unrealistic to think that the spectator or David is

able to single out that Ohanian's e-mail is the only e-mail that is relevant to the investigation, the only one that is operating as a clue. From a three level *screenlife* film mise en scène perspective, it is clear that there are many text zones displayed in this *Gmail* virtual window. Twenty of the 21 e-mails are not relevant to the investigation, but each one represents a distinct text zone that operates on the first-level. The one e-mail that is a clue functions within the *Gmail* virtual window, so this way of concealing the significance of a clue also operates on the second-level. While there are other visual elements existing outside of the *Gmail* virtual window within the screen space, such as a *YouTube* and an *ABC-7 News* virtual window, the third-level of the mise en scène does not play a significant factor in burying the clue because these other virtual windows are very much in the background, they are overlapped by the *Gmail* virtual window which effectively blocks most of the information on each of these other windows that are not foregrounded.

Rodell's third and final clue technique is the concealing by timing technique. This technique works effectively within the detective novel, according to Rodell, when two important clues are divided by many pages. The two clues become relevant when they are juxtaposed, when compared, they can suggest information that helps to solve the mystery. What appears most important about this technique is that the strategy of separating the clues by a large number of pages is an attempt to make the first clue disappear, essentially to be forgotten in the mind of the reader before the second is shown, so that the juxtaposition between the two clues is not made.

> In this method, the clue and its application are separated by fifty or a hundred pages; put together, the two are significant, but if the reader has forgotten the first one, the second one will mean nothing to him. Thus, in the example given above, if the bit of dust is observed on page five, and the character's passion for cleanliness is shown on pages forty and seventy, what has gone between may make the reader forget that there ever was a bit of dust (Rodell 1946, 271-272).

The most important difference between this technique used to conceal the significance of a clue and the other two techniques is that this one cannot be transposed into a computer screen's GUIs in a simultaneous way. Concealing by timing by definition requires that two clues are separated by pages which if transposed into the time-based medium of film translates into screen time. Thus it is screen time between the appearance of two clues that is required in a film in order to achieve this effect, concealing by timing. This means that two clues could not be shown simultaneously on the same computer screen GUIs to achieve this clue significance concealing technique.

However, simultaneously displaying multiple media within the computer screen GUIs can be used to significantly reduce the relative duration required between the two clues necessary to make a spectator forget the first clue. Achieving the concealing by timing technique in novels, as mentioned by Rodell, suggests that a separation of fifty to one hundred pages is required between two clues in order to made the reader forget the first one. If one transposed 50 to 100 pages into screen time, one could assume that this duration might be anywhere between 15 minutes to an hour-and-a-half between clues to achieve this effect. For the *screenlife* film, notably within *Searching*, the relative duration between two significant clues in order to realize the concealing by timing clue technique is much shorter than 15 minutes. In *Searching*, achieving this technique in a very short duration has much to do with the ellipses that this film uses that the other *screenlife* films do not employ. *Searching*, as opposed to *Unfriended* and *Unfriended: Dark Web*, has many ellipses, moments during the film where there are gaps in time of the diegetic world. It is these ellipses that are used in combination with the GUI interfaces of the *MacBook* and the applications used within the computer that significantly reduce the time between two clues to perform this clue technique aimed at making the spectator forget a first clue before a second one is presented.

An example of this much shorter interval between clues to achieve concealing by timing occurs in *Searching* when David Kim looks at a post on Margot's *Tumblr* account that displays a photo of Margot at Barbosa Lake with the caption "Barbosa Chillin" (fig. 141).

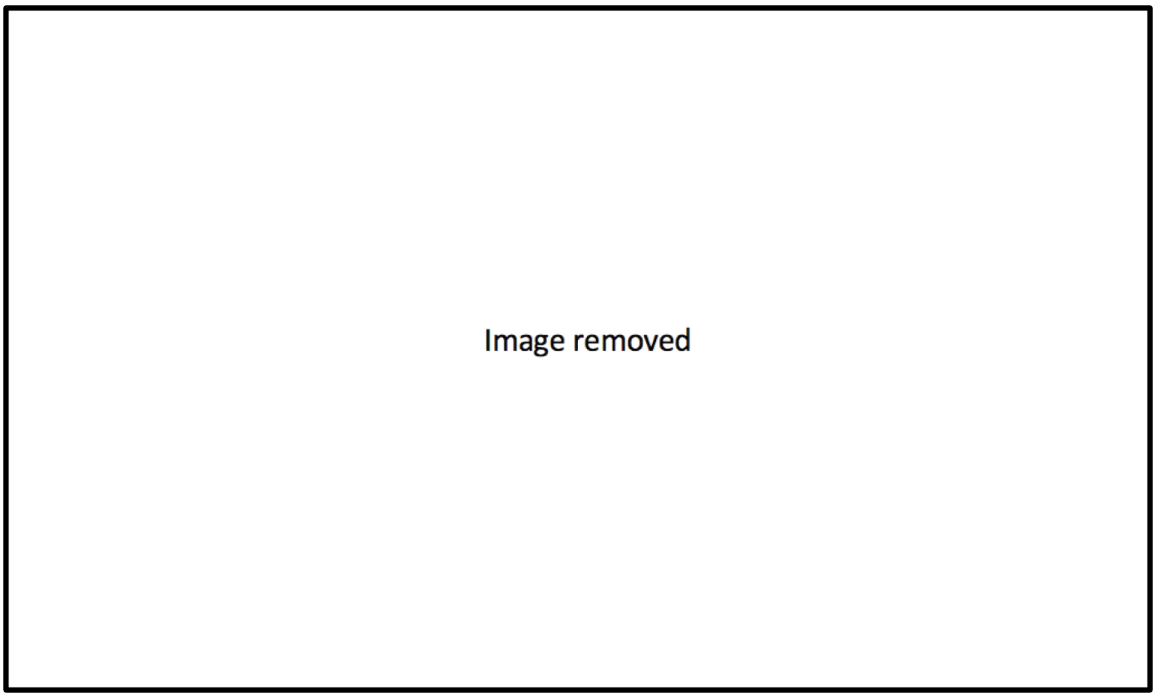

Figure 141. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 33 min 06 s. The Barbosa Chillin caption is a clue referring to Barbosa Lake where Margot had frequented. ©Screen Gems.

It is important to point out that Barbosa Lake had yet to be mentioned prior to this moment in the film. The photo is the second of 18 images, some of which contain captions, that are shown individually in a rapidly edited sequence of *Tumblr* posts that lasts 18 seconds. The relevant photo – the Barbosa lake photo with the caption “Barbosa Chillin” – only lasts for 1.25 seconds (30 frames). As well, four of the 18 photos are also shown simultaneously onscreen with a caption. There are also text captions displayed adjacent to certain photos within the *Tumblr* interface that reveal the dates that specific posts had been published. "Barbosa Chillin" is the only caption shown simultaneously with a photo that makes reference to a specific place. About a minute after this caption and Barbosa lake photo are shown simultaneously, David marks on a *Google* map the last location that Margot had been spotted by a security camera while she was driving her car (fig. 142).

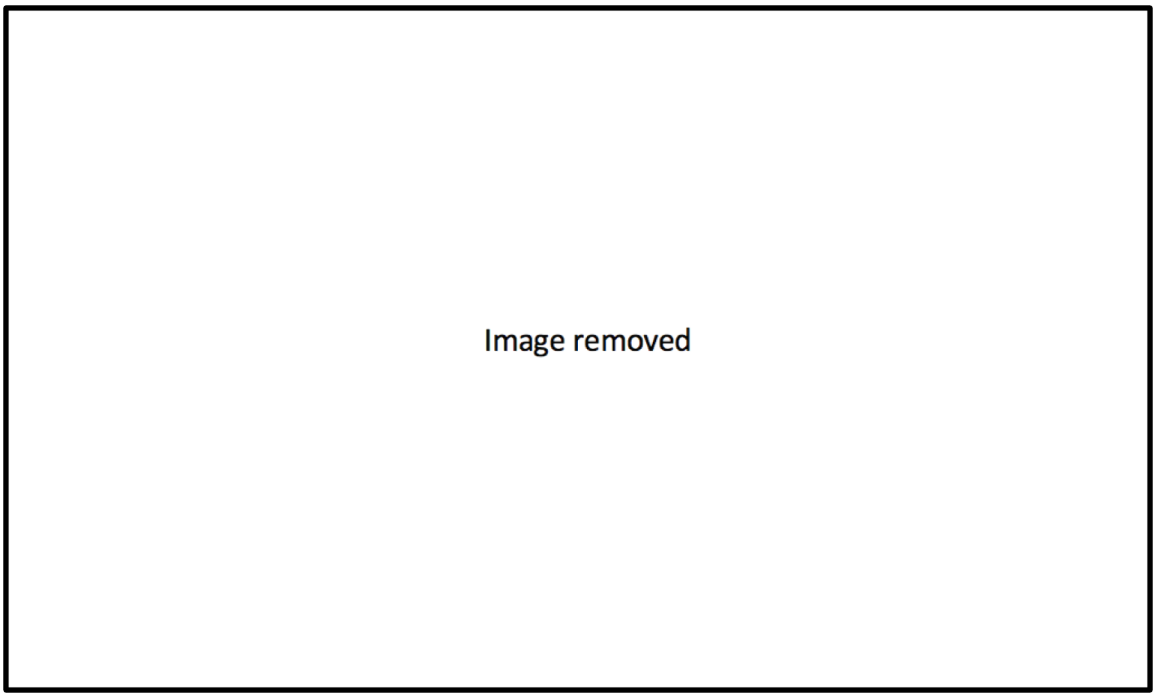

Figure 142. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 34 min 06 s. Barbosa Lake is shown on the *Google Map*. ©Screen Gems.

Just below and to the right of the marker on the map, a caption for an image of Barbosa Lake is shown. It turns out that later on in the film that Barbosa Lake is the location where Margot's car was found. It might appear relatively simple to make the connection between the "Barbosa Chillin" photo and the *Google Map* showing Barbosa lake, but it is probably not reasonable to think that a spectator would be able to remember all 18 photos, some of which have captions, shown in 18 seconds and deduce that the only one that had the potential to be a relevant clue is the photo showing a lake with the "Barbosa Chillin" caption. The probability of the spectator linking the "Barbosa Chillin" caption in the *Tumblr* virtual window and the image of Barbosa Lake in the *Google Map* virtual window is relatively low when one considers all of the possible juxtapositions between all of the text zones and images shown during the minute between the two significant clues. The potential juxtapositions significantly increase if one takes into consideration all of the other blocks of information (video frames, photo frames, text zones) shown before and after these two clues. Other factors that make it difficult for the spectator to make the juxtaposition between these two clues is that the first clue, the "Barbosa Chillin" caption

and affiliated photo, is only displayed for 1.25 seconds which is not much time for a spectator to analyze the juxtaposition between the photo and the text to realize that Barbosa is referring to the lake in the photo. As well, the second clue, the image and caption of Barbosa Lake on the *Google* map, is shown for 20 seconds, but it is buried amongst several other text zones on the map. The *Google Map* virtual window that displays Barbosa Lake is also shown simultaneously as a *FaceTime* virtual window that displays two video frames showing the conversation between Detective Vick and David which represents where the action of the scene is focused on within the composition of the screen (fig. 143).

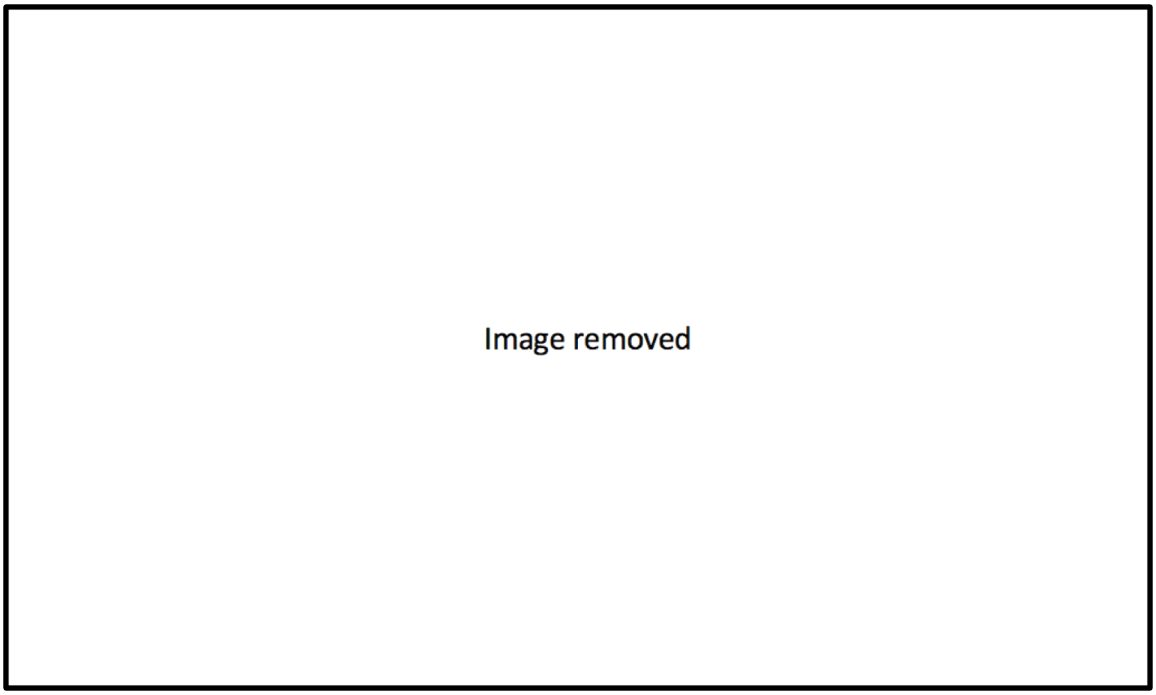

Figure 143. – Frame from the film *Searching* (Aneesh Chaganty, 2018) at 34 min 21 s. Barbosa Lake is displayed while Detective Vick and David Kim have a conversation. ©Screen Gems.

Thus, many factors are at play in this concealing by timing effect aimed at making the spectator forget the first clue before the second one is presented onscreen. This clue technique is made possible because of the quick cut editing between the different *Tumblr* publications, but also because both the *Tumblr* and *Google Map* virtual window GUIs show various combinations of photos, captions and videos simultaneously making it more challenging for the spectator to keep track of all of the information, potential clues, on a screen at any given time. This simultaneity of

images and rapid editing are the primary factors that reduce the amount of time required between two clues when transposing the concealing by timing technique into the GUI environment of the *screenlife* film. The time between each clue is reduced to approximately one minute in this example in *Searching* because the spectator is essentially overwhelmed with too much information in a very short period of time. It is implausible to think that one could retain each block of information, each potential clue, and perform the necessary juxtapositions in order to make the connection between the "Barbosa Chillin" caption on the *Tumblr* virtual window and the image of Barbosa Lake on the *Google Map* a minute later.

The purpose of Rodell's concealing by timing technique is to show two relevant clues, but in a way that separates them by many pages into separate contexts, so that the clues do not appear to be connected, so that it is more difficult to piece them together to solve the mystery. R. Austin Freeman has also highlighted the importance of revealing clues in ways that make it challenging to connect the dots between them in detective stories, but with certain limits or restrictions.

> This failure of the reader to perceive the evidential value of the facts is the foundation on which detective fiction is built. It may generally be taken that the author may exhibit his facts fearlessly provided only that he exhibits them separately and unconnected. And the more boldly he displays the data, the greater will be the intellectual interest of the story. For the tacit understanding of the author with the reader is that the problem is susceptible of solution by the latter by reasoning from the facts given; and such solution should be actually possible. Then the data should be produced as early in the story as is practicable. The reader should have a body of evidence to consider while the tale is telling (Freeman 1946, 15).

If this approach to showing clues in mystery fiction is considered when evaluating the quality of the concealing by timing technique in the last example in *Searching*, one can observe that the clues are shown in a separated and unconnected way, but the information or the "data" as Freeman refers to it, are not necessarily shown "boldly." The frenetic frequency of images and text shown simultaneously for very short periods of time does not really give the spectator enough time to analyze and evaluate the information being displayed. In the sequence that rapidly displays the 18 images on Margot's *Tumblr* page in *Searching* that contains one photo with a caption that reveals the clue that leads to Barbosa Lake, there just does not seem to be enough time to analyze, never mind comprehend what has been observed. This rapid nature of showing the multiple and simultaneous images has been pushed to the limits in *Searching* where ellipses

exist which permit the creation of these rapid succession of images because of jumps in diegetic time that operate like a strobe light flashing social media posts in temporal slivers. Thus, the concealing by timing technique can be achieved in a relatively short period of time because the spectator is so overwhelmed with rapidly changing imagery that he or she has almost no time to evaluate each one making it very difficult to retain each image in their memory and to process the significance of each one in relation to others while new ones are appearing.

In another example of concealing the significance of a clue that relies on communicating a large quantity of information in a relatively short period of time, Blaire, the protagonist in *Unfriended*, clicks on *The Fresno Star*, an online news website, to find information about the death of Laura Barns in a news report. It explains that Laura was a victim of cyberbullying, but that she also had other personal issues. The article essentially reveals background information that suggests that there were other reasons why Laura may have committed suicide (fig. 144).

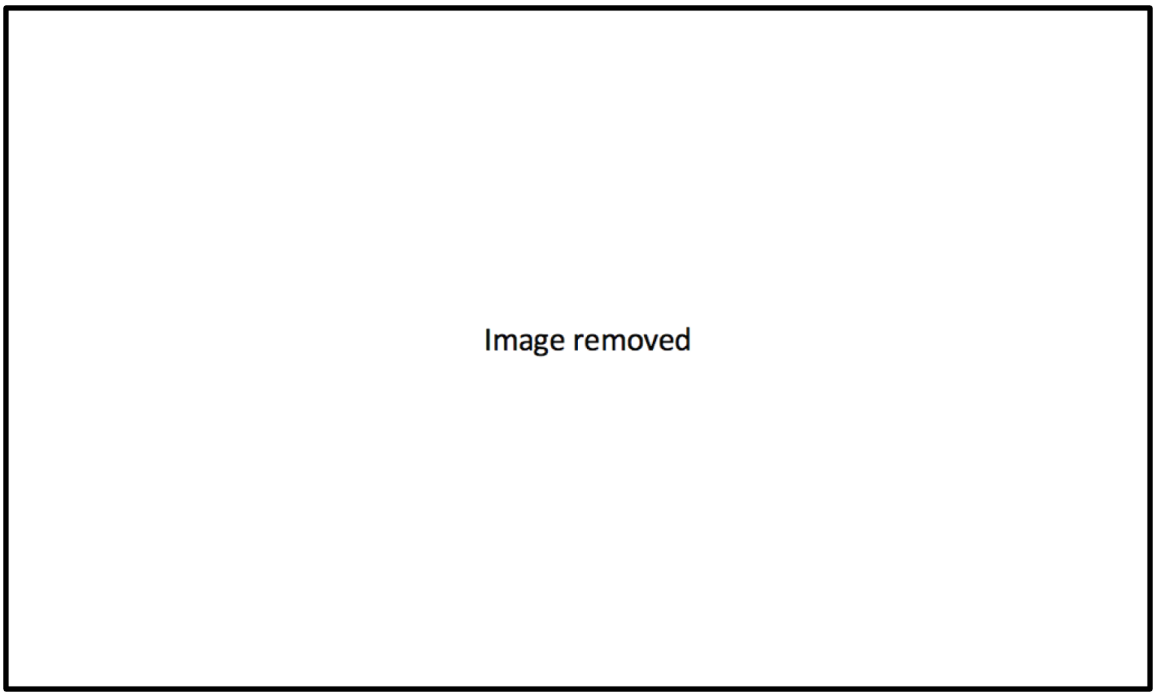

Figure 144. – Frame from the film *Unfriended* (Leo Gabriadze, 2014) at 16 min 11 s. Information pertinent to Laura Barns' suicide is briefly revealed in a news story. ©Bazelevs Company.

The text mentions that Laura was deprived of the help she needed because her "school neglected to prevent harassment and that a school counselor violated part of the special education plan

that allows the teen to seek counseling at any time." The article also publishes quotes from Laura that reveal that she had already attempted suicide, that she already had mental health problems and that she had already been abused.

> "I've never had a healthy relationship with food and I got called fat in one of the tweets," she said. "At the time, I was struggling with binge and purge and two years before that, I had a suicide attempt. I slashed my wrists, I did not feel like living anymore. I was tired of the bullying" (*Unfriended*, 16:11).

The main technical element concealing the significance of these clues within this news report is that the page that reveals all of this pertinent information is only shown it for 2.375 seconds because Blaire just scrolls down very rapidly to scan the page with the trackpad, then scrolls up. The text contains 346 words, so the viewer must be able to read 8,741 words per minute to read the 346 words in 2.375 seconds. Therefore, it is not realistic for the spectator to read and comprehend this new information that offers other relevant factors that could have led to the suicide of Laura. The explanation for the suicide emphasized early on in the film, the one that essentially blames it on the embarrassing video of Laura posted on *YouTube*, becomes the central cause of death of Laura. The article's description of Laura's previous suicide attempt and mental health issues have the potential to diminish the embarrassing video's role in her suicide. Thus, by very quickly showing the pertinent information in the article relating to Laura's mental health problems, suicide attempt and prior abuse, the film rejects a much more comprehensive explanation of the suicide. Instead, the film prefers to keep the cause of death rooted to one incident by placing the blame of the suicide exclusively on the video. This storytelling decision works in the context of this type of mystery genre film because by blaming the death of Laura on the unknown creator of the embarrassing video, it effectively sets the film up like a murder mystery, a *whodunnit*. However, one cannot deny that the information in the article, if communicated more effectively by leaving it onscreen longer than a couple of seconds, could have added more depth to the simple explanation of Laura's death. Denying the spectator a more nuanced explanation of the factors that contributed to Laura's self-destruction is also perhaps a way of increasing the horror of the film by simplifying the explanation of the suicide which makes the cyberbullying element of the embarrassing video more haunting. This is relevant because this film is also marketed as a horror film. In the end, the solution to the mystery reveals that Blaire

filmed the embarrassing video, it thus leaves the impression that she was out for revenge against Laura after she pushed her down and embarrassed her at a party. This explanation, set up by certain clues revealed in the embarrassing video, meets the general genre expectations of the murder mystery genre because it offers a simple explanation of how and why someone was killed as well as who did the killing. This approach denies an explanation that is more probably more truthful, especially since the death in *Unfriended* is a suicide, a cause of death that is often linked to several factors, not just one. The information that could have added more nuance to the suicide is concealed from the spectator because it is not shown onscreen long enough to be read by most people. The GUI elements that play a role in concealing the significance of this information is not only the sheer quantity of text that is shown within a very short period of time displayed within the text zones of *The Fresno Star* virtual window, but it is also the scrolling down, then quickly back up within the news website by Blaire who uses the trackpad to perform this movement. The representation of quick hand gestures from Blaire on the trackpad of her *MacBook* manipulate the contents within the *Google Chrome* browser that is showing the news story about Laura Barns's suicide on *The Fresno Star* website.

The rapid nature of showing clues onscreen for a very short duration of time, so that they are virtually impossible for the average spectator to detect also occurs in *Unfriended: Dark Web*. In this example, the clue is only shown on one frame which is equivalent to 1/24 of a second when it is shown on screen (fig. 145).

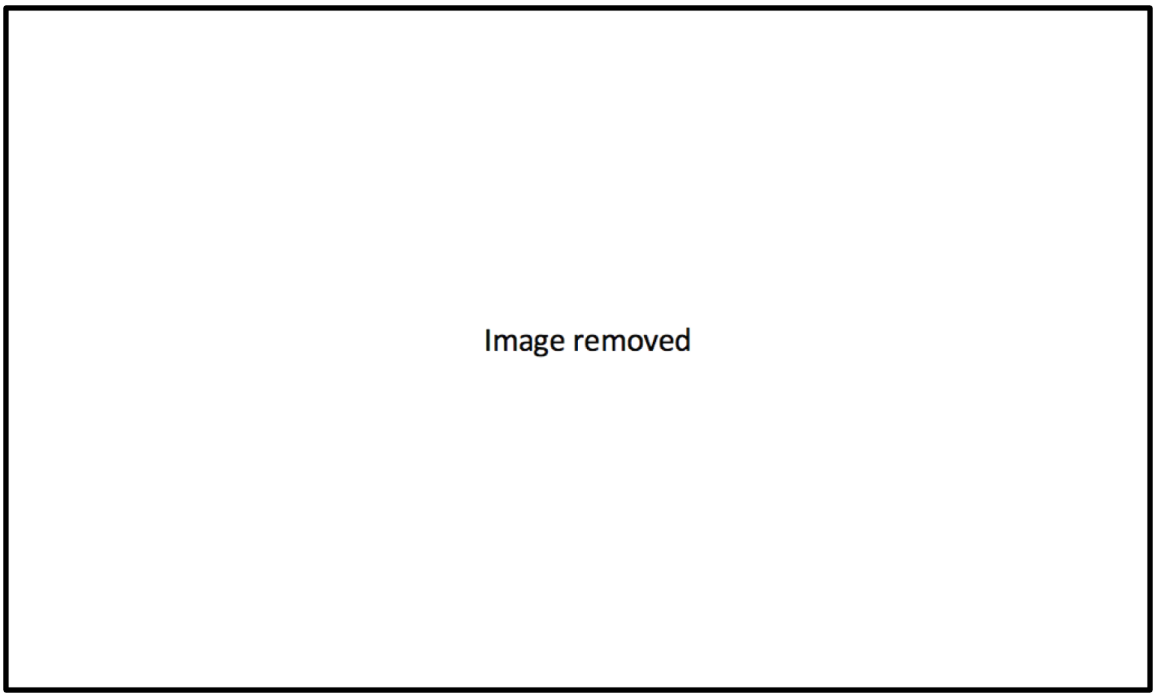

Figure 145. – Frame from the film *Unfriended: Dark Web* (Stephen Susco, 2018) at 58 min 58 s. One frame reveals within a text zone that the account Charon IV is present during a *Skype* video call. ©Bazelevs Company.

The frame in question shows the text "Charon IV" pop-up as Matias moves his cursor quickly over one of the 12 *Skype* accounts each represented by a white-coloured generic icon with a light-blue background. Charon IV is a member of the underground criminal organization whose members use Charon as the first name of their codename which is followed by a Roman numeral. This is the group that has baited Matias and his friends into the deadly game. The one frame showing the text “Charon IV” on the screen suggests that Charon IV had been participating in the *Skype* conversation that showed the assassination of Lexx Putri in a *YouTube* video. This is relevant because Matias, the protagonist, tells his friends that he thinks Charon IV was not present during this *Skype* meeting when this video was played. Matias and his friends think Lexx was murdered because the Charons had discovered that she along with Matias and their group of friends watched the videos of the kidnapped women on the computer Matias stole and that Lexx had been targeted as the Charons’ first victim as part of their plan to eliminate anyone who saw these videos they had produced.

Charon IV's presence on *Skype*, when Lexx's assassination is shown, is therefore relevant because it suggests that he is still working with the other Charons rather than as the renegade Charon that he presented himself to be to Matias. Had Charon IV really been concerned about the imminent death threat to Matias and his friends after Lexx's assassination, he would have alerted them, but he did not. Charon IV gave Matias the impression that if the other Charons found out that Matias or his friends saw the videos of the kidnapped women they would all be killed as would he for losing the computer containing these videos. This means that Charon IV lied to Matias and that this single frame showing his presence on *Skype* is a clue that supports the conclusion of the film when the computer stolen by Matias is revealed to actually be a bait computer for a deadly game organized by the Charons. This single frame suggests that all along Charon IV had been pretending that his computer was stolen, that he was merely playing the role of a character within the game as someone who had lost his computer with sensitive material on it. Again, this clue is only shown for the duration of 1/24 of a second, on one single frame, so technically it is being shown to the spectator and technically it is a way of concealing the significance of the clue, but the quality that it lacks, is one of the qualities that Freeman had stressed which states that a clue should be shown boldly. In these last two examples, the clues are definitely not shown in this way because most spectators would not have had enough time to detect, then read them.

In conclusion, this chapter has demonstrated that mystery fiction techniques, specifically different types of clues as well as red herrings, are presented within the *screenlife* mise en scène in ways that reflect the multiple and the simultaneous characteristics that Friedberg has associated with GUIs. The root of all clues – whether or not they are diegetic or extra-diegetic – begin with information expressed within a video, photo or text (first level of the mise en scène) that can be juxtaposed to other media of similar or different types within the same virtual window (second level of the mise en scène) or within another one or outside of it in the same screen space (third level of the mise en scène) to either change its meaning or to make it easier or more difficult to interpret. In general in mystery fiction, clues are intentionally made more difficult to understand and red herrings are often communicated more clearly in an attempt to deceive the spectator. Clue camouflaging techniques, as described by Rodell, exist to make it more difficult to detect real clues that are linked to the solution of the mystery. In *screenlife* films, the GUIs

represented within the computer screens are often used to conceal the significance of clues in a simultaneous way. This approach is relatively unique for these clue camouflaging techniques that are normally presented in a sequential manner in novels and traditionally shot films. The conjuring, burying and concealing by timing techniques all use the GUIs ability to display multiple media simultaneously in an attempt to make clue detection and interpretation more challenging to effectively mystify clues. While the GUIs present new ways to realize mystification, they are not always constructed in ways that make it possible for most spectators to realistically detect a given clue primarily because GUIs have the ability to present too much information in too short of a period for most spectators to interpret and analyze. One can conclude that GUIs offer new ways to present clues and red herrings in a multiple and simultaneous way, but especially for clues, these techniques are not necessarily presented in a way that reflects the spirit of "fair play," the detective novel tradition that challenges the reader to solve a mystery before the detective does by revealing the same information to both parties. It is not really fair for the spectator when a clue is presented within a mise en scène that is constantly surrounded with many other simultaneously displayed blocks of information that have no link to the solution. In these situations, clues are displayed within an environment that not even the most professional detective would likely be able to correctly interpret if they were accorded the same screen time as the spectator. It requires an analysis, such as this one, that takes the time to evaluate individual frames with no time constraints. Thus, these *screenlife* films present clues in a new way within the film frame for the mystery genre, but they are not always going to be detectable by the spectator if he or she is being barraged with simultaneously displayed frames and zones containing information that may or may not be linked to the solution.

Conclusion

The presence of graphical user interfaces (GUIs) on screens for computers, but also for cellphones and tablets have become increasingly important, if not necessary, in the daily lives of people in most corners of the world over past two decades. This incursion of GUIs was pushed to an extreme in many countries including Canada and the United States during the Covid-19 pandemic that forced people into isolation. To maintain friendships, relations within extended family and to continue an employment, many people could only rely on their screen technologies that use GUIs as the primary interface for online interpersonal communication. However, prior to this global crisis, the digital life that is defined by communicating with others using a computer display interface had already become increasingly widespread since the video call and social media took off in popularity during the mid-2000s. Each of the three *screenlife* films analyzed – *Unfriended*, *Unfriended: Dark Web* and *Searching* – had been produced prior to the presence of Covid-19, thus demonstrating the prevalence of the use of computer display interfaces, more specifically GUIs, used for applications such as *Skype* and *Facebook* within popular culture.[8] These films reflect certain trends when these films were released between 2014 and 2018 that show how important interpersonal communication over the internet was especially for certain adolescents and twenty-somethings in the United States who appeared to be early adopters of new screen-based communication technologies. In the context of this research into the three *screenlife* films, GUIs became a central focus of the analysis because they define how characters communicate within each story using different media. How characters communicate raised perhaps the most important questions about *screenlife* films in relation to narrative filmmaking because the GUIs used to mediate communication completely changed the mise en scène. The mise en scène in these *screenlife* films do not show a direct representation of the physical world like traditionally shot films do, it is a completely mediated one on a flat screen.

[8] During the *Corona* virus pandemic, several *screenlife* films such as *Host* (Rob Savage, 2020), *R and J* (Carey Williams, 2021) and *#BLUE_WHALE* (Anna Zaytseva, 2021) had also been produced.

The computer screen is the diegesis, it defines the mise en scène and it is only made up of a grid of pixels. Represented within the pixel dimensions that make up the screens, the images formed on these flat surfaces are used to tell stories. In the case of the three *screenlife* films studied, they are also stories that have mystery elements within their plots. Using the spaces within the GUIs to tell a story with mystery elements poses important questions about how the mise en scène is structured, how objects can be organized within this space that is different from the physical world. In order to understand how this mise en scène operates, it was important to deconstruct the underlying structures of the GUIs that display images. It was also important to study the individual visual media – the video, photo and text – that have been positioned within the GUIs. When deconstructing how the GUIs function in relation to the individual media displayed within them, it appears that three distinct levels are present within the film frame: the individual media, the individual virtual window and the individual screen. The general approach toward the description and analysis of each of these three levels of the *screenlife* mise en scène was to understand how each level has unique qualities that shape the characteristics of imagery within each level. This is relevant because there are already established cinematic conventions, storytelling traditions and mystery fiction techniques that exist in regular narrative fiction films that are defined by showing one frame, one space and temporality at a time. The GUIs within *screenlife* films are structures that can display multiple images in a simultaneous and overlapping way. Thus, much of this thesis has been a study of the transposition of pre-existing cinematic, storytelling and mystery genre techniques into the screen spaces of computer displays that are defined by their GUIs and their embedded user generated content – the videos, photos and texts – produced by characters and their devices within the diegesis. As mentioned, what is most apparent within this format of filmmaking and storytelling is the multiple and the simultaneous nature of imagery as defined by Anne Friedberg as well as the overlapping, collage-like effects that are the result of the virtual windows. Temporalities associated with each image, representing either the present or the past, also play a role in the storytelling that allow for characters acting in the present to revisit the past not through *flashbacks*, but in uncovering archival media that represent the past, a *past temporality*. It is this ability for the GUIs to show multiple digitally encoded media onscreen simultaneously that can represent different temporalities and can

either be overlapped or overlap while embedded within virtual windows that are contained within a two-dimensional pixel grid that present a new form of storytelling. Exactly how GUIs and their embedded media are manipulated in order to achieve similar cinematic, storytelling and mystery genre techniques as traditionally shot and edited films has been much of the focus of the description and analysis in this study.

Before the description and analysis of how GUIs have transformed storytelling and the mystery fiction genre with moving pictures was detailed, the introduction and first chapter established that three levels or spaces can be isolated and identified within the mise en scène of each of the three *screenlife* films. These divisions into three spaces, as aided by divisions that Lev Manovich has identified within GUIs, reflect an association with specific technologies and their characteristics: the modularity of individual media realized by a character and his or her device; the individual virtual window whose layout is significantly influenced by its associated application's GUI; and the screen space that is governed by the GUI of the computer's operating system. What was important to note within each of these three divisions is that each one has their own internal mise en scène. Thus, each level of the mise en scène has the potential to play a role in the transposition of cinematic conventions, storytelling traditions and mystery fiction techniques. However, it is important to stress that the mise en scène starts at the first level with individual media that serve as the building blocks or units of information used to tell each story. From there, the internal organization of these storytelling units that are contained within frames (video, photo) and zones (text) can be analyzed within each virtual window they have been positioned within in relation to other video, photography or text. Finally, relationships between frames and zones between virtual windows can be analyzed to determine if there are pertinent juxtapositions between them that serve the narration or mystery fiction elements of the story. What can be observed, which is documented in chapter 2, is that certain cinematic conventions such as the shot reverse-shot, the subjective point of view shot and cross-cut editing can be transposed into the GUI environments of one or more virtual windows in a multiple, simultaneous and overlapping way. Chapter 3 revealed how the GUIs can also play an important role in the presentation of mystery fiction techniques, notably different clue types and red herrings, that are also presented in a multiple, simultaneous and overlapping way. The primary difference between

the transposition of cinematic conventions versus the transposition of clues into the GUI screen spaces is that the simultaneous nature of presenting clues where multiple other media exist often makes it very difficult to detect certain clues because the amount of information being presented within a single film frame during a relatively short duration likely poses significant challenges for spectators to detect, interpret, then remember everything that has been displayed. The transposition of cinematic conventions are communicated more clearly because it is likely the intent of the filmmakers of these three *screenlife* films to make certain conventions such as the shot reverse-shot, subjective point-of-view shot and cross-cut editing more apparent within the mise en scène. Whereas, the mystification of clues is part of the mystery fiction tradition, making them more challenging to detect and interpret is part of this tradition. The only problem is that in some cases the clues are likely too difficult to detect or interpret on a first viewing because of the multiple and simultaneous nature of the GUIs. These types of hidden clues can also be categorized as Easter eggs which encourage certain spectators to enter into a detective-like mode that can involve scanning images over repeated viewings to detect them.

The other major difference between *screenlife* films and a traditionally shot film is that the realization of the individual media are all representations of devices used by characters in the diegesis of each film. Thus, each text, photo and video has traces of the body movements of characters and their gestures, most notably from their hands, that have influenced how these images embedded within the GUIs appear. The appearance of each individual media is often characterized by a certain amateur aesthetic that must also be considered in the transposition of the cinematic conventions, storytelling traditions and mystery fiction techniques into the GUIs of a given computer display. The plausibility of how these images – the video, photo and text – is produced is of vital importance within each of these three *screenlife* films because, unlike traditionally shot films, each image must be the result of a character using a device such as a cellphone camera or a keyboard in a way that seems believable within the story.

This study into three *screenlife* films has demonstrated how and why a story told using GUIs is different within this format than the traditionally shot and edited film. The division of the mise en scène into three levels aids in the deconstruction of certain cinematic conventions and storytelling techniques that have been transposed into the GUI environments. Further research

into these and other *screenlife* films could reveal other cinematic conventions and storytelling techniques that have been transposed into the *screenlife* environment. As well, certain mystery fiction techniques, clues and red herrings, were isolated and analyzed in relation to the GUIs they are presented within to better understand how they function within the three levels of the *screenlife* mise en scène of the three *screenlife* films studied. While there could be further research into how mystery fiction techniques have been transposed into other *screenlife* films, the three films analyzed also have important suspense and horror elements that exist within the mise en scène. These elements and how they function were not investigated with any depth. Thus, if one maintains the division of the mise en scène into the three levels proposed, it could help to clarify how suspense and horror techniques have been transposed into these GUI environments that are characterized by their multiple, simultaneous and overlapping qualities. Other approaches can also be taken to analyze the *screenlife* films discussed in this document. A sociological analysis could investigate how the teenagers and young adults write messages, send certain types of photos and memes, as well as the ways that they speak to each other in groups on video calls such as *Skype*. A psychological study could attempt to define how spectators perceive these films, where their eyes are looking within the frame when there is not a classical representation of space, time and perspective. One could further this investigation into determining the factors that influence where people look within the frame and why. A technological approach could offer a more in-depth study into the specific types of computers, video call applications, social media and internet connections that have been represented from the very first *screenlife* films to the most recent. And from an anthropological perspective, there could be an attempt to make a comparative analysis between research into *polymedia*, the case studies this concept is based upon (see Miller and Sinanan, 2014) and the representation of this concept in the *screenlife* films. For example, in the context of 2014 in the United States when *Unfriended* was released, how faithfully does this *screenlife* film represent the concept of *polymedia* in relation to how actual teenagers at the time, not actors, multitasked between video calls, social media and text message applications? How accurately teenagers and young adults were represented using these applications in the three *screenlife* films may not necessarily be easy to answer because each of the plots reflects specific genre expectations that involve

nefarious activities that do not normally reflect the behaviour of most teenagers. However, each of the three films analyzed and most of the others within the *screenlife* format appear to represent a certain type of interpersonal telecommunication that reflects, possibly more than any other type of film, the intimate, deceitful and interrogative ways that humans can interact using the vast array of video call interfaces and social media applications available in the United States and Canada over the past twenty years.

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