“Youtubers Are Upscaling The Past To 4K. Historians Want Them To Stop” Article Review

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Artificial intelligence and digital editing have changed the way contemporary audiences encounter historical film. YouTube creators now stabilize damaged footage, remove scratches, increase resolution, generate additional frames, add colour, and reconstruct details that early cameras never captured with modern clarity. Denis Shiryaev became especially visible for presenting early films in 4K and at higher frame rates, creating an experience that can feel surprisingly immediate to viewers. The article “YouTubers Are Upscaling the Past to 4K. Historians Want Them to Stop,” published by *Wired UK*, presents a genuine conflict between accessibility and authenticity. Enhanced footage can make distant history emotionally compelling and introduce archival material to audiences who would never search for the original. At the same time, colourization, frame interpolation, and AI upscaling do not simply reveal information hidden in the source; they also predict, estimate, and sometimes invent visual data. The most defensible position is therefore not to prohibit enhancement but to treat it as an interpretive adaptation. Original footage should remain available, changes should be disclosed clearly, and viewers should be able to distinguish recorded historical evidence from modern reconstruction (Nast; Read and Meyer).

Why Enhanced Historical Footage Attracts Modern Audiences

The strongest argument in favor of historical upscaling is its ability to reduce psychological distance. Early film can appear unstable, low-contrast, damaged, monochrome, or unnaturally fast when projected at unsuitable modern speeds. These technical characteristics may cause contemporary viewers to experience the people on screen as belonging to a remote and almost unreal world. When footage is stabilized, cleaned, sharpened, slowed appropriately, and sometimes colourized, ordinary human details become easier to perceive. Faces, clothing, street behavior, gestures, vehicles, and architecture can become more legible, encouraging viewers to notice that people a century ago moved through recognizable social environments rather than existing only as figures in textbooks. This emotional accessibility can have real educational value because curiosity often begins with identification. A viewer drawn into a transformed video may then seek information about the city,

event, community, or archival source represented in the footage. Used this way, enhancement can function as an entry point into historical inquiry rather than as a substitute for it (Nast).

Digital platforms also expand access far beyond specialist archives. Historical collections are often organized for researchers, require knowledge of catalog systems, or receive limited public attention. A widely shared enhanced video can introduce archival footage to millions of people who otherwise would never encounter it. This reach can be especially valuable when creators identify the source institution and provide links to the original material. The popularity of such videos also demonstrates public interest in archival preservation and may encourage viewers to explore primary sources. The problem arises only when the adapted version becomes detached from provenance or is presented as though nothing significant has been altered. Accessibility and authenticity therefore do not have to be opposing goals. Enhancement can attract attention while the archive preserves evidentiary integrity, provided the relationship between the two versions remains visible.

What AI Upscaling, Colourization, and Frame Interpolation Actually Do

Different enhancement processes introduce different levels of interpretation. AI colourization uses models trained on large image collections to estimate likely colours from grayscale patterns. Vegetation may be assigned green tones, skies blue, and skin colors from statistical ranges learned during training. The result can look convincing, but the model is estimating rather than recovering colour information secretly stored in the film. Historical research can improve accuracy when uniforms, vehicles, buildings, flags, or surviving objects are documented, yet many details remain uncertain. AI upscaling works similarly. Rather than merely enlarging existing pixels, machine-learning systems predict how a higher-resolution version might appear based on patterns encountered during training. Faces, textures, buttons, signs, and edges may look more detailed after processing, but some of that apparent detail was generated by the software rather than recorded by the camera. The more realistic the result becomes, the easier it is for an inexperienced viewer to mistake prediction for evidence (Read and Meyer).

Frame interpolation changes the temporal structure of footage by creating intermediate images between frames that were actually photographed. This can make motion appear smoother and more familiar to audiences accustomed to modern video. In some cases, historical footage seems unnaturally fast because it is projected at a speed different from the original recording rate; correcting playback speed through historical knowledge can therefore improve accuracy. Generating entirely new frames, however, goes further. The software predicts where bodies and objects would probably have been between recorded moments. Fast movement, smoke, occlusion, water, or damage can produce visual distortions, and the synthesized frame remains an interpretation even when it looks plausible. Stabilization, scratch removal, and exposure correction may involve less invention, but they still require judgment about what counts as damage and what belongs to the

historical object. These differences make documentation essential because “restored,” “enhanced,” and “reconstructed” should not be treated as identical terms (Read and Meyer).

Why Historians and Archivists Object

Historians are not objecting simply because enhanced footage looks modern. Their concern is that visual realism carries authority. A smooth, colourized, high-resolution image can appear more truthful than the damaged original even though it contains more present-day intervention. Every historical photograph or film is already mediated by camera position, lens, exposure, framing, selection, preservation, and captioning. AI enhancement adds another interpretive layer while potentially making that mediation less visible. Colour provides a clear example. A system may select a statistically common brown, gray, red, or blue for a garment without any evidence that the specific historical object had that colour. Generated facial detail may reflect training patterns rather than the individual who was photographed. Such interventions become especially problematic if the enhanced clip is later downloaded, cropped, reposted, or incorporated into documentaries without its original disclaimer. Digital images travel quickly, and context is often the first thing lost when media circulates online (Nast; Read and Meyer).

Historians are also concerned that enhancement can erase the history of media itself. Early cameras, film stocks, projection speeds, exposure limitations, and visual artifacts are part of the historical record. Making every source resemble contemporary digital video may unintentionally teach viewers that older media was merely an inferior version of current technology. In reality, early audiences encountered images through different technical systems and developed different expectations about movement and visual quality. Preserving those characteristics can therefore be important for scholars studying cinema, technology, perception, and cultural history. Historical footage is valuable not only because of the people and places depicted but also because of the material form in which those scenes were recorded.

Restoration, Adaptation, and Responsible Labeling

A useful distinction can be made between restoration and enhancement, even though the boundary is not perfectly sharp. Restoration generally attempts to stabilize and clarify surviving evidence by repairing damage, cleaning dirt, correcting known projection issues, balancing exposure, or preserving deteriorating material. Enhancement may add information that cannot be recovered directly from the source, including estimated colours, synthesized frames, and predicted high-resolution detail. Restoration can still involve interpretation—for example, removing a scratch may require reconstructing the image underneath it—but its guiding purpose is usually fidelity to surviving evidence. Enhancement may legitimately prioritize accessibility, emotional effect, or creative interpretation instead. Problems arise when an adaptation makes the same evidentiary claim as an archival master. An AI-enhanced film can be valuable as long as viewers know they are watching a

modern reconstruction rather than an untouched historical record (Read and Meyer).

Responsible practice therefore depends heavily on labeling and provenance. An enhanced video should identify the major interventions prominently, ideally in the opening frames rather than only in a description that may be separated from the video later. Colourization, interpolation, upscaling, stabilization, generated sound, and other alterations should be named explicitly. The creator should cite the source archive and link to the original when licensing permits. If particular colours or details are based on historical evidence—such as surviving uniforms, written descriptions, or contemporary colour photographs—that evidence can be explained. Where no evidence exists, terms such as "estimated," "interpreted," or "AI-generated" are more honest than phrases suggesting that software has recovered the "true" appearance of the scene. This approach allows creative work without confusing probability with historical certainty.

Educational and Ethical Uses of Enhanced Footage

One of the best uses of enhanced historical media is comparative teaching. Students can view the original and adapted versions side by side, identify what changed, and ask which features represent recorded evidence and which were generated by later technology. This exercise develops historical literacy because it demonstrates that sources do not speak for themselves; they must be examined for provenance, context, technology, and alteration. It also develops digital literacy at a time when synthetic images, AI-generated voices, and reconstructed video are becoming increasingly common. Learning to ask who made an image, what was changed, what evidence supports the change, and where the original can be found is a valuable civic skill. Historical upscaling is particularly useful for this purpose because the modifications are visually engaging and can be discussed without assuming that the technology itself is either entirely deceptive or entirely beneficial (Nast; Prelinger).

Ethical responsibility becomes especially important when footage depicts victims of war, genocide, colonial violence, racial oppression, poverty, or personal trauma. Beautifying a scene, generating expressions, changing skin tones, or adding sentimental music can alter the emotional meaning of the record and may disrespect people whose suffering is being represented. Descendant communities, archives, and subject-matter experts should be consulted when material is culturally sensitive or involves identifiable victims. Sound is another powerful intervention. Silent footage accompanied by dramatic or nostalgic music can lead audiences toward emotional interpretations that were not contained in the source. Public-domain status does not eliminate these ethical concerns. Technological permission and legal permission are not the same as responsible historical representation.

Preserving the Original While Allowing Creative

Reconstruction

The most important safeguard is that the enhanced copy must never become the only accessible version. Archives should preserve high-quality scans of the source, including technical characteristics and damage where relevant, while maintaining metadata about provenance and preservation history. YouTube popularity cannot substitute for archival stewardship because channels disappear, files are recompressed, captions change, and descriptions become detached from reposted clips. Creators who benefit from archival material should acknowledge the institutions and individuals who preserved it. At the same time, there is little reason to prohibit clearly labeled adaptations when the original remains protected. Multiple versions can serve different purposes: the archival source as evidence, a conservative restoration for study, and an enhanced interpretation for public engagement. The key is not to force every version into the same category of truth.

Conclusion

The controversy surrounding AI-upscaled historical footage is best understood as a question of representation rather than a simple conflict between historians and technology. Enhancement can make old film vivid, accessible, emotionally immediate, and educationally useful. It can introduce archival collections to large audiences and encourage people to investigate periods they might otherwise ignore. Historians are nevertheless justified in warning that colourization, frame interpolation, and AI upscaling add information that was not captured by the original camera. The resulting image may look more realistic while being less transparent about its evidentiary limits. Responsible enhancement should therefore preserve and link to the original, label every major intervention, distinguish restoration from reconstruction, and acknowledge uncertainty where historical evidence is absent. Used under these conditions, digital enhancement can connect present audiences with the past without pretending that a modern adaptation is identical to the historical record itself (Nast; Read and Meyer; Prelinger).

Works Cited

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