Colourisation and the Archive: Repurposing World War One

By Tom Livingstone

Michael Hammond and Michael Williams open their survey of *British Silent Cinema and the Great War* by introducing a basic tension that has informed visual media's relationship to the Great War since the close of hostilities in 1918. "The issue during the war was how to represent it, following the war it was how to remember it".[i] Faithful representation does not always serve the purposes of venerable remembrance: each is an entanglement of political and ideological concerns that do not necessarily complement one another. Take for example the poetry of Wilfred Owen and its description of gassed men, mass slaughter and the general futility of war. Initially, this work was considered too anti-war to serve as commemoration. It was not fully enshrined into the canon and curriculum of remembrance until late in the twentieth century. When it comes to moving image depictions of the war, the knotty problematic of remembrance and representation intensifies, not least because of the assumptions of authenticity and veridicality baked into the medium of film. Jefferson Woods, the manager of the Broadway Cinema in Hammersmith, refused to screen the film *The Battle of the Somme*, produced by the War Office in 1916, projecting instead a slide reading: "WE ARE NOT SHOWING THE BATTLE OF THE SOMME. THIS A PLACE OF AMUSEMENT, NOT A CHAMBER OF HORRORS".[ii]

In the years immediately following the war, the rituals of remembrance were established by institutions such as the British Legion (who began the sale of poppies in November 1921) and along with them many of the acceptable parameters of how to represent the conflict. Cinema participated in this unspoken legislation of modes of remembrance and representation in a number of ways. Initially, Jefferson Woods' proclamation proved overwhelmingly true: the cinema was a place of amusement and tales of derring-do and magnificent men in their flying machines dominated the screens of the inter-war years. In the second half of the century, however, as discourses surrounding the war shifted, so did the depictions of it on big and small screen alike, eventually culminating in the familiar 'lions led by donkeys' narrative still popularly held today. However, acute condemnation of the futility of trench warfare did not dim any of the pre-established imperatives of remembrance – i.e. memorialisation over and above explication – that informed the moving image depictions. Instead, Emma Hanna notes that

television documentaries about the first world War became central sites

of national memory and mourning which utilised images and ideas about the conflict which resonated with the accepted story of 1914-1918. By using modes of remembrance that were established in the inter-war years, these programmes were designed to be self-generating. Many programmes sought to place the war and its aftermath beyond critical discussion, and where more recent programmes challenged accepted ideas about the war they were roundly condemned in the press.[iii]

Hanna was writing in 2009, before multiple events that potentially augured the reconfiguration of these "sites of national memory and mourning." The first is the official passing of the war from living memory. In 2011, Claude Stanley Choules, "the Last Survivor of World War One," died at the age of 110. A year later, Florence Green, considered the last living person to serve in the war in any capacity, died at the age of 111. With the passing of living memory, the moral authority of the first hand witness moved from the individuals who had experienced the war to the archives where those experiences and memories were enshrined. Eliah Bures, discussing the weight that "living memory" placed on our collective conception of the First World War, anticipated that "the loss of living memory can also bring with it a liberation from entanglement in the past, and from the distortions to which all memory – individual and collective – is inevitably prone."[iv] This was an optimistic forecasting. The centenary provoked an intensification of rituals of remembrance and whilst the events of the war are continually undergoing re-consideration, the distortions of memory that gave rise to popular myths of the stalwart British Tommy were reinforced, a spate of referendums providing plenty of opportunity for revamped notions of national character.

Another cultural trajectory significant to the memorialisation of the war is the large-scale digitisation of film archives that is currently underway. I'll return to the impact of digital technology on memory later in this essay. For the time being, it is enough to note, in passing, the coincidence of the deaths of Claude Chouled and Florence Green and pioneering programmes of digitisation such as the BFI's Unlocking Film Heritage project (2012-2017) which aimed to digitise 10,000 films from the BFI National Archive, in turn re-building the architecture of the database and transforming access to the films themselves.[v] This relation is not entirely facetious: with the passing of living memory, film footage became the principal connection to the events of World War One at precisely the moment when the nature of that connection was undergoing radical change. Film emerged as the material record of the war with the greatest 'authenticity' at roughly the same moment that the position and function of archive images within the landscape of visual media was re-written.

As the events of the war recede further and further away, the competing imperatives of politically inflected modes of remembrance and the

representational affordances of digital technologies overlap one another in increasingly complex ways. Where cinematic representation was hitherto legislated by the propriety of memorialisation, the screen is now the principle medium of remembrance and its rituals. What I aim to do in the following discussion is query the degree to which these previously institutionally discrete modes are now co-determinant, and ask whether or not our current techno-cultural context requires a re-thinking of how traditions of remembrance, and their concomitant myths, are sustained, re-produced or thoroughly re-constituted in the context of pervasive digital visual media and new forms of digital representation.

It is within this context that I'd like to examine Peter Jackson's World War One documentary *They Shall Not Grow Old* (2018). On the surface, it fits the mould outlined by Emma Hanna. Arriving as part of the centenary celebrations of the war it is "self-generating" and avoids any "critical discussion" of the war and its aftermath. Indeed, it was designed as a classroom tool and is available as a set of KS3 teaching resources.[vi] What makes the film stand out from its predecessors is its treatment of archive footage, which it presents in digitally applied colour and – in some screenings – 3D. Whilst it is not the first film to digitally colourise footage from World War One, it is the first to claim the superiority of the colourised images over their originals, and, crucially, for that claim to be met with mainstream critical consensus. Whereas Philip Nugus and Jonathan Martin's *World War One in Colour* (2003) was largely derided for being a historically uninteresting one-trick pony, Jackson's handling of the archive is being signalled as the beginning of a new practice in non-fiction film-making (as evidenced by a new documentary project delving into the extensive Beatles' archive).[vii] Crucially, the digitisation and colourisation processes are not positioned as new modes of representation, but rather strategies of restoration that enable a more venerable remembrance. For Jackson, restoration is an ethical project "important if we want people […] to think of these men as human beings… Restoration is a humanising process."[viii] The critical reception of the film ratified this: Jackson's film was celebrated not so much for re-iterating the contemporary relevance of archive footage but of making the archive footage feel contemporary.[ix]

Not everyone would agree with this opinion of colourisation. Indeed, many perceive the ethical dimensions of colourisation in opposite terms from Jackson. The FIAF Code of Ethics itself states that:

When restoring material, archives will endeavour only to complete what is incomplete and to remove the accretions of time, wear, and misinformation. They will not seek to change or distort the nature of the original material or the intensions of its creators.[x]

Luke McKernan, in anticipation of the Jackson's film, argued "colourising … threatens to make the WW1 film archive we have inherited meaningless, because we can no longer look at it sympathetically."[xi] Lawrence Napper, upon seeing the film, bemoaned that "so sacred is the cow of the Great War in its centenary moment that nobody seems to have noticed how horribly distorted and ludicrous Jackson's tarted-up images look."[xii] Elsewhere, Pamela Hutchinson argued that Jackson's treatment showed a "contempt for archive footage."[xiii]

Like it or loathe it, colourisation is never invisible. Either it is ludicrous, or it brings the images to life. But how does the consistent visibility of the digital manipulation of archive footage effect the film's status as a "site of national memory and mourning"? It is the first and principle task of this essay to outline colourisation as an object of aesthetic analysis. Understanding what exactly colourisation does will provide insight into how it might be operating on its spectators. In turn, this will give some impression of the effects of digital colourisation upon our collective conception of the past.

Outlining the aesthetics of colourisation and its impact on perception of the archive is not solely relevant to Jackson's film, nor the World War One archives in general. Colourisation is an increasingly standard practice in non-fiction film-making. Principally, as with Jackson's film or the Smithsonian Channel's *America in Colour* series (2017-ongoing), colourisation stands as the chief feature of the text. Elsewhere, however, colourisation has been used without much acknowledgement in a variety of recent documentaries including Ron Howards' *The Beatles: Eight Days a Week – The Touring Years* (2017) and Raoul Peck's *I Am Not Your Negro* (2017). Colourisation's increasing prevalence is an aesthetic expression of a much broader shift, one with ramifications of epistemological proportions. My analysis of colourisation, then, feeds into the broader stakes of the digital architectonics of memory. I will return to these issues later, in my discussion of Vilém Flusser and Wolfgang Ernst. Gesturing to them now, I aim to sharpen my focus on the problematic of representation and remembrance. The mythopoeic conception of World War One has been influenced by a century's worth of screen media: now the digitization of that media entails a reconstitution not just of how the events of the war are represented but how collective memory emerges as a function of those representations. In what follows I aim to posit Jackson's documentary as a crystallization of our techno-cultural context and its ingestion of history and the film archive. Whilst I'll primarily be talking about how digital colour on archive footage strikes the eye and operates on how we engage with archive material, an always-proximate question will be how digital remediation strikes the viewing subject and intercedes in our relationship with capital-H History.

Turning now to an account of the peculiar aesthetics of colourisation. The aesthetic effects of the process have received very little critical attention, and what work has been done on them has been pre-emptively charged by one side or the other of the argument whether or not it is appropriate. That said, arguments against colourisation are also the place where one finds the best accounts of their appearance. Simply put, purists go furthest in explaining the technical challenges of colourisation, suggesting why the addition of colour is anything but a neutral process. Whilst not a purist myself, my argument will inevitably stray into similar territory. At the outset I'd stress that I aim to describe features of colourisation that appear relatively consistently and can be assumed to be apparent to a substantial portion of the audience. I will gesture towards technical accounts of these effects both to better explain their appearance and also to begin sketching out the underlying operativity of digitisation. The aesthetic features I'll be examining can be loosely listed as follows: the redness of red, the pinkness of (largely Caucasian) skin and the monotone of deep backgrounds. Each is particular to colourisation; the specific result of the difficulty of overlaying digital colour information on a grey-scale image derived from 100 year old film footage. As such, each is also an articulation of the priorities of our current techno-cultural context. On the basis that colourisation is geared towards a greater degree of photorealism or naturalism than the monochromatic image provides, these priorities are principally aesthetic. However, in each of the sections that follow, I'll endeavour to describe what these aesthetic features disclose about the colourisation process, its modes of signification and symbolisation, as well as its effect on the significatory modes of photochemical media. From this standpoint, I'll decode what impact this might have on the collective perception of World War One.

Luke McKernan's impassioned assault on colourisation is grounded in the fact that film stocks of the early twentieth century were orthochromatic rather than panchromatic, and do not represent an accurate capturing of real colour in the first place.[xiv] Orthochromatic stocks, in general, registered reds as deep blacks and blues as lighter greys (a chemical quirk that Méliès famously accounted for by painting his sets blue in order brighten up the final image). What this means for the colourisation process is that the orthochromatic record of the colours will be translated into a misleading grey-scale and when colour information is interpolated into the grey-scale several shading issues will present themselves: what could be perceived as something receding into darkness was, in front of the camera, a bright red object.

Mistakes such as this are for the most part prevented by editorial oversight, but nevertheless this dynamic with regards to reds effects the image in two ways. Firstly, most specifically, the misregistration of red in the orthochromatic record means that red areas of the frame – those areas of uniforms, munitions, or blood, for example, are overcompensated for given that the colour information must be overlaid on a dark grey. Secondly, more abstractly, given that red objects present such problems for colourisation, their generalised absence means that the presence of red can potentially strike the viewer in an overly significant key. Indeed, the infrequency of colourisation's handling of reds means that when reds do occur they appear anomalous. Red is already a highly symbolic colour, and this dynamic can freight the red with excessive symbolic meaning. It snags the eye and tempts a meaning that over-rides the neutrality of the documentary presentation. Jacksons' film features red in its most vivid registers: as blood and as poppies. Looking at these two details and the way in which they are presented helps us glimpse the way in which colourisation both attempts to shore up its claim on authenticity even as it slips into a rhetorical register that exceeds the parameters of neutrality and veridicality.

Firstly, the redness of blood. Under the conditions of colourisation the documentation of injury must overcome the technical difficulties of blood red and its misregistration on orthochromatic film stock. A creative intervention is inevitable as is the potential for the blood to appear stylized. Jackson's display of injury and death is in line with his ethics of restoration: it is an attempt to express the human, physical cost of combat. Accordingly, the film is peppered with frequent, often visceral, images featuring dead and wounded soldiers. One image of a gangrenous foot stands out as being positively gory. Another sequence, shows the walking wounded being treated in a field hospital. Here, the reds of bloodied gauzes and open wounds pull the eye in a way that verges on the over-accentuation of the presence of blood. This over-accentuation bifurcates the meaning of red in the image: it denotes blood but

simultaneously the livid reds connote the process of colourisation itself and its re-signification of the contents of the black and white image. The way in which red draws the eye and accentuates the injury detail serves as a reminder of its interpolation into the monochrome image; in turn this generates an awareness of the manipulation taking place on a semiotic level. No matter the photorealistic achievements of the colourised image, any signal of the process itself potentially hampers the perception of the image as an authentic document of injury. For this reason, blood in Jackson's film always has an edge of the lurid showman about it.

The red of the poppies in the film has a similar effect on the way in which the image is interpreted. In a variety of flat green shots, dots of red stand out in a manner that organises the way in which we perceive the images. Appearing in the foreground of wider landscapes, red in and amongst the green of the grass helps segment the image and contribute to the sense of perspective. Popping up at the side of the road, bright dots of cheery red offset the uniforms of marching men. Significantly, there is never any question as to what flowers this red is supposed to represent. The connotation of this use of red is overwhelmingly symbolic, so much so that it imposes upon the basic veridicality of the colourised image. The appearance of red dots resonates symbolically before it persuades photographically. Poppies are ubiquitous in Jackson's film and not, one suspects, because they were ubiquitous on the ground in 1916. Here the rituals of remembrance reveal themselves to supersede photographic realism. The symbolic lineage that runs from John McCrae's "In Flanders Field," via the British Legion to every lapel on television in early November consistently pushes its way into Jackson's frames. Moreover, the presence of the poppies is often open to interrogation. Whilst nit-picking about whether or not there were actually poppies in every frame that is dotted with red is not necessarily helpful, their repeated presence contributes to a growing awareness of the retroactive processes of colourisation, that has the potential to re-signify the most basic landscape. Each repeated inflection of a green landscape by a random scatter of symbolically over-loaded red opens the question of whether or not those flowers were really there. Thus integrated into our basic perception of reds in the colourised image is an intuition that the red is motivated less by the presence of actually existing flowers, and more by the power of the colour itself.

The colourisation of skin-tone, like the presence of reds, can prove a distracting feature in the frame. However, where the reds compromised the veridicality of the colourised image by creating a tension between the overtly symbolic use of red and its actual presence in the profilmic scene, colourisation's presentation of largely Caucasian skin-tone must deal directly with issues of naturalism and the correspondence between digital colour space and natural colour. If, as Jackson says, the task of restoration is a humanising one, returning humanity to the figures trapped in a black and white "Charlie Chaplin" world,[xv] it is worth taking a closer look at those humans and interrogating the degree to which the application of digital colour is successful in making the faces appear more human. Again, the process is inhibited by the nuances of colour registration in monochromatic stock and again, this problem of translation and registration accounts for the characteristic aesthetic of colourised skin tones.

On first glance, colourised faces appear strange, they have a monotonous wash and can appear either overly luminous, almost acidic, or chalky and sallow. There are various ways to explain this issue, but in essence the reason for this chromatic monotony is that colourisation deploys too few colours in its rendering of flesh tone. Painters have been including surprising hues in their representation of skin for centuries, in deference to the nuances of shade, tone and reflection. In more recent years, researchers into digital effects, most notably Barbara Fleuckiger,[xvi] have outlined the challenges of digitally modelling and photorealistically rendering convincing skin. The solutions that have been pioneered in the VFX industry – most notably the rendering protocols loosely described as Subsurface Scattering (SSS) – rely on multi-layered models with an abundance of sub-cutaneous architecture and enormous amounts of computing power.

By contrast, colourisation is only dealing with a grey-scale image and there are no sub-visual determinants to inflect the way light bounces off faces. Likewise, colourisation is not a rendering process. The colours are determined not according to the behaviour of light, but according to a set of assumptions established and articulated externally to the processes of visual media. This is most markedly the case in the colours of uniforms, which cannot be captured spontaneously or automatically by black and white film. To compensate, the colours are imported from various other realms of knowledge: military history and regimental portraiture being foremost. In the example of uniforms the use of colour isn't particularly intrusive given that the average viewer does not have direct experience of World War One livery. The same can't be said of the representation of skin, which is so vivid and particular as to make manifest the process by which colour values are assigned in colourisation; each image of a pink faced Tommy attesting to the colour arriving from beyond the

significatory processes of photography. This is doubly consequential. Firstly, the consistently problematic representation of skin tone in the colourised images troubles our intuitive perception of the photographic image as a transparent picture of reality and goes some way towards guaranteeing the visibility of colourisation within the frame. Secondly, this persistent visibility transforms the way in which the image is understood. That is to say, once the evidentiary status of the image has been undermined, what becomes visible is what Vilém Flusser describes as "the entire complex of apparatus and their criteria… that lie between a photograph and its meaning".[xvii]

Jackson's film dedicates a significant amount of attention to the personal hygiene of the troops. It is reported that on the front-line the men are expected to shave. Likewise, on returning from a four-day spell at the front, the men are expected to be spick and span the next day. Accordingly, the film features several group portraits of pink-faced Tommies smiling at the camera. However, even justified by the images of vigorous scrubbing there is a monotony and unnaturalness in the pinkness of the faces. This non-correspondence between real flesh tones and those of colourisation discloses the fact that the colour information is not drawn from the scene photographically, but instead selected from a palette, wherein Caucasian skin tone can be expressed as an RGB value. These are the criteria – the description of ethnicity in mathematical parameters, R225, G224, B189 according to Colour-Hex.com[xviii] – by which, Flusser argues, the meaning of the image is set in place. What they disclose through being visible in the frame is the basic incommensurability of photographic media and digital colour space. This splits the ontology of the image: the spatial information is derived from the play of light in front of the lens, the colour values quite legibly have no relation to the profilmic scene.

Pink faces are not the only problem with colourisation's treatment of skin tone. At the other end of the spectrum, there is a notable group portrait within the film (taken from *The Battle of the Somme*) where the men's faces appear grey instead of pink. This greyness is contextually motivated and appropriate to the scene, the men are in a sunken road in the middle of no-man's land, anxiously waiting to go into battle (famously, the caption from the original film specified that they went into action 30 minutes after the film was shot). Nevertheless, despite its appropriateness to the moment being depicted, the grey-ish colour of the skin still suffers from a strained correspondence to actual flesh-tones. What is more, the saturated greens of the foliage in the background off set the washed out appearance of the men's faces and alert our eyes to a contradiction internal to the chromatics in the image. Whether the faces are grey or pink (or another colour entirely), the problematic correspondence between actual skin tones and those in colourised images

routinely foregrounds the process of colourisation. As with the overly symbolic accents of red in the representation of blood or poppies, this foregrounding of the process interferes with our perception of the 'authenticity' of the image.

It is not just that the monochrome image has undergone a process of re-signification. Prolonged exposure to colourised representation of skin tone amounts to an encounter with the determinants of digital colour space. The monotony of the skin tones is an artefact of the parameters that express Caucasian skin tone in digital colour. What is being brought to the fore in this particular aesthetic of colourisation is a set of representative tendencies that are potentially in conflict with the politics of remembrance. There is a paradox at work. In humanising the individuals caught on film, Jackson's process is quite legibly homogenising them. What is at stake here is not the success or failure of Jackson's film but instead the effect of a representative medium on the processes of "national memory and mourning." I'll return to this problematic in more detail towards the end of this essay, but signal here that the aesthetics of colourised skin tone do not enable a greater realism in the image, but instead seem to conform skin tones to the available palette. As such, in the tension between representation and remembrance, digital colour's drive to more realistically represent the events of World War One instead actively distort them according to a set of descriptive standards, fulfilling the dynamic that Sean Cubitt identifies of "conforming perception to the technical standards," and which he describes as the "normative core" of digital media.[xix]

Adding colour to a black and white image has an effect not just on the semiotic conditions of the image and its significatory processes, but also on its expression of space. As Christine Brinkmann points out in her essay "The Tensions of Colour in Colourized Films," which focuses on hand painted early film but contains many points that are relevant to the digital iteration of colourisation,

colour can alter the impression of space, as warm colours seem to lie close up and cooler ones appear to be more distant… It can override the three-dimensional modelling of shadows on objects as well as the illusion of depth resulting from central perspective and other indicators in the image.[xx]

This disruption of photographic space has a two-fold effect on the viewing experience of colourised films. The first occurs image by image, with warm colours effecting the depth of the image and making distant perspectives appear shallow. The second effect results from the concatenation of these effects, as the intensity of the impact of colour upon photographic space oscillates from shot to shot. Across the duration of a given sequence, the viewer negotiates not just the effects of montage – with its construction of spatial continuity – but the varying effects of colour on spatial perception as well.

To deal with the first of these interconnected effects: there are several instances throughout Jackson's film in which distant backgrounds more closely resemble matte paintings than receding space recorded photographically. This is particularly acute when the middle and foreground of the image are clearly demarcated, either through the movement of figures across the screen, or by a clear line receding in perspective, such as a road or a trench. In these instances, it is often the case that deep spaces aren't fully integrated into the composition and the application of colour to the deep background can make the image appear planar, especially when that colour is warm and, as Brinkmann describes, pushes itself forward in the composition. In one example, wounded soldiers returning from the front trudge past the camera, having climbed what appears to be a relatively steep hill. The middle ground of the image is taken up by the road and the detritus on the verge, scrubby trees dominating the right hand side of the image. On the left, however, the landscape opens out. There is no movement to help discern the perspective or distances at play, instead the area of the frame appears in a pale and static green. It does not fully integrate with the perspectival information laid out in other portions of the frame; as a result the

composition appears unbalanced. The single plane of green in the deep background looms over the middle-ground of the frame instead of receding behind it. A similar effect occurs in colourisation's integration into aerial shots, where the colour appears unnatural and schematic rather than isomorphic or phenomenally persuasive.

What can be drawn from this treatment of perspectivally flattened space and deep backgrounds is that successful colourisation depends upon images that offer a clear distinction between figure and ground. This should come as no surprise, given the process by which colourisation is achieved and its similarity with the process by which 2D images are rendered in 3D. In both instances, objects within the grey scale image are isolated and differentiated from the background, usually via an edge detection algorithm. In the 3D rendering, this differentiation is the first step in stereo conversion and is used to create the parallax effect. In colourisation the object is then assigned a colour and tracked as it moves. It follows that in images where the differences between figure and ground are unclear not only will 3D rendering be unpersuasive, but the application of colour will obfuscate what little depth information is contained within grey scale.

This varying effectiveness of colourisation's integration within spatial compositions is felt not just in individual frames but also across the duration of a colourised sequence. For example, when spatially distinct compositions are edited together, the eye constantly re-adjusts to compensate for the effect of the colour on the expression of space in the frame. The juxtaposition of a group portrait, for example, with aerial views of the trenches, requires a re-adjustment between the unobtrusive colours applied in the former instance, and the more abstract use of colour in the latter. Jackson's film uses a number of strategies to make the flow of images as smooth as possible, nevertheless, there are enough awkward juxtapositions to disclose the fact that colourisation is not equally effective across every type of image. In short, because colourisation is most effectively applied to images where there is a strong differentiation between figure and ground, and where objects can be easily mapped and tracked, a film that relies on colourisation for its aesthetic impact will show a formal tendency precisely towards those images where colourisation is most effective. In Jackson's case, that tendency is towards the group portrait. Whilst this is not entirely the result of the use of colourisation, the use of colourisation certainly enables and justifies this formal structuring of the film, thus impacting its representational strategy at a structural level.

As with colourisation's treatment of flesh tones, which exposes the criteria of digital colour space, this bias towards compositions with a strong differentiation between figure and ground affords a glimpse at

another set of criteria informing digital colourisation and its processes of construing meaning from the monochrome archive. The implementation of these criteria, through an emphasis on particular compositions, has a homogenising effect on the film as a whole and exerts a normative force on which images and which archives are eligible for colourisation. This is not the venue to denounce Jackson's film for its editorialisation – conscious and unconscious – of the archives it employs, merely an opportunity to show how Jackson's film exemplifies an automatic tendency within the processes of colourisation. This tendency places restrictions on what can be represented within the strictures of colourisation and potentially excludes entire subsets of images from representability. Those images that cannot be represented in colourised form cannot enter the canon of remembrance as it is being re-shaped by digital technologies and processes such as colourisation.

CONCLUSION

The three effects discussed above stand as examples of digital colourisation's failure to disappear within the image and the tangibility of its remediation, despite its claims to, and plaudits for, greater photorealism. In conclusion I'd like to ask, what does this emergent aesthetic reveal about the epistemological framing of the past in the current techno-cultural context?

In order to frame this question appropriately, I'd like to first look at the relationship between media forms and historical consciousness as outlined in the work of Vilém Flusser. This media-epistemology can then serve as a springboard from which to examine the impact of digitization on the dynamics of national memory and mourning set off by films such as *They Shall Not Grow Old*. Finally, from this vantage, I'll be able to speculate about what colourisation's aesthetic characteristics imply about historical consciousness in the digital era.

For Vilém Flusser, historical consciousness is tied to the media form that enables it. He perceives history as emerging with the alphabet ("with the invention of writing, history begins"[xxi]) and beginning to disappear in the middle of the 19th century with the invention of photography. Writing in the mid to late 20th century, he discerned that "history, and the mode of thought that produces history, is over."[xxii] We are in an era of "post-history" Flusser argues, wherein photographic media, rather than writing, have become the basis for all consensus about reality and "all of history, politics, art, science and technique are thus motivated by the apparatus, in order to be transcoded into their opposite: a televised program."[xxiii] Crucial to Flusser's argument is that technical images such as photography, in appearing to be neutral windows onto reality, in fact disguise or obscure the workings of the photographic apparatus that

are operative upon the observer. That is to say, in viewing an image as if it were a neutral depiction of reality, the observer complies with photography's ontological displacement of reality. Flusser died in 1991, and therefore his work cannot be said to fully engage with the digital technical revolution, specifically its ability to construct images that are perceptually realistic without being ontologically plausible. Nevertheless, the premise that media generate modes of thought that in turn construct epistemological relations to history (or post-history) is one that can be productively applied to digital media (and several philosophers such as Jonathan Beller are engaged in the work of applying Flusser's thought to contemporary media-epistemological constellations).[xxiv] For my purposes, Flusser's thinking is useful when looking at colourisation, where the aesthetic features of the process consistently betray the neutrality of the image's representation of reality. The question arises, when the aesthetics of colourisation interfere with the supposed 'realism' of archive footage what effect does that have on our perception of the historical events the archive testifies to? Or, does colourisation produce a historical consciousness distinct from that generated by analogue media?

Wolfgang Ernst's work in *Digital Memory and the Archive*, complements Flusser's imbrication of media and consciousness, and goes some way towards bridging the gap between Flusser's work and the contemporary moment. Discussing processes of digitization, Ernst describes the process of "digital retroaction."

By digitizing analogue material in the archives and bringing it into a technomathematicized present, [digital retroaction] translat[es] an analogous world into a digital matrix. The microtemporality in the operativity of dataprocessing (synchronization) replaces the traditional macro time of the historical archive (governed by the semantics of historical discourse) – a literal quantization. Our relation not only to the past but to the present becomes truly archival.[xxv]

Again the implication is that the media-structural conditions of the digital archive re-construct our experience of reality, the past and the present. With regards to Ernst, the questions that arise are as follows: what characterises an experience of the "technomathematized present"? Is there a phenomenological dimension to "digital retroaction" and its "microtemporalities"? Does colourisation, where the aesthetics of the process testify to the residual presence of historical discourses and non-photographic semantics, provide just such an expression of these emergent modes of experience?

I will now return to *They Shall Not Grow Old* (2018) and its negotiation of the politics of representation and remembrance. Ultimately, the film was commissioned as part of a festival of remembrance, and despite

mobilising a set of highly contested technologies in order to re-present the experience of the war, it fits comfortably within the criteria described by Emma Hanna. It is a "site of national memory and mourning," fitting neatly into the evolving consensus concerned with the events and legacy of World War One and the contemporary duty to remember. Even so, its chief aesthetic characteristic is a self-disclosing process of digital manipulation: the intermittently successful process of colourisation. Whatever the justifications for the process, my analysis above has aimed to demonstrate how the overt manipulations of colourisation are never absent from the image. Nevertheless digital manipulation does not alienate the audience from the events of World War One. Even if one doesn't agree that colourisation 'brings the images to life' one can't claim that the evidentiary status of the archive footage is erased or totally obscured. Instead, the manipulation of the archive as a strategy of restoration is present in every frame. Going further, digital manipulation is actively celebrated in the use of colourisation and ascribed an epistemological function – making the images more real – that is not reflected in its unusual aesthetics.

The conclusion that I'd like to draw from this is that colourisation updates the archive, but not to the technical standards of photorealism. Rather, colourisation updates the archive to the epistemological context discerned via Flusser and Ernst, wherein a media-contingent historical consciousness is undergoing a process of digital retroaction. As a crystallization of this epistemological context the unique aesthetics of *They Shall Not Grow Old* allows us to highlight some of the dynamics of this formation. *They Shall Not Grow Old*'s legible re-configuration of black and white film demonstrates how an awareness of the micromanipulations of digital visual media, and a tolerance of open manipulation, is embedded in contemporary acts of spectatorship, and need not interfere with the evidentiary status of a given image. As evidenced by the film's reception, 'the colourised archive,' provokes little anxiety with regards to the truth content of the archive, despite the normative thrust and re-significatory impact of colourisation. The epistemic formation modelled by the film is one in which photorealism and digital manipulations have a symbiotic relationship in almost every image we see.

In this context, I argue that colourisation represents the most recent – but potentially the most decisive – reconfiguration of the mythopoeic presentation of the events of World War One since the enshrinement of Remembrance in the years following the war. Colourisation embodies an entirely digital mode of representation and in doing so, models and necessitates a mode of remembrance that accommodates an epistemology formed around digital media's propensity to manipulation. *They Shall Not Grow Old* endeavours to present the lived experience of the trenches in a

colourful, phenomenologically accessible present tense: a re-coding of the past in digital colour that attests, not to the decaying state of the film archive, but to the contemporary epistemology of digital visual media that acknowledges the construction and operativity of image technologies even as it depends on it them for access to the past. It is not that the mythopoesis of World War One is re-written by colourisation; rather colourisation demonstrates the way in which contemporary mythopoeic framings of past events are underwritten by digital media, whose processes and parameters become visible thanks to the aesthetics of colourisation.

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Notes on Contributor

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