**Photographic Registers are Latent Images**

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Anyone familiar with using a film camera will know how easy it is to talk of having taken a roll of photographs and the anticipation involved in waiting to have them developed. In a recent article, Dawn Wilson (2021) has argued that the idea that photographic images exist before development is irredeemably confused. Wilson’s aim is to show that single-stage accounts of photography are untenable. According to the single-stage account:

1. A photograph is taken: for a time interval, a photo-sensitive surface is exposed to light from the scene. The photograph exists as soon as it has been taken and it is typically stored as a latent image on undeveloped film, or as a digital file.
2. The photograph is developed, printed, or screened. (Wilson 2021, 162)

Wilson argues against the single-stage account by arguing against latent photographic images. Concomitantly, she argues that the only viable account of photography is multi-stage:

1. A photographic event occurs: for a time interval, there is causal registration of the light that forms the optical light image. When the photographic event ends, a photographic register exists. No photograph yet exists.
2. A static visual image is produced using the register from the photographic event. A photographic image now exists. (2021, 163)

The key point of difference is that the multi-stage account does not postulate the existence of a photographic image *of any kind* prior to the information registered from the photographic event being processed. As natural as it is to speak of “undeveloped photographs,” according to Wilson this is a contradiction.

In this Discussion Piece, I defend the single-stage account by arguing that Wilson’s rejection of latent photographic images is premised on an implausible view of what a latent photographic image is. Given a reasonable interpretation, the latent images described in the single-stage account just *are* the photographic registers described in the multi-stage account.

Wilson stages a two-pronged attack against latent photographic images. Most of the argumentative work is done in the second prong, so I will focus my discussion there. However, there are a couple of observations worth making about the first prong.

In the first prong (Section V), Wilson aims to drive a wedge between the latent images postulated by the single-stage account and those we recognize in other contexts. The point of contention is whether the “image” that, according to the single-stage account, exists prior to development can rightly be understood as the *same* image as the one that exists after development. Wilson points to cases of latent images where she thinks the “latent” and “patent” image are evidently the same. Children’s water-painting books have blank white pages until water is applied to them, when they reveal colorful images. Novelty coffee mugs reveal latent images when filled with hot liquid. In both cases, an image with determinate visible properties exists and is obscured under an opaque layer that, under the right conditions, becomes transparent, revealing the same image. Unlike these examples, putative latent photographic images do not possess any visible properties until they are developed. The problem, according to Wilson, is that so-called latent photographic images can manifest images possessing a variety of visible properties, depending on how they are developed. If one latent “image” can be used to produce many different images, it does not make sense, Wilson claims, to speak of *one* latent image (2021, 169).

The first observation to make here is that the criterion that Wilson appears to be proposing for the relationship between a latent and patent image is highly demanding: any manifestation of what is latent must be the same as any other. By this standard, many if not most usages of “latent” in common parlance and fields such as biology and psychology would appear to be confused. When, for instance, one refers to a latent psychological condition, one presumably does not mean to limit it to just one possible set of manifest features. The second observation is that it is not in fact evident that the supposedly bona fide cases of latent images that Wilson points to meet this demanding standard. Images in water-painting books and on heat-sensitive mugs will possess different visible properties depending on, in the first case, how much water is applied and where, and, in the second case, how much heat is applied and where. In both cases, the visible properties of the patent images change over time. Moreover, one can apply colored liquid to water-painting books to affect the colors of the images that emerge. Wilson cannot consistently discount such non-standard methods since she adverts to non-standard development techniques in photography to support her case that latent photographic images are improperly so called (2021, 168).

Wilson does not present the considerations advanced in the first prong as decisive grounds for rejecting latent photographic images, so let us turn to the second prong (Section VII). In the second prong, Wilson considers a possible counterargument in defense of latent photographic images and then aims to show why the counterargument fails. The possible counterargument that Wilson aims to reject is this. Instead of having a one-to-one relation with properties of their patent images, latent photographic images are determinate with respect to some properties and indeterminate with respect to others. In Wilson’s words, “the latent image is determinate with respect to the invariable properties—meaning any patent image produced from the latent image would have these properties—but indeterminate with respect to the variable properties.” (2021, 171)

Wilson thinks this counterargument fails because it cannot explain a basic feature of (at least some) photographs that any theory of photography must be able to explain, namely, the dependency relation between determinate visible features of a photographic image and those of the scene it depicts (2021, 171). The single-stage account requires that the dependency relation between visible properties of (at least some) photographic images and those of the scenes they depict is mediated by those properties of the latent image that are determinate. Therefore, this dependency relation “only obtains for the modest collection of determinate properties that are common to every different variation of the patent image.” This is a problem, Wilson claims, because “in many crucial respects,” i.e., in respect of properties where one would expect to find the dependency relation, “it seems the latent image is indeterminate, so carries no information from the scene to the final image.” (2021, 171)

The crux here is whether latent photographic images are indeterminate in respect of properties where one would expect to find a dependency relation between visible properties of a patent image and the photographed scene. The example she focusses on to support her case is of tonal contrast. Variations of tonal contrast applied during development can have significant effects on the appearance of patent images. Depending on how one controls tonal contrast in development, details in, say, a deeply shaded area of a scene may either be visible or not (2021, 171). Since two patent images from the same latent image can vary with respect to their tonal contrast, the latent image is indeterminate with respect to tonal contrast. So the single-stage account is forced into the untenable position that there is no dependency relation between the tonal contrast of the patent image and the scene.

The first thing to note here is that, to some extent, we *do not* expect to find a dependency relation between the tonal contrast of a patent image and the photographed scene. If I see a photograph on Instagram that has evidently had a filter applied, I have a good idea that to some extent the tonal contrast of the image is an effect of the processing. The problem that Wilson presents for the single-stage account is that to *no extent* does the tonal contrast of a photograph depend on the tonal contrast of the scene it depicts. And this does indeed seem like an undesirable result. However, the truth of the matter is not what Wilson claims.

*Contra* Wilson, it does not follow from the fact that different patent images developed from the same latent image can have different tonal contrast that the latent image is therefore “indeterminate with respect to tonal contrast.” (2021, 171) Determinacy of tonal contrast admits of degrees. By analogy, consider that a latent photographic image may encode an object as red but no specific shade of red. Depending on how the latent image is processed, the object may appear scarlet, crimson, or vermillion. Evidently, it does not follow that the latent image is indeterminate with respect to its color. Likewise, different patent images produced from the same latent image can vary in respect of their tonal contrast, but the latent image can still have a degree of determinacy with respect to tonal contrast.

To see how this works in practice, consider the following. If I take a picture of a scene on a bright sunny day, more areas of the image will either be solidly black or solidly white than if I take a picture of the same scene on a dull overcast day. The first picture has high contrast, the second picture has low contrast. No amount of manipulation in the darkroom or Photoshop will reveal detail in blacked-out or whited-out areas of the images: these areas are determinately absent of detail from the moment of exposure. To this extent, then, the latent photographic images are determinate with respect to tonal contrast. To the extent that the one image is comprised of more of these blank areas than the other, it is determinately higher contrast.

Thus, tonal contrast is, to an extent, properly a function of a latent image’s determinate properties. Moreover, Wilson has given us no reason not to suppose that the degree of determinacy of tonal contrast that latent images possess is just the same degree to which we ought to expect to find the dependency relation between tonal contrast of patent images and the scenes they depict.

What about the fact that, depending on how tonal contrast is varied during development, certain details of a photographed scene may either be visible or invisible? According to Wilson, the determinate properties of a latent image are just those that are common to any of its possible patent images. We have cases where, owing to the variability of tonal contrast applied during development, two patent images from the same latent image represent different visible properties of the photographed scene: one represents certain details of the scene that the other does not. According to the single-stage account, it follows that the latent image must be indeterminate with respect to the details that are missing in the one image. This is a problem for the single-stage account, for the dependency relation between the visible properties of the photographed scene and the representational features that are only visible in the one image has now implausibly vanished.

The problem can be amplified. Imagine a case where one patent image is printed low key, so that only highlights are visible, and another is printed high key, so that only lowlights are visible. None of the pictorial features that are visible in the one patent image are visible in the other, and vice versa. The absurd result is that the latent image must, according to the single-stage account, be indeterminate with respect to *all* recognizable features of the photographed scene. Here we have a *reductio* not against the counterargument that Wilson attempts to refute but the way she sets up the counterargument. For if a patent image’s pictorial features are not, qua pictorial features that are surely dependent on features of the photographed scene, attributable to the development process, then they surely must be attributable to determinate features of the latent image.

Wilson’s mistake is in thinking that a latent image’s determinate properties are equivalent to those properties shared by any of its possible patent images. A latent photographic image has the potential to manifest patent images possessing a wide variety of visible features, depending on the conditions of its development. Knowing what features of patent images (or to what extent those features) are determined by the latent image will depend on one’s knowledge of the medium it is in and the techniques used to develop it. As a rule, if a feature cannot be attributed to the development process, then it must be attributable to the latent image. Whether or not one is able to infer in any given case what determinate features a latent image possesses, the point remains: the fact that certain visible features can vary across patent images does not show that the latent image is indeterminate in respect of those features. Any plausible view of what a latent image is must be able to accommodate this.

Indeed, the multi-stage account must be able to tell some such story about how images are produced from photographic registers in such a way that maintains the dependency relation between visible features of photographs and the scenes they depict. Why insist that latent images are determinate only with respect to features common to any of their patent images? For no other reason that I can see than of saving the multi-stage account from collapsing onto the single-stage account.

The photographic registers described in the multi-stage account just *are* the latent images described in the single-stage account. Both possess determinate properties that do the job of securing the dependency relation between visible features of photographs and the scenes they depict to the extent that one should expect that relation to obtain in any given respect. Whether one talks about “photographic registers” or “latent photographic images” is only a matter of taste.

Where, if what I have argued here is convincing, does this leave the multi-stage account? Perhaps not much worse off. Latent photographic images must be developed, printed, or screened before they can be appreciated as photographs. The multi-stage account (see Phillips 2009; Wilson 2022) is valuable because it draws attention to the complexity of processes involved in producing images that we appreciate qua photographs; processes that skeptical attacks on photography as an art have either overlooked or been keen to dismiss (e.g., Scruton 1981). What the criticisms I have raised here do suggest is that we should shift the focus of the debate to questions such as what processing techniques can properly be thought of as internal to the medium of photography (see Atencia-Linares 2012) and what sets the identity conditions of patent images (see Mag Uidhir 2012). In any case, it is a relief to know that we can still talk about taking a roll of photographs without fear of talking nonsense.

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