SILENT WITNESS:

the Construction of Photographic Truth in Forensic Science
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FORENSIC SCIENCE AS A

discipline covers a broad range of practices related to collection, identification, preservation and interpretation of physical evidence. Simon Cole distinguishes forensic science from what he calls the 'conventional research sciences,' arguing that it differs from the latter in the epistemological principles it employs in several respects (p.39). Unlike the open-ended, temporarily unlimited conventional scientific inquiry, forensic science rarely leaves room for revision and follow up research; instead it aims at establishing the 'truth' within the period of the legal proceedings of a case (Cole, p. 39). The scope of inquiry in forensic science is also rather limited, since

it does not have the ambition of producing generalizable knowledge about the natural world; it is a 'science of the particular' that generates very specific knowledge claims, spatially and temporally bounded and pertaining to a particular case, just like the source data it deals with (Shapin cited in Cole, p.39). Since the data forensic experts deal with is inherently limited, the outcomes of forensic expertise can rarely be verified through the common scientific methods of knowledge validation like reproducibility; forensic claims can sometimes be checked through repeatability, but almost never reproduced. This methodological constraint puts additional pressure on the tedious process of data collec-

tion and preservation that has to be carried out in accordance with very strict regulations to secure the objectivity of forensic science. This paper will explore one of such practices – the application of forensic photography to the documentation of a crime scene and will examine the construction of the concept of photographic truth that serves to validate the data used for production of forensic claims and thus ensures the objectivity of forensic science. Using a semiotic approach to the study of an image, the article will discuss the double nature of a photograph that represents both an automatic reproduction of reality and a reflection of an author's subjective vision of it, and it will attempt to raise some questions regarding the legitimacy of photography as an objective method.

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IMAGE AND ARGUMENT

To understand how and why photography came to have such a prominent position in forensic science and became viewed by many as "medium of truth and unassailable accuracy" (Guilshan quoted in Porter, "A New Theoretical Framework Regarding the Application and Reliability of Photographic Evidence," p.42), it might be worthwhile looking at the history of imagery usage in the Western scientific tradition. The ideas of what an image stands for when used in an academic context have evolved over time. Analyzing the change in the relational nexus between the text and image in the medical academic tradition of the early modern period, Matthijs van Otegem identifies a shift from the scholastic tradition of usage of highly realistic images that served exclusively as illustrations for the text to the alternative mode of application emerging in the seventeenth century that involved a schematic image that "tells its own story" and in itself constitutes an argument to which a text serves as a supplementary explanation (van Otegem, p.610). Van Otegem conceptualizes this transition as a shift of cognitive paradigm "from cognition as perception to cognition as comprehension" (p.614). Photography that allows grasping parts of objective reality with their finest details, in a sense, reverses this shift: it presents to us not an argument or expression of an author's idea, but reality itself,

thus reifying modern scientists' long nurtured dream of objectivity. Produced through the mediation of a mechanical instrument – the camera – photography makes a certain claim on objectivity (Porter, p.22) and gives a promise of liberation from "authorial control of meaning" (W. Mitchell, p.28).

It is this potential for objective and accurate representation of reality that makes photography a precious tool for evidence collection and preservation in forensics. The systematic application of photography for the documentation of a crime scene and preservation of forensic evidence was crucial for the establishment of forensic science as a field (Baden cited in Porter, "A New Theoretical Framework Regarding the Application and Reliability of Photographic Evidence," p.39). The major concern of criminologists working at a crime scene is similar to that of scientists performing an experiment – to keep the data uncontaminated, which means to eliminate completely any possibility of the researcher's intentional (or unintentional) intervention (Daston & Galison, p.123). The image of a crime scene investigator popularized by numerous TV shows – always wearing gloves and protective clothing, seeking to minimize if not exterminate completely his physical (and also emotional) contact with the field, helps to establish the illusion of objectivity of 'uncompromised' forensic evidence presented in courts. This is precisely the ideal of objectivity photography came to embody – mechanical objectivity, based on production of data through an execution of a certain algorithm, leaving no room for the author's intervention and human subjectivity. Photography becomes not just the method of preserving evidence, but also of checking its reliability and the 'purity' of the crime scene.

The painful awareness that the source data forensic science works with has higher probability of being tempered with comes back every once in a while in the form of a public scandal provoked by the uncovered contradictions between the pieces of evidence presented in court, as it happened during the investigation of the Marikana miners' strike case in South Africa. On August 16, 2012, in course of a violent confrontation with the local police forces around thirty-four strikers have

been shot dead. The crime scene pictures presented in the court revealed a large amount of contradictory evidence, suggesting that the crime scene could have been manipulated.

Thus, Figures 1 and 2 (**Pulse** p.54) present the images of the same body taken by the law enforcement specialists at the crime scene several hours apart; the pictures document the appearance of an 'alien' object at the scene – a yellow-handled panga placed under the arm of a dead body, that is clearly missing at the first photograph that has been taken earlier (Tau).

This type of public debates reflects concerns about the reliability of the data obtained at the crime scene, while the accuracy and objectivity of photography itself as a mediator of the evidence, whether actual or forged, remains unquestionable. Daston and Galison point out that this type of public debates reflects that awareness of the photography's double nature (its ability to function both as a reflection of objective reality and as a subjective vision of a photographer) has been around and build conclusions (Porter, "A New Theoretical Framework Regarding the Application and

ever since the invention of photography, and poured into infinite debates on whether photography pertains to the field of art or to that of technology (p.133). However, the scientists in their endless quest for objective and judgment-free representation that can stand for reality itself never abandoned their dream of a perfect, 'pure' image (Daston & Galison, p.139).

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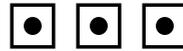
THE OBJECTIVITY EFFECT

Building on Jacobson's analysis of realism effect in art, Mitchell argues that it is due to the photographs' extraordinary contiguity with the objects they portray that they come to be seen not as pictures but "as formulae that metonymically evoke fragments of reality" (W. Mitchell, p.27). The goal of forensic photography is to deliver evidence to the court members who do not visit and investigate the crime scene themselves; therefore to them forensic photography is the substitute for reality: they use it as 'pure' data from which they can draw inferences

Reliability of Photographic Evidence," p.40). The validity and authoritative truthfulness of

forensic photographs is supposed to be secured by the systematization and unification of practices of visual images production, which are generated in strict conformity with the protocol. Crime scene investigators have an elaborated standardized system of visually documenting the scene that conditions how many shots and from what viewpoint and range these should be taken (Porter, "A New Theoretical Framework Regarding the Application and Reliability of Photographic Evidence," p.45). Figure 3 demonstrates how a series of shots taken from different range help to situate the position of fingerprints found at a crime scene and bind them together into a coherent visual narrative.

Ironically, the very practice that was meant to become the guarantor of objectivity of forensic photography, and help it escape the tyranny of the author's subjectivity and primacy of idea, made it most susceptible to it, through establishing canonical principles for a new genre, and thus endowing the form of the pictures taken already with a pre-existing meaning, and with semantic connotations and associations.
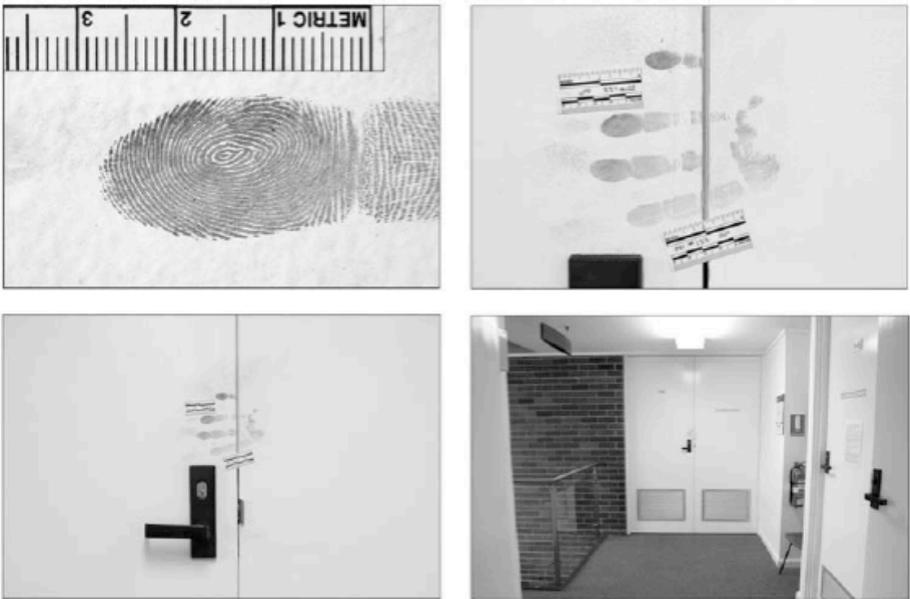

Fig. 3. Crime scene photographs using a visual narrative to illustrate the location of the fingerprints (Porter 2011)

Visual narratives, just like any other narratives, inadvertently prompt interpretation and push the viewers to seek meaning, and not any type of meaning but the one that was 'put' there by the author (Sontag cited in Porter, "A New Theoretical Framework Regarding the Application and Reliability of Photographic Evidence," p.45).

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Application of unified methodological practices to the production of images might have succeeded in limiting the human intervention and thus decreasing the level of subjectivity in forensic photography to a certain extent, but it was never able to eliminate the ideational component existing prior to the image and inherent to any photography. Not only are forensic photographs read and interpreted in the context of forensic culture and its taxonomical categories, but they are produced in accordance with its cannons. The fact that an expert chose to photograph a particular object already reflects this expert's reading of the object or situation in a particular way, his recognition of it as a case of something; the forensic images are never self-referential, but always function in a larger system of meaning determined by forensic culture. Thus, the photographic documentation of a crime scene in forensics that is meant to represent an accurate perception of objective reality simultaneously reflects a certain comprehension and conceptualization of a particular situation (Porter, "A New Theoretical Framework Regarding the Application and Reliability of Photographic Evidence," p.45). Arranged into a narrative, forensic photographic images possess both denotative and connotative components that stand both for the objective reality they mirror, and for the photographer's subjective comprehension and assessment of this reality, that he or she frames in a certain way as representing a case of something (Barthes cited in Proper, "Visual Culture

in Forensic Science," p.82). Images and the reality they represent are never fully identical or mutually substitutable; forensic photographs are not 'pure' data to be analyzed and interpreted, for the very fact that they are framed as such already implies a certain reading of the reality they claim to represent, the form itself can be an expression of the author's evaluative attitude to reality (Bakhtin, p.84).

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RECOVERING THE SUBJECT
In nineteenth century scientific practice, photography was used not only as a technique of documenting objective reality, but also as a means of scientific discovery, as a way of making "visible phenomena otherwise invisible to the human eye" (Daston & Galison, p.126). In a sense, forensic photography has preserved this function as well: even though it does not always necessarily help us transgress the limits of human vision, it helps bringing into focus what otherwise could escape our attention and remain unnoticed, and in this way uncover something important about the case. However, very often this dis-

covery is already 'put' into a picture, the photograph is taken not to reveal something, but because a certain fragment of reality is judged by an expert as revealing something. Any image is the result of a photographer's decision that a particular moment or scene is worth being documented and displayed (Berger in W. Mitchell, p.20). Porter argues that "a fundamental function of crime scene investigation is for the forensic investigator to bring and articulate aspects of the crime scene to a court," which opens a new space for the transmission of the expert's subjectivity ("A New Theoretical Framework Regarding the Application and Reliability of Photographic Evidence," p.39).

In a sense, a forensic expert plays a role similar to that of an exhibition guide: he might not have arranged the crime scene himself, but he directed the public perception of it, arranging the sequence in which the public encounters images, accentuating certain elements and foreshadowing whatever he deems unworthy of attention. Every crime scene image is framed and presented in such a way as to match the representation of what a crime scene is,

that the court experts and the legal system audience share, and thus, to evoke a structure that exists prior to it, to convey a larger truth that is there to be discovered (T. Mitchell, p.101). Truthfulness and objectivity of forensic photography is based on its conformity with what Barthes called 'doxa' – shared conventional and commonsensical expectations and representations (Barthes cited in Moriarty, p.159). This fragility of balance between subjectivity and objectivity in forensic photography and the impossibility of drawing a clear line between the two is symptomatic of forensic science's inability to escape abstraction. Something that was meant to become the inductive science of the particular, to operate only within the strictly set boundaries of specific cases, ended up producing a set of categorical generalizations that eventually became a basis for the assessment of other cases. This is where the individual and the collective merge and the abstracted, averaged out, archetypal image of a murderer (thief, robber) emerges (Galton cited in Daston & Galison, p.169). Such archetypal images lie at the heart of how the legal system constructs, determines and recognizes the cases of murder, assault, robbery, or fraud; hence, forensic photographs never simply represent themselves, but inevitably allude to one of the aforementioned categories.

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CONCLUDING REMARKS
Unlike the conventional research science that produces knowledge for the broader scientific community that can test, assess, criticize and eventually accept or reject its claim, forensic knowledge is produced with a specific audience in mind – the criminal justice system. This audience often lacks necessary training in the logic of scientific inquiry and method to be able to assess critically the validity of the claims made; moreover, unlike the scientific community, this audience does not always adhere to the principle of organized skepticism and tends to unquestionably accept and ascribe a lot of credibility to the evidence presented (Cole, p.40). Since many of the participants of the legal system are not trained scientists, and their judgment is largely based on their commonsense representations, the persuasion factor

becomes even more central to forensic science than the probation (Barthes cited in Moriarty, p.159). Crime scene photographs presented in court as evidence not only play on the jury's commonsense ideas of what is scientific and what is objective, but also evoke the categories constructed by the legal system in the way they are staged. In this way forensic science produces a sort of self-contained truth: it creates a set of postulates and one's compatibility with those postulates becomes the sign (and proof) of one's culpability (Barthes cited in Moriarty, p.159). While forensic science legitimizes the legal system by acting as a guarantor of its objectivity and validity, the legal system becomes the ultimate source for the validations of forensic claims. ⬛

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