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DOMINIK MAEDER AND DANIELA WENTZ

Introduction: Digital Seriality as Structure and Process

The web is foremost a form: an idealized structure of decentralized and delinearized connections between sets of data, stored on an open multitude of physical devices dispersed around the entirety of the globe. Despite its (in principle) distributed and networked technical nature, the web is accessed through a relatively small number of websites and services such as Google, Facebook, Twitter, Yahoo!, Wordpress, and their respective affiliates. These companies centralize and monetize access to, and the flow of, web data. For an overwhelming majority of private and business Internet users, these companies' various services are crucial to the everyday experience of the web. Bypassing all these services—for instance in an effort to escape government surveillance—is still theoretically possible; however, it requires an advanced level of technological understanding and awareness. The web as an ordinary and everyday medium (or set of media) thus becomes effective, operational, and convenient only through the interfaces of a few predominant search engines and social networking, video sharing, and (micro)blogging websites—the web's "citadels" (Warnke 2012).

In other words, while it is technically a complex, decentralized, and non-linear networked structure, the web becomes phenomenal, i.e. visible and open to navigational user practices, only in so far as it is made accessible by a small number of web interfaces operated by an even smaller number of companies and corporations (cf. Warnke 2012, pp.132-134). Since these interfaces format most of the world's experience of the web, it is imperative that we pay close attention to their formal properties. With regard to a theory of interfaces, such as that developed by Lev Manovich (2001), we will argue that web interfaces in principle, and contemporary examples of video sharing websites such as YouTube in particular, can be described as operative forms of *seriality* rather than as webs or networks. More precisely, we will show that YouTube's interface performs, enables, and fosters operations of serialization, operations which occur neither inside nor outside of images, but in the in-between space of the interface. These forms of digital seriality can be located, for instance, in the publishing strategies of video-game based walkthrough videos, so-called *Let's Play*s, which closely resemble and emulate serial television programming. While these procedures of weaving complex (narrative) nets through serialization in television have received a great deal of scholarly attention over the course of the past decade (cf. Mittell 2006, Nannicelli 2009, Piepiorka 2012), seriality as a key feature of web-based forms has largely been neglected and left undertheorized. Manovich's disregard of television in its entirety, and of seriality as a spatial-temporal procedure in particular, serves here as a case in point.

Compared to the concentrated, regulated, spatially based seriality of Youtube's interface, the platform's infrastructure at the same time enables a form of seriality that can be described in completely opposite terms. The platform is also one of the most

Eludamos Vol. 8, No. 1 (2014)
pp. 129-149

important locations where what one might call “viral seriality” takes place or has its origins. Videos are called viral when they gain a very high degree of popularity, often on a global scale, through extensive and rapid online viewing and sharing, mostly in the form of user-based distribution via video-sharing websites and social media.

Virality is based on speed and decentralization—a spatial distribution in time—which, more or less opposed to the regulated seriality of Youtube as a platform, has to be described as a process that is out-of-control: Videos spread via networked distribution in ways that can neither be foreseen nor determined, much less controlled (cf. Burgess 2007).

Viral videos can be described not only as fodder for today’s media and network culture, but might—and will in this paper—be approached also as revealing the basic traits of the media ecology of which they are an essential part (cf. Parikka 2005, Goriunova 2013, Sampson 2012). As such, viral videos have to be understood not as discrete entities or as mere messages or content. Rather, they are complex, autopoietic processes which, together with memes of all sorts, and also malicious software like viruses and worms, lie at the heart of the vividness and maintenance of network culture as such. Olga Goriunova describes memes very aptly as “techno-aesthetic processes of becoming,” as “a behavior, or rather a system of human-technological performances. A meme grows out of a variety of websites, agents and ecologies, meshing to build networks promoting its emergence” (Goriunova 2013, our translation). While, as Limor Shifman writes, “memes and digital culture seem like a match made in heaven,” it is interesting—especially in the context of this special issue on digital seriality—that all the aforementioned phenomena are based on serial processuality, on coupling, doubling, replication, repetition, imitation, and more or less independent distribution (Shifman 2014; for the virus cf. Parikka 2005, 2007). Memes, as we aim to show, are paradigmatic examples for digital seriality across multiple dimensions, not only with respect to their sprawling distribution processes.

Our aim, in the following, is not to describe the entirety of networks in terms of seriality, yet we do argue that serial operations and procedures play a distinct and significant role in the workings of Internet memes and digital interfaces generally.

The Seriality of Interfaces

Within the space of a mere decade, YouTube has become synonymous with watching videos online; indeed, the platform plays such a crucial role in people’s access to visual material on the web that its interface may already have become a naturalized form of organizing and displaying web videos.

Much scholarly attention (both affirmative and critical) has been given to YouTube as a platform that empowers its users, and that arguably marks a larger medial and cultural shift in production cultures with users increasingly becoming producers themselves (cf. Bruns 2008). Likewise, research on the aesthetics of specific YouTube genres such as vlogs, machinima, Let’s Plays, mashups, and many others is well on its way (cf. Snickars and Vonderau 2009, Lovink and Niederer 2008, Lowood 2011). Far less academic work has been devoted to the interface forms through which social networking sites and video or image sharing platforms enable,

actuate, and govern actual navigational practices. Rather than being mere containers for the distribution of content or neutral placeholders for user-driven practices of "prosuming," interfaces have to be conceived as the basal forms through which practices of sharing, "produsing," and mashing up are put into effect, shaped, and regulated. It is precisely this scholarly "neglect of the substantial role a site's interface plays in manoeuvring individual users and communities" (van Dijck 2009, p. 45) which we aim at starting to overcome in this section.

In his seminal work on *The Language of New Media*, Lev Manovich (2001) provides an account of new media that focuses on the aesthetic forms of digital media and makes a strong case for the importance of visual interfaces. In this context, he aims at outlining the affiliations of new with "old" media by analyzing the ways media as diverse as print, cinema, and computers represent and construct space and time in making databases accessible and enabling narratives. Strangely enough, new media's immediate predecessor, television, plays only a minor role (if at all) in his analyses. Drawing upon television's strong affiliation with modes and forms of seriality, we may eliminate this blind sport and emend Manovich's analysis of database and narrative, which he asserts to be "natural enemies" (2001, p. 225).

Manovich's strong claim regarding the natural enmity of database and narrative—which is a claim about the relation between the structure of gathered data and the navigational practices by which it is accessed—derives from what he describes as a semiotic reversal: While the syntagmatic, i.e. the linear cause-and-effect dimension of signs, is presented *in praesentia* in the material sequence of spoken phonemes, written graphemes, or the moving images of film, the paradigmatic, i.e. the non-linear differential dimension of signs, remains *in absentia*, available only through virtual comparisons between potential phonemes and graphemes or images. In computer-based media, on the other hand, these paradigmatic and syntagmatic functions of signification are transposed, according to Manovich (p. 230): here, the paradigmatic dimension of signs, the inventory of potential elements of signification, is displayed on the screen and thus present, while syntagmatic sequences, linear combinations of signs, remain subject to the navigational practices of individual users and are thus relegated to the realm of the virtual. "Database (the paradigm) is given material existence, while narrative (the syntagm) is dematerialized. Paradigm is privileged, syntagm is downplayed. Paradigm is real; syntagm virtual" (p. 231).

This conception of paradigmatic database and syntagmatic narrative has, of course, been challenged (cf. Hayles 2012, pp. 175-198), and even Manovich himself arguably fails to consistently hold up his strong claim about the antagonism of narrative and database. In his discussion of the loop as a basic means for constructing "database narratives" (Manovich 2001, p. 319), Manovich presents the loop as a technique that produces difference through repetition in filmmaking as well as software coding, leading Manovich to the conclusion that computer programming, like filmmaking, belongs to the same realm of industrial seriality that has been characteristic of modernity all along: "So if we strip the computer from its usual interface and follow the execution of a typical computer program, the computer will reveal itself to be another version of Ford's factory [...]. A computer program progresses from start to finish by executing a *series* of loops" (p. 317, *emphasis added*).

Drawing upon this marginal notion of seriality, Stephanie Boluk argues that seriality is the missing link in Manovich's discussion of database and narrative. As seriality works both spatially (e.g. a series of paintings on a wall of a gallery) and temporally (e.g. a series of events over time), it operates on both sides of the distinction between paradigm and syntagm and may thus be located on the levels of database and narrative alike: "Digital media and specifically, a database aesthetic, subsumes these multiple, perhaps even contradictory uses of seriality under its regime of production" (Boluk 2009). Seriality may then be analyzed not only as a function of computer code, but as an aesthetic feature of the organizational forms in which databases are presented and, therefore, as an intrinsic feature of web interfaces.

This neglect of seriality in Manovich's discussion coincides with a media-historical blind-spot: jumping directly from the cinema of the early twentieth to the digital media of the late twentieth century, Manovich quite stunningly skips the defining medium of the twentieth century altogether: television. This is all the more surprising when taking into account television's technological status as a point of transition between "old" media, i.e. the storage-based, chemical-optical media of photography and film, and transmission-based, fully electronical "new" media. Anticipating the clickable operational images of computer screens and the selection device of the mouse, television's images can already be qualified as switchable images, as images which enable operations of selection embedded in a supplementary device, the remote control (cf. Engell 2004, 2013). In turn, TV viewers' navigational practices have also relied heavily upon (printed) lists and tables of television schedules, which are nowadays integrated into fully digital guides and menus on the TV screen itself. Most significantly, however, both on the levels of programming and of aesthetic forms, television has adopted a mode of monitoring the multitude and heterogeneity of televised worlds (Cavell 1982), a mode that enables collecting and assembling images of different times, places, and media while at the same time converting these images into narrative forms. The epistemological and aesthetic procedure which television brings into play—and the key term which Manovich's discussion of old and new media is missing—is, of course, seriality.

By employing lists, tables, drop-down-menus, and so forth, web interfaces do indeed strongly favor paradigmatic forms of representation, yet rarely—if ever—do we encounter "pure" paradigms. Google's search bar, for instance, refrains from any paradigmatic visualization at all, the reason being that if Google aims at making the entirety of the web searchable, any visualization would require an immense amount of processing and necessarily lead to an excess of visibility. Search results appear in the form of a list, which again does not encompass the entirety of link results in a random fashion, but sorts them according to the company's algorithm (PageRank), which promises to display the most relevant results[1] at the top of the list and limits the number of results displayed on one page to a predefined number of just ten.

Search results, however, do not constitute narratives in a conventional sense: their order is not one of causality and sequence, but of selectivity. The relation between the first list entry and the second one does not correspond to the linear sequence of a scholarly book, for example, which would usually start with an introductory overview in its first chapter and then elaborate on one specific aspect of the topic at hand in its second chapter, arranging these things according to comprehensibility, the supposedly sequential logic of the research process, or the intrinsic rationalities of

the research object itself. In any case, the first chapter of a book somehow prepares the reader for reading the second one. Obviously, this does not hold true for search results, whose order is based on similitude, which is brought into a structured and selectable top-down sequence by Google's algorithm. PageRank calculates a document's relevancy by evaluating its degree of interconnectedness, thereby modeling a random user's likelihood of stumbling upon a website (cf. Page, Brin, Motwani, and Winograd 1999). This automated link-topological procedure (cf. Röhle 2010, pp. 121-128) conceives the web as an aggregation of possible sequential paths, which may be mathematically converged, evaluated, and brought into a sequential order—the search list.

The list (like tables, registers, clouds, and so forth) thus cannot be conceived as a representation of purely paradigmatic dimensions of signification, which could be located on the level of a new media ontology (cf. Manovich 2001). Rather, lists and other distributed forms of presentation are the primary tools through which paradigms are constructed, but they only become effective when we regard and use them as such. Yet lists additionally enable, in contrast to spatial forms such as tag clouds, a unidirectional, summary form of reading, thereby allowing for a seamless screen flow as users are accustomed to not browsing through the whole menu of results but quickly choosing one of the first options. Entirely personalized search engines such as StumbleUpon, in consequence, go so far as to eliminate lists from their interface, instead rerouting a user directly to another page, thereby valuing screen flow above selectivity. By constructing a menu of selectable options across the screen and at the same time bringing these options into a top-down sequence for generating screen flow, lists have arguably become such a privileged form for web interfaces precisely because they do *not* represent the web. By reproducing existing paths through the web and allowing for non-linear operations of following up, they may rather be described as forms of serialization. This becomes more evident when we take a closer look at the organizational forms of YouTube.

As a cultural technique, browsing through YouTube might by now have become as intuitive as writing letters or zapping through TV channels. Indeed, other web video sites such as Vimeo, which aims at hobby and semi-professional filmmakers, or the live streaming platform Twitch, happen to be organized in a fashion similar to what we will here outline for the case of YouTube. However, since its launch in 2005, YouTube's interface has undergone several major and a myriad of minor updates, indicating a constant need for optimization and adjustment to its uses. Moreover, with the rise of mobile media, any notion of *the* YouTube interface has at least become problematic, for the introduction of specific small-screen and touch-based interfaces for smartphones and tablets has led the desktop interface to lose its binding or canonical status. For the purpose of this article, we will nonetheless focus on the desktop interface as our point of reference, because it still is the most encompassing type of interface, making most of the site's functionality accessible through a single screen (cf. Figure 1).

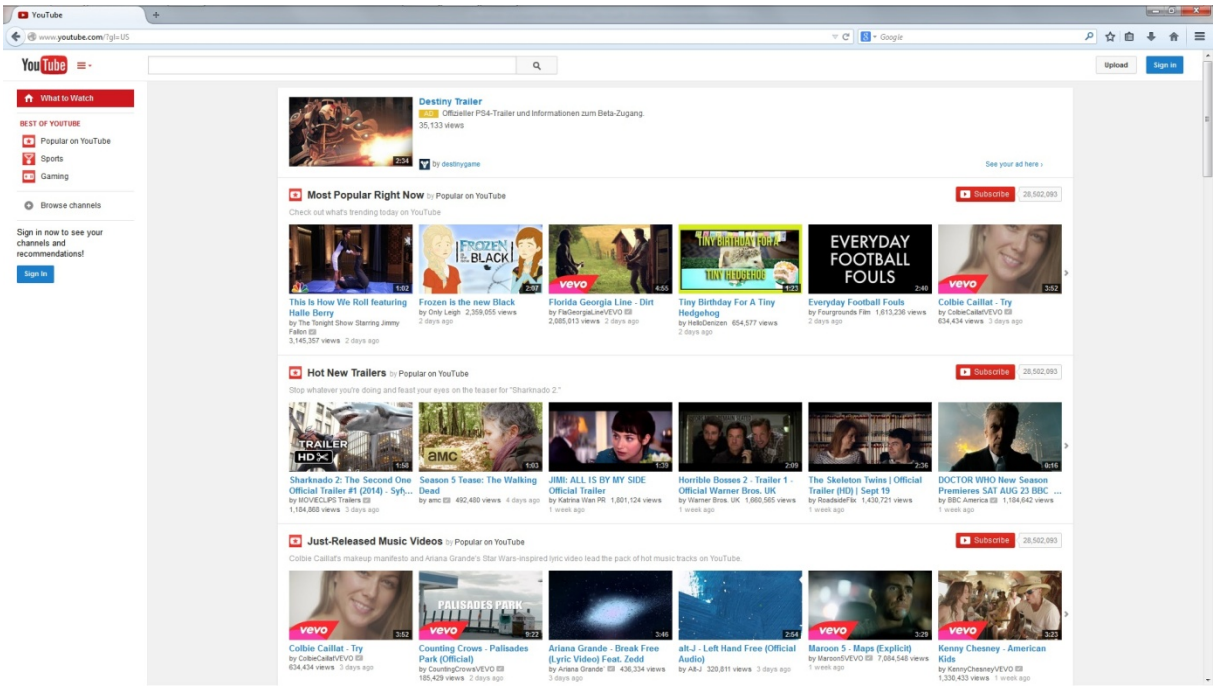

Figure 1: "Default" US YouTube start screen, 07/11/2014, http://www.youtube.com/?gl=US

If we wish to describe this interface in language, i.e. in a linear, text-based form, we already encounter a methodological problem: The site's design makes any assumption regarding an obligatory starting point seem arbitrary. Rather than being organized around a central point of entry, such as is the case with Google's search engine, we are here exposed to a spatial arrangement consisting of rows of identical-sized images and a column of navigation buttons, as well as a small header including the logo and search bar. In its spatial organization, this display clearly lends itself to the representation of databases, for it mimics tabular forms for the two-dimensional representation of separate data entries. The strict flatness of this operational image levels the potential hierarchy of top-down and left-right preferences for users accustomed to specific script cultures, making any image equally likely to be clicked upon.

While the tabular form evokes databases as collections of data without hierarchy, the interface opts at the same time for a display of well-sized and thus easily identifiable preview images, which significantly limits the number of entries available on one screen (without scrolling). Drawing upon a distinction drawn by de Certeau (1988, p. 221), the spatial arrangement here operates no longer according to the logic of an image space, which makes us recognize the order of places, but follows a logic of movement: The table of preview images is precisely not just a list; consisting of clickable links, it defines a range of possible paths or trajectories across the database. These paths result from a monitoring of media usage: by default, YouTube suggests videos according to their popularity, i.e. according to the metadata that the site itself collects about the frequency and order in which users watch videos. Watching YouTube therefore always already implies watching other people watch YouTube (cf. Adelmann 2012, p. 264), because the tiny snippets of data presented to the user can also be regarded as screened metadata (cf. Chamberlain 2011, pp.

236-237). These recommendation systems arguably play a key role in the experiences of watching YouTube, for they are, again by default, present throughout every part of the interface, most prominently featured as a top-down list on the right-hand side column next to the actual video player. (cf. Figure 2)

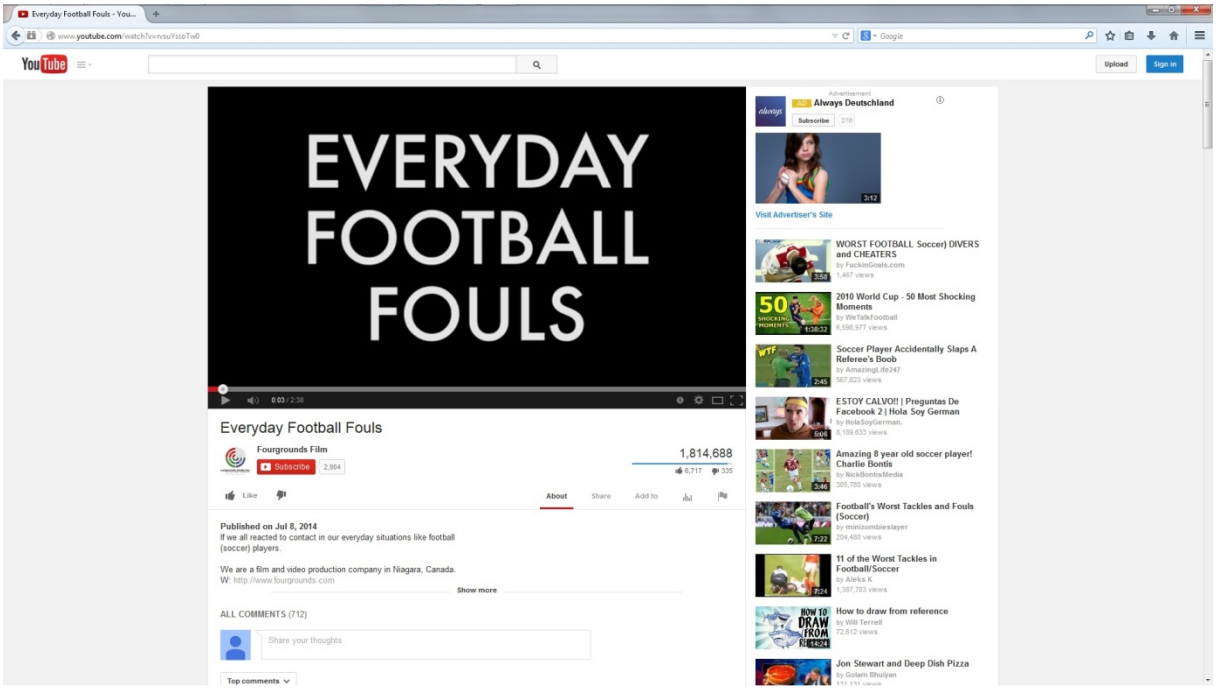

Figure 2: YouTube's paths of recommendation, 07/11/2014, http://www.youtube.com/watch?v=rvsuYssoTw0

Unlike search engines, which are designed to enable users to find something outside of the search engine's realm, recommendation engines pursue the purpose of prolonging and extending a user's activity on a specific page by the means of serialization. As Susan Murray (2008, p. 155) has argued for the case of the photo-sharing site Flickr, the interface's organization leads to a devaluation of single images and enacts procedural logics of streams and flows. Ever since Raymond Williams's (1974) seminal description of the experience of unmarked transitioning between heterogeneous moving images, "flow" has of course been thought of as a key property of television. YouTube's flow, generated by its recommendation engine, must be located on a different level of media experience, however. In television, flow emerges in two ways. On the one hand, it derives from operations within TV imagery: through teasers, announcements, and soft transitions, television produces a seamless experience of watching not just a distinct program, but a serial stream of programming, an experience of "watching television" (rather than watching a particular program). On the other hand, the mechanism of the remote control allows viewers to switch between channels, i.e. between completely self-contained images, and thus enables a serial flow of images to emerge out of technical manipulation outside of the moving electronic images. While in the former case serialization occurs within discrete images, in the latter case it is constituted outside of TV imagery proper by the means of "channel-surfing," which does not directly affect the respective images of different TV channels.[2]

In the case of YouTube, by way of contrast, flow has to be located on the level of interface and therefore *between* images. Since videos are produced and uploaded by users completely independently of one other, in principle they remain stand-alone images which may or may not be selected by users. Yet at the same time they are assembled on the very same screen and thus necessarily interact with other videos (and their users) through metadata, either through formalized tags and keywords or by belonging to paths of usage.[3]

William Uricchio has accounted for this transition between televisual and digital flow as "a shift from flow as default to flow as a condition that requires active selection" (Uricchio 2009, p. 33). More precisely, however, this shift has to be located on the level of serialized images: while serialization in television takes place either within or outside of images, YouTube's seriality occurs on the level of the interface itself, and therefore between images. As images which allow for operations of selecting, as well as pausing, rewinding or forwarding, YouTube's videos also shift and redistribute agency to the user. Unlike watching television, "database-watching," as Lovink (2007, p. 10) calls it, requires constant exertion of user agency, so the trajectories across the database, which the interface defines, aim precisely at upholding the user's agency. On YouTube, seriality is therefore not a process belonging to the realm of imagery, but a metadata-driven movement across a database, which the interface enables and aims to actuate in cooperation with the user. YouTube can thus be characterized as an agent for the production of serialized agency that occurs between images.

Recommendation-based serialization thereby necessarily leads to a series of similitude. Distinct segments link up with each other either through semantics (tags and keywords) or by automated observation of user activity. Following paths of recommendation leads, however, to a perpetuation of these paths and thereby tends to disable the interface's ability to produce difference. Thus, following recommendations frequently results in loop-like structures, where a user's movement across the database folds onto itself through algorithmic repetition (cf. MacKenzie 2006, p. 176). And while processes of serial looping, copying, and repetition play a large role in the aesthetics of digital, networked media (cf. section III of this article), YouTube's interface does provide an additional organizational form, which circumvents serial repetition by providing a personalized, subscription-based access to its database (cf. left-hand side column in Figure 3).

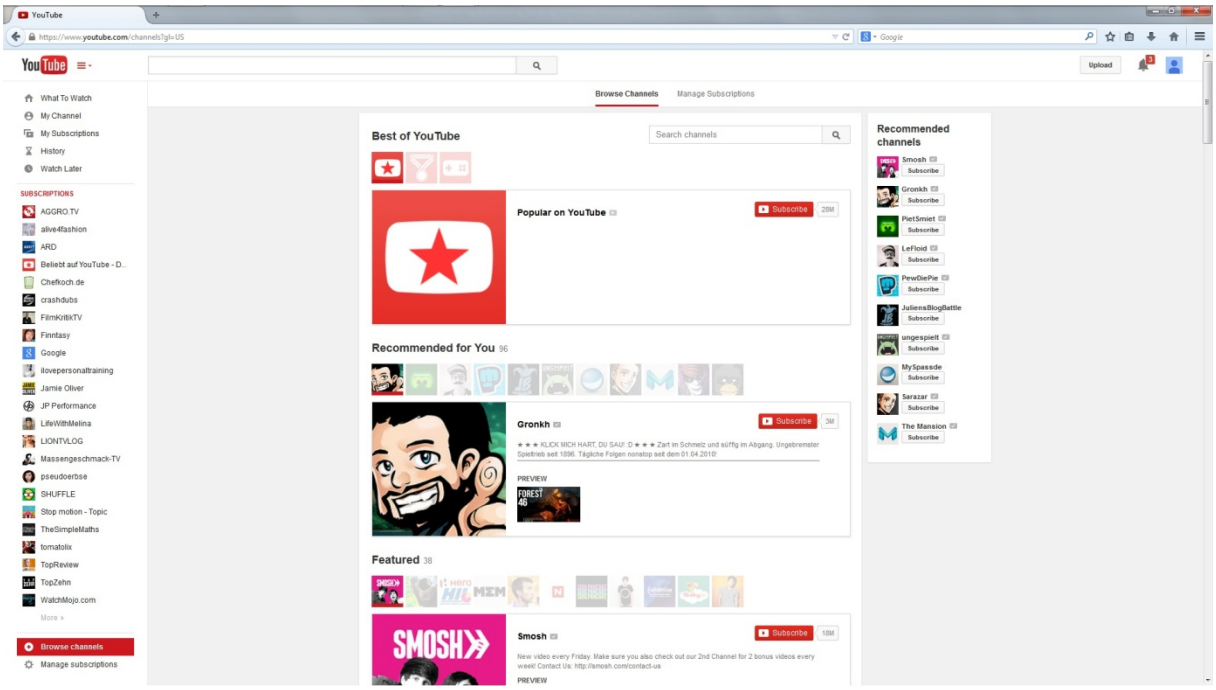

Figure 3: YouTube's left-hand side interface column provides an additional layer of navigation after creating an account and more or less randomly subscribing to recommended channels.

Subscribing to specific "channels" thereby not only mimics the logics of cable and pay TV, but it also enables seriality to become a feature of the images themselves, most pertinently in the emergence of *Let's Play* videos as a distinct YouTube genre with video uploads scheduled to appear regularly on specific weekdays, thus enabling *Let's Players* to produce distinct series. As a database within a database, a YouTube channel aggregates the content of individual producers or uploaders and allows for the organization of videos in producer-generated playlists, as well as allowing subscribers to receive automated notifications of new videos. By shifting agency towards producers/uploaders, YouTube's channel system has led to a large number of users being able to monetize their activities through YouTube's partner program. This allows for longstanding series to be produced, which may take the form of episodic series (e.g. introductory *Let's Plays* for different games) or long-form serials (e.g. complete *playthroughs* of Triple-A games) and thus for seriality to become a defining feature of these camera-less images. This shift of agency in turn also reintroduces problems akin to television's scheduled programming: *Let's players* frequently apologize for uploading "too late," for cancelling unpopular series, or for being unable to produce new videos due to vacations or other commitments.

Let's Play videos often emerge out of non-stop gaming sessions, yet they are usually split up in distinct segments. Games arguably already lend themselves to notions of seriality (cf. Denson and Jahn-Sudmann 2013), thus encouraging YouTubers to carefully align the serial structure of *Let's Play* videos with the serial structure of the games themselves, e.g. by matching video segments with gaming segments such as levels, turns, and stages. The serialization of gaming that occurs in *Let's Play* videos is not, however, a direct result of games' seriality, but of the organizational forms of operative images provided by the interface.

In addition to these interface-based forms of seriality, YouTube also hosts a different kind of seriality, in which agency is not so much located in formal operations of the interface, but in the self-directing processes of producing, transforming, and sharing images which have come to be known as "memes." It is to these that we turn now.

The Seriality of Memes

In the "ecology of practices" (Stengers 2010) which is the web, viral and memetic seriality plays a crucial role as both a form of mediated, image-based communication and as a self-reflexive means of analysis of the networked culture of which it is an essential part. Memes are digital and processual objects with an agency of their own. Whereas viral images or videos are based on a form of seriality familiar to us from industrial mass production—i.e. a continual production of more of the same—a meme can be defined differently: not as a discrete *part* of a series but as *itself always already a series* of different digital items that share only a certain set of characteristics—like form, content, or aesthetics—and thus refer to each other in a relatively closed formal system.[4] Hence, a viral video can be a part of a meme, but its viral spread alone does not make it a meme. Thus, what differentiates memes from viral images or videos is the handling of the "original" content throughout the serialized process. Memetic processes are not only about liking, simple copying and sharing, they are especially about transformation. Although the term meme was originally used to describe mechanisms of mere replication—as in evolutionary biologist Richard Dawkins's seminal use of it to describe small units of culture or distinct contents of consciousness spreading through communication and thus contributing to cultural evolution—more recent understandings of memes especially emphasize the oftentimes user-based transformation of "primary" content in the production of parodies, remixes, mash-ups, re-enactments, remakes (Dawkins 1976, Fuller 2007, Goriunova 2013, Shifman 2014).

Despite the possibility, in principle, of tracing most popular memes back to a certain original video or image, terms like "original" and "primary" have to be put in quotation marks. In most cases, it is questionable whether it even makes sense to speak about original content, for the meme-series completely decontextualizes the original image and changes its meaning. The significance, with respect to memeification, of some random image macro or moment in a film or video lies less in its unique original characteristics, but rather conversely in its ability to be transformed or be put in totally different contexts. It is not the source's meaning that creates the meme, but rather the other way round. Moreover, as mash-ups and supercut videos make particularly clear, an essential attribute of memes is their intertextuality, along with the fact that their production involves agents of totally different medial and material origins. Such series have neither beginnings nor ends, neither precisely definable predecessors nor successors. But despite this apparent indeterminacy with respect to (audio)visual or textual materials, thematic issues, aesthetic forms and so on, memes gain their strength precisely from a pronounced tension between repetitiveness and differentiation. Indeed, memes tend not only to organize around serial repetition and imitation within an individual meme-series, but also to build veritable genres with very distinct styles and/or contents that unite or relate individual memes, thus establishing a kind of inter-seriality in addition to the intra-seriality of memes discussed so far.[5] It

is beyond the scope of this paper to give an exhaustive list of these genres, but a short look at three of the most common (still) image-based meme genres—viz. the extremely easy-to-produce image macros, Photoshop memes, and photo fads—should suffice to illustrate this level of inter-serial proliferation.

Image macros, probably the most prevalent meme genre, can be described very simply as photographs with large, white text superimposed upon them. This multimodal genre can be divided into multiple subgenres like the notorious *lolcats*, the so-called "advice animals," or stock-character macros like "The High Expectations Asian Father" or "The Successful Black Man." Most of them share the same visual style, with images of the animals or stock characters presented in front of a color-wheel background (cf. Figure 4).

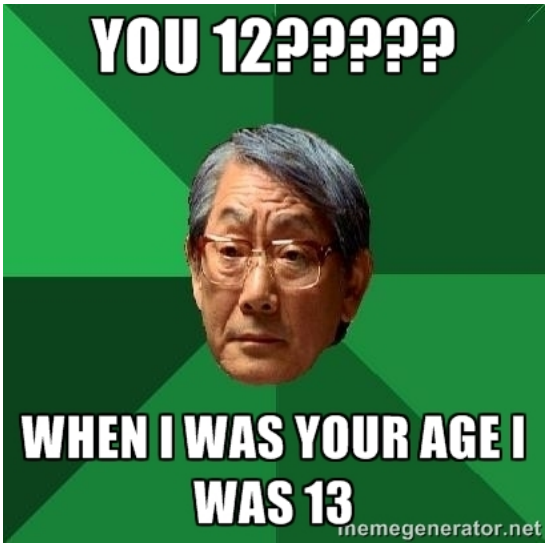

Figure 4: High Expectations Asian Father

The animal archetypes and human stereotypes that constitute the main body of this meme-subgenre are as such already the sedimented results of frequent, repeated recurrences in diverse cultural forms—serial figures which can be used either to affirm or undermine the historically consolidated underlying stereotype.[6]

The second genre, Photoshop memes, often places a famous object or person in a variety of extravagantly different contexts. A recent example is "The Ridiculously Good Looking Guy," a meme based on the photograph of a handsome young man captured during a marathon. This photograph inspired not only multiple images that photoshopped the man into totally different contexts, but also multiple series of different meme styles, including a series of advice animals and derivative series like "The Ridiculously Photogenic Metal Head" or "The Ridiculously Photogenic Horse,"—serialized (and emphatically inter-serial) memes that can only be understood in their full meaning if one is familiar with the first of those series. This meme-literacy is vital to understanding the complexity behind the seemingly platitudinous humor that often characterizes such phenomena.

At the time of writing this article, during the 2014 Soccer World Cup, a meme called "VanPersieing" has originated from soccer game footage.[7] This meme illustrates genre-seriality and genre-intertextuality on at least three different levels. Based on Dutch national football player Robin van Persie's goal against Spain with a flying header during the World Cup group match on June 13, 2014, this image proliferated widely and quickly as both a Photoshop meme and as a so-called photo fad, the third genre term discussed here, which describes staged photos capturing the subject posing in a very specific manner (e.g. in the "planking" pose, which requires that the subject lie head down on the ground, hands touching the side of his or her body, often in unusual locations). As a Photoshop meme, the soccer player appeared flying with the casts of the movies *Peter Pan* (Clyde Geronimi, Wilfred Jackson, Hamilton Luske 1953) or *Gravity* (Alfonso Cuarón 2013), was shown alongside superheroes, or was portrayed as the next step in human evolution, for example. One of the viral images shows him among salmon swimming upstream in a river, straight into the gaping mouth of a brown bear. This iteration of the meme references another popular meme genre, the so-called demotivaters or demotivational posters. As a genre, the latter are parodies of motivational posters, which, in their simplest form, combine postcard-like images with banal optimism and comical pessimism.[8] The common salmon-and-bear picture combines the title "ambition" with the phrase "the journey of a thousand miles sometimes ends very, very badly."[9] Van Persie's flight further inspired people to upload pictures of themselves in a Van Persie-like pose. As this pose is overtly reminiscent of the aforementioned planking pose, itself an extremely popular memetic photo fad genre, the "VanPerseing" almost seems to be a meme about memeing itself (cf. Figure 5-7).

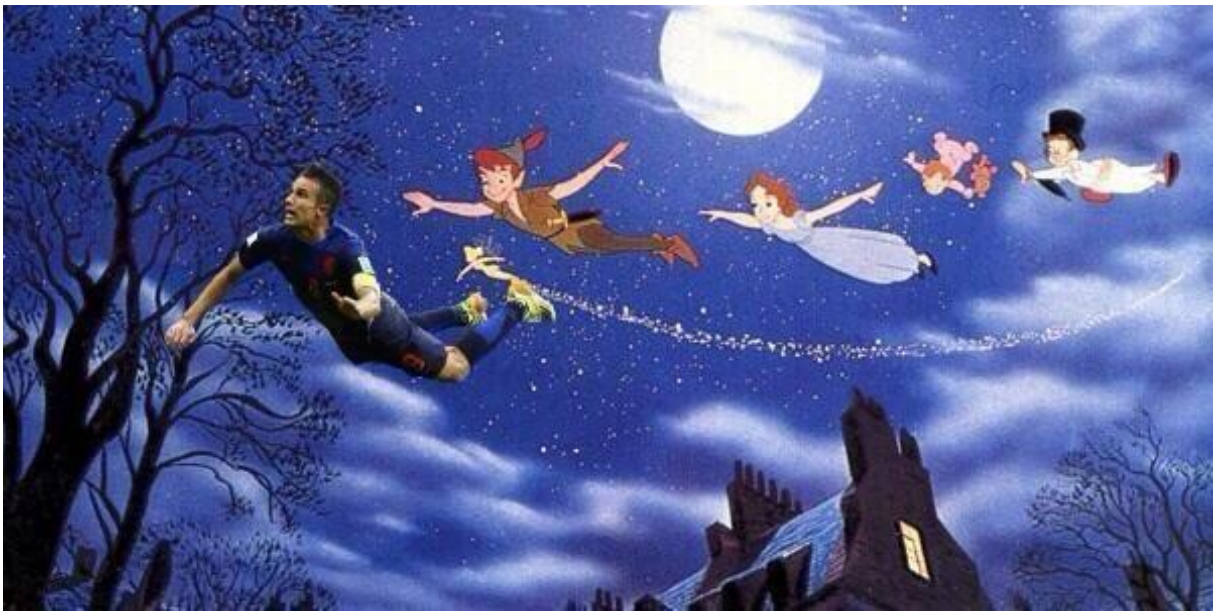

Figure 5: Van Persie and the cast of Peter Pan

Figure 6: A journey ending badly

Figure 7: Van Persie pose

As we see, then, the peculiarity and appeal of memes, especially those related to the genres described here, cannot be situated outside the realm of their seriality. By doing a Google or Tumblr search for the term “owling,” you find a myriad of images of

people posing like an owl and staring blankly into space, and by googling the number 241543903—well—find out for yourself (cf. Figure 8).

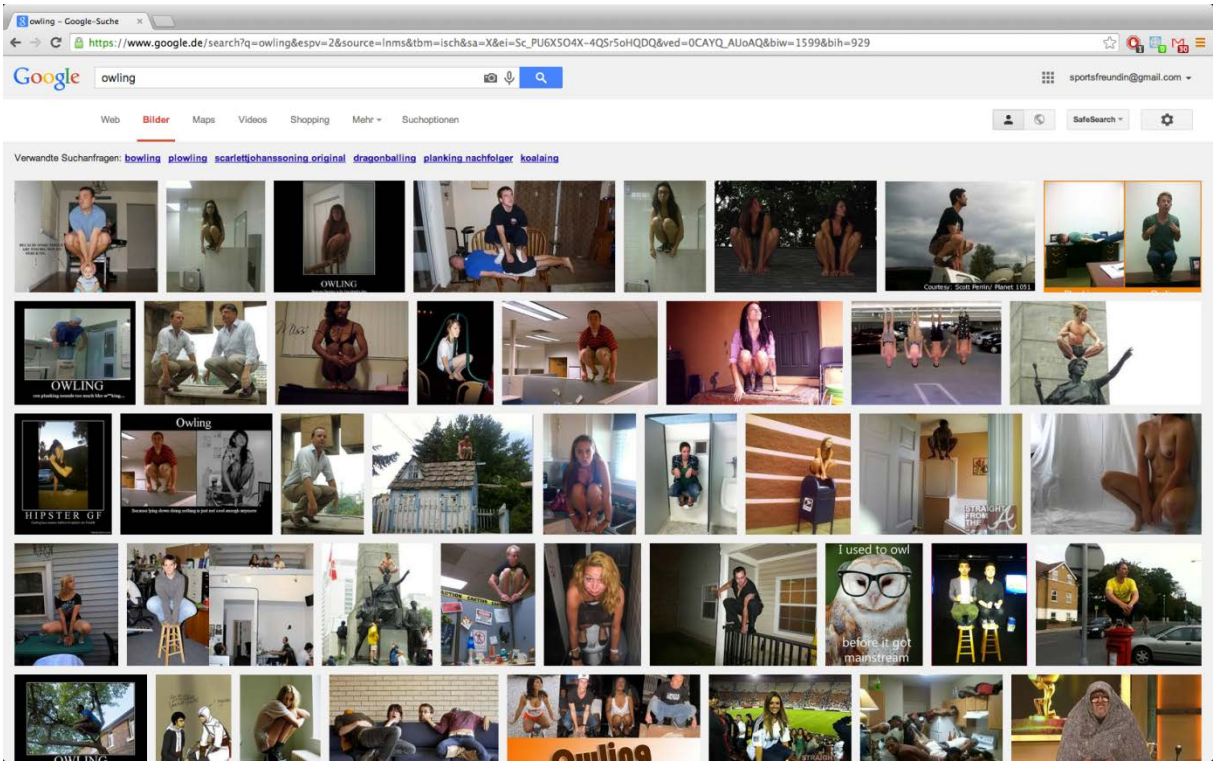

Figure 8: Image search for "owling"

The sheer quantity and juxtaposition of the similar creates veritable atlases of exalted "pathos formulas" (Warburg) without a history. It may at first sight seem eccentric, even forced, to relate the results of a Google image search for these meaningless actions or poses to Aby Warburg's famed *Mnemosyne* project, in which he pinned photographs and visual tropes to black boards and related them to each other in his Mnemosyne project in terms of an "afterlife of the antique" (Warnke and Brink 2000). But, as a matter of fact, these apparently disparate image collections not only share striking similarities concerning their style and the role seriality plays as an analytical and representational tool for the memetic—or, in the case of Warburg, mnemonic—project, but they also have in common a conspicuous interest in poses and gestures (for the epistemology of seriality in Warburg's atlas, cf. Wentz 2014).

Nor is this fact limited to the memes described so far. Rather, one of the most interesting meme genres—with genre here conceived in terms of techno-aesthetic form—is surely the ubiquitous animated gif, whose primary content is the bodily motion of humans and animals (on the gif, cf. Lewe 2014). There are countless examples of these extremely short and looped clips, consisting of animations, home videos, or fragments of movies, television series, or captured sports events; of course, the VanPersieing meme also exists as a gif, looping the movement of the flying Dutchman for all eternity. Gifs are downright obsessed with facial expressions and bodily gestures. A great entrance by Beyoncé, a yawning kitten, Ryan Gosling smoking, David Cumberbatch as Sherlock removing a scarf rather theatrically, some

guy trying to jump from a trampoline into a swimming pool but missing, a toddler falling asleep whilst in the middle of eating: the list, of course, is endless.

This obsession with the division of bodily movements, actions, and gestures into discrete parts is, of course, neither an invention made possible by gifs, nor is it especially new. Rather, it makes us think, almost unavoidably, of the analytical preoccupations of late 19th and early 20th century sciences such as physiology and physiognomy, criminology, ergonomics, and the photographic and proto-cinematic image techniques that enabled them. Etienne Jules Marey's physiological and chronophotographic studies, Eadweard Muybridge's photographic experiments for his encyclopedic atlas project on human and animal motion, Alphonse Bertillon's taxonomic image series of body parts and the so-called "signaletic registration system" of criminals, Frederick Taylor's and Frank and Gillian Gilbreth's time and motion studies for business efficiency: They all share an analytical focus on movement, especially gesture (cf. Levitt 2002, Wentz 2014), breaking images down into their smallest possible segments and creating series from the resulting images. Watching Van Persie fly and fly again or Ryan Gosling smoking that cigarette *ad infinitum* are highly reminiscent of Muybridge's series of women jumping over stools or dancing, horses galloping, men playing tennis or "Walking and Turning Around Rapidly with a Satchel in one Hand, a Cane in the Other"[10]—especially when such movements and gestures were brought back to life as looped animations with the help of the zoopraxiscope (cf. also Manovich 1995).

So what does this interest in the gesture have to say about network culture and digitized media? According to Giorgio Agamben, the gesture, which for him is the cinematic element par excellence, fulfills a media-philosophical role in that it "is the exhibition of mediality: it is the process of making a means visible as such. It allows the emergence of being-in-a-medium of human beings and thus it opens the ethical dimension for them" (Agamben 2000, p. 57). The gesture thus reflects pure potentiality and the mediacy of every meaning or message. In the gesture "nothing is being produced or acted, but rather something is being endured and supported" (1995, p. 56). Especially when images are repeated, the gesture is freed within them (Agamben 2008; see also Noys 2004; Hagman 2012). This becomes especially clear when the gesture, as in the gif, becomes decontextualized and disconnected from its original source. The gif frees the gesture from its context, e.g. its place in the causal chain of events in a movie; it thus replaces narrative telos with radical openness. Likewise referring to Agamben's notion of the gesture, media scholar Hampus Hagman identifies the gif's potential within the media ecology of networks precisely in terms of the form's pure mediality: "This is what the gif does: it shows movement as pure support; as the medium that carries actions and events. It is not a matter of communicating a particular content, but of showing movement as a medium of communicability as such. In itself, it is pure becoming and process, and this is key to understanding its success as an item of networked circulation. Through its decontextualized status as pure medium, it is free to enter into many different contexts" (Hagman 2012, n.pag.).

Serial repetition thus represents the heart of the aesthetic and analytical potential as well as the properly medial function of the meme phenomenon. In the infinite loops of human and animal gesture, meaning eventually surfaces. Supercut videos and archetypical image macros can be read as analytical tools to reveal patterns and

notorious clichés also far beyond the borders of Internet culture. Ultimately, as viral videos, images and memes of all sorts disclose the logics and characteristics of their media ecology by means of their own logic and functioning; simply by force of co-evolution, they are not only well-nigh paradigmatic reflections of their technological conditions and their media milieu, but they seem also to be the media that reveal most directly, via their own serial traits, that the notion of seriality as such has to be reckoned among the most basic characteristics of contemporary networked, digital media.

Digital Seriality and Television

So far, we have described two distinct modes of digital seriality. The first mode, which we located on the level of web interfaces, concerns the web as a structure of interconnected websites, as well as the organizational forms through which the operational images of web interfaces establish, manage, and regulate these connections. The second mode of digital seriality plays out on the processual level of viral autopoiesis, which is characteristic for memes as gesture-images in constant transformational becoming. While we have separated these two dimensions of digital seriality for analytical purposes, they should not be regarded as mutually exclusive, for they in fact presuppose each other. The purpose of interfaces is precisely the stimulation of image-processes such as memes, while the popularity of memes has likewise spawned new platforms dedicated to the accumulation and proliferation of memes.

The rise of digital seriality as a defining structure and process for web-based media coincides, finally, with the flourishing of serial forms in a rather "old" medium, viz. television. As contemporary TV series heavily rely upon their distribution through online platforms such as Netflix or BitTorrent and extend their realm far beyond the televisual texts themselves, we might speak more precisely of a co-evolution of televisual and digital seriality. It is thus no wonder that television series build a seemingly infinite supply for meme of all sorts. Supercut videos, in particular, take their materials from television series and compile them in order to reveal those patterns that, in their original temporal and narrative frameworks, remain more or less latent if nevertheless characteristic for the television series. The resulting videos can be considered media of reflexion, not only with respect to the seriality of their own media environment but with respect to televisual seriality as well. They condense the programs to their defining gestures and to the forms of repetitive seriality that todays' series so dearly wish to escape. In supercuts, a celebrated series like *Mad Men* (AMC, 2007-) is revealed as nothing more than a bunch of people sitting around drinking and smoking; *Breaking Bad* (AMC, 2008-2013) is the eternal recurrence of "Bitch"; *Game of Thrones* (HBO, 2011-) the mindless repetition of "You know nothing, John Snow." Sitcoms, on the other hand, positively offer themselves to memeification and an afterlife on the web with their episodic seriality, their short gags, and their willingly serialized catchphrases ("Bazinga," "Challenge accepted," "Wait for it," etc.). Moreover, the producers of series like *The Big Bang Theory* (CBS, 2007-) and *South Park* (Comedy Central, 1997-) have created episodes entirely about memes, while Bravo TV has gone so far as to produce a meme-related reality TV series, LOLwork (2012-), devoted to the people of Icanhascheezburgers, the weblog renowned first and foremost for its cat content.

At the same time, contemporary long-form multi-serial narratives have come to be classified as "network narratives" themselves, i.e. as aesthetic forms which take the shape of webs precisely through increased serialization. Evoking the epistemological realm of drug addiction, for instance, *The Wire* (HBO, 2002-2008) traces the viral spawning of the drug trade over the districts, social milieus and institutions of Baltimore by way of an ever-expanding narrative that accumulates a vast cast of major and minor characters. This serial expansion in turn necessitates means of orientation and navigation such as pinboards, charts and tables, which closely resemble the spatial forms of orientation that are provided by digital interfaces (as well as Warburg's juxtaposition of "pathos formulas" in his Mnemosyne atlas).

There are thus multiple intersections and attendant processes of imitation and adaptation between televisual and digital seriality; as a result, the television series still has to be considered as a central hinge in the transition to a digital media regime and is of great relevance even there where its serial forms have become almost completely independent from their media of origin. The rise of network narratives in contemporary television series and the increasing serialization of digital, web-based media could thus be understood as a process of co-evolution, in which old and new media do not collide, but mutually influence each other. Just as the web has become an ineluctable condition for the development and analysis of contemporary television, seriality has to be thought of as key characteristic of aesthetic forms and processes in digital network media.

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Notes

[1] For a discussion of “relevancy” as a criterion for search engines, cf. Röhle 2010, pp. 106-143.

[2] Indirectly, of course, TV’s images always take into account and thus react to their switchability, because they aim at making viewers not switch to other channels.

[3] Of course, the same holds true for digital TV interfaces (cf. Adelmann 2012).

[4] For the basic difference between these two forms of seriality, cf. Beil, Engell, Schröter, Schwaab, and Wentz (2012).

[5] On the intra- and inter-seriality of digital games, see also Denson and Jahn-Sudmann (2013).

[6] For the relation between seriality and stereotypes, cf. Winkler (1992). For a detailed analysis of the race and gender issues of stock character memes, cf. Milner (2013).

[7] http://knowyourmeme.com/memes/vanpersieing.

[8] http://knowyourmeme.com/memes/demotivational-posters.

[9] http://www.despair.com/ambition.html. Witnessing the defeat of the Dutch Team in the semi final on July 9th, the image almost becomes prophetic.

[10] Animal Locomotion Plate 49, 1979 [1887].