

The Dissemination and Popularisation of Surveillance Technologies: Five Case Studies of Criminal Cases

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Abstract

Mediatised criminal cases generate privileged opportunities for the public to analyse the criminal justice system. However, these cases are seldom representative of routine criminal investigations or judicial proceedings. The inquisitorial characteristics of some justice systems often clash with the adversarial narratives of the media. The media contribute to the collective production of symbols and exercise influence on the representations of individuals, particularly on subjects that are more distant from their daily experiences and knowledge. Previous studies about the social construction of representations about forensic science indicate that some of the media's discourses about criminal cases reveal exaggerated beliefs and expectations that science and technology will provide rapid and definitive answers that will lead to their solution. Through the discussion of the selection of five mediatised criminal cases in the context of a doctoral project to be developed in Portugal, I will address some of the impacts that the use of forensic science had in their resolution, while reflecting on the media's cultural framework of reference in their coverage. I argue that the media's construction of glorified images of some surveillance technologies as crime fighting technologies might facilitate the introduction and deepening of surveillance.

1. Introduction

In 1985, Alec Jeffreys developed an identification technique that led to the beginning of a "second generation of forensic science" (Murphy, 2006). The so-called "genetic fingerprinting", described thus due to the analogy with traditional fingerprinting (Lynch et al., 2008) and its uniqueness, promised greater credibility for criminal investigation work (Brewer and Ley, 2010). In 1986 the technology was used for the first time in a criminal investigation in England known as the Pitchfork case, involving the rape and murder of two girls, which was only solved by collecting biological samples from over 5,000 volunteers (Werrett, 1997). In this case, the use of DNA technology allowed the exoneration of wrongfully arrested individual, while enabling the identification of the real perpetrator who had submitted a false sample (Van Camp and Dierickx, 2007). In the United States of America, another case became a landmark regarding the forensic use of DNA technologies. During 1994-1995, in Los Angeles, O. J. Simpson stood trial for the double murder of his wife and her friend, dubbed "the trial of the century" (Lynch, 1998). Blood evidence and DNA technology, or rather the concerns and contention about sample collection and chain of custody, played a fundamental role in the trial that ended with O.J. Simpson's

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acquittal in the criminal case. Moreover, while producing very little impacts on the way the USA courts deal with DNA evidence, the O.J. Simpson case became an important lesson to lawyers on dealing with expert witnesses (Halfon, 1998). The abovementioned cases are two examples of the ways in which famous cases can pervade the public and collective representations of DNA technology, becoming culturally embedded as frameworks of understanding for complex and extra-ordinary themes like DNA profiling. The media's role is pivotal in the process of creating collective imagery of criminal investigation and DNA technology, and widely publicised criminal cases constitute what Martin Innes (2004) describes as “signal crimes”, that is: “(...) *a crime incident being constructed by journalists through their use of particular representational and rhetorical techniques, and interpreted by audiences, as an index of the state of society and social order*” (Innes, 2004: 16–17). In addition, the popularisation of DNA technology in television series such as *CSI* has, according to some authors, helped reinforce the demand for this kind of scientific evidence within criminal justice systems (Huey, 2010), whilst also providing a cultural framework of reference for the news media reporting of real criminal cases (Machado and Santos, 2011).

While DNA profiling is a powerful tool for criminal investigation, DNA databasing is a mechanism of biosurveillance by which the retention of profiles and samples, particularly when this applies to acquitted or non-accused individuals, configures permanent suspicion insofar as it challenges the presumption of innocence (Dahl and Sætman, 2009: 100). Depending on local legislation, DNA databases can also be used to reveal and produce inferences from biological samples and profiles related to an individual's kinship, ethnic background and external visible traits such as hair, skin and eye colour (Van Camp and Dierickx, 2007). This paper aims to provide a preliminary analysis of five criminal cases that occurred in Portugal from 1997 to 2007 which made use of DNA technology. The first section briefly describes the circumstances of each case, while the second is focused on the role that DNA evidence played in each case. The article is concluded with a discussion about the cases and the potential impacts of media coverage of criminal cases for the public perception of the usefulness of surveillance technologies in face of the criminal risks.

2. Methods

My doctoral research project involves the selection and analysis of mediatised criminal cases that took place in Portugal. The five cases that were selected span over a decade, from 1997 to 2007, and refer to violent crimes. The main criteria were that the cases received considerable attention in the press, namely that the coverage was consistent throughout the development of the case, and that DNA technology was used in the investigation, independently of having played a decisive role in the investigation. Four Portuguese daily newspapers were selected as sources, ranging from what could be referred to as “quality press” to “tabloid” or “popular” press, namely the *Público*, *Jornal de Notícias*, *Diário de Notícias* and *Correio da Manhã*, in order to provide a wider perspective of the news coverage. The collection of news articles for each of the five cases covered the period between the first mention of the case in the newspapers until the court sentence had been passed, or the inquiry had been closed (as it occurred in one of the selected cases). This process already resulted in the collection of almost full coverage of the cases, amounting to more than 1,300 news items. These figures are not final as there are still some

newspapers editions to be viewed in hard copy format. The collected materials are being analysed – as it is yet an ongoing process – in accordance with the principles of the *grounded theory* (Glaser and Strauss, 1967). In this preliminary stage of the research project, each case was analysed through common parameters: a brief description of the circumstances of the case; parallel issues that emerged in the media coverage of the case; the police investigation of the case; what was the role of DNA evidence; and some impressions of the case.

3. Five Criminal Cases

This section aims to provide a brief description of each selected case, drawn from four daily newspapers. The reporting of scientific themes in the context of the selected criminal cases appear to be rooted in beliefs surrounding its decisiveness, objectivity and even some degree of infallibility. The media's impact on the perceptions and beliefs of the audiences can be analysed through the *cultivation theory* (Gerbner and Gross, 1976), which claims that there are correspondences between media consumption and the formation of audiences' beliefs, principally in themes related to violence, crime and law enforcement (Gerbner and Gross, 1976). A similar conclusion was reached in Nisbet et al.'s (2002) media effects model for public dispositions toward science and technology, where the news media, and particularly, newspaper reading, is a relevant factor in the shaping of general perceptions about science and technology (Nisbet et al., 2002). In a more recent survey, Brewer and Ley (2010) observed that: "*newspaper reading was positively related to both self-perceived understanding of DNA and support for a national DNA databank*" (Brewer and Ley, 2010: 107). This section reviews the circumstances of each selected case.

3.1 The "Meia Culpa" Case

On 16 April 1997, three hooded men entered a nightclub in Amarante (a small city in the North of Portugal) and, using pistols and shotguns to threaten the customers and staff present at the time (around 4 am), they poured petrol all over the floor and furniture, set fire to it, and escaped while locking the main entrance. There were 35 individuals inside. The fire resulted in the immediate death of twelve and the severe injury of nine. The first news reports mentioned the possibility that business or personal rivalry was the motivation for the attack. The case reached trial on February 1998 and, on 1 June, 1998, five people were given the maximum sentence (25 years in prison) for the crimes of arson, murder, attempted murder and theft. During the trial, it was proven that the owner of a similar establishment in the same city, José Queirós, ordered the attack for reasons that were not clearly established during trial. According to the news, he paid an intermediary to hire the three men who would carry on the assault on the "Meia Culpa". Also involved were two men who stole the car that was used in the attack. They were convicted to one year in prison, suspended for three years.

3.2 The “Tó Jó” case

“Tó Jó”, as the case came to be known, was a diminutive for the name António Jorge, a 23-year-old boy that, on the night of 12 August, 1999 (between 1 and 3 am), coinciding with the last solar eclipse of the millennium, killed both his parents with a knife, in their home near Aveiro. The father was stabbed many times and his body was found on the upper floor of the house. Apparently, the mother tried to escape and was also stabbed. Because of the coincidence with a solar eclipse and the fact that Tó Jó was a member of a black metal band called *Agonizing Terror*, news reports speculated that the crime had been committed in the context of a satanic ritual, a hypothesis disregarded by the authorities. Nevertheless, the connection to a particular music style became a parallel theme to the news coverage. In less than a week, in 16 August 1999, Tó Jó was detained and confessed to the crime. However, the police believed that it would have been very difficult for a single person to have committed the crime and suspected that his wife and a friend might have assisted in the commission of the crime. The trial began on 20 December 1999 and, on 17 April 2001, António Jorge was convicted for the double murder of his parents and sentenced to 25 years in prison, while the other suspects were acquitted.

3.3 The “Joana” Case

On 12 September, 2004, an 8-year-old girl was reported missing in the village of Figueira in the Algarve. Joana’s mother, Leonor Cipriano, reported to the Republican National Guard (GNR) that her daughter had gone to the grocery shop but never returned home, saying she had probably been abducted. On 23 September 2004, following a police questioning of Leonor, news reports said that Joana was murdered and that her body was could be buried near her house. According to statements by the coordinator of the investigation, Gonçalo Amaral, produced during the trial, it was an interview given by Leonor Cipriano a short time after Joana’s disappearance that changed the investigative hypothesis from abduction to murder. In his words quoted in the *Correio da Manhã*: “*She gave the impression that she was lying. She was all dressed in black, she spoke of the girl in past tense and said that the girl had come home with the groceries*” (Marques, 2005). After this interview, Leonor and her brother João Cipriano were subjected to several interrogations by the *Polícia Judiciária* and were named official suspects, or *arguidos*, that is, someone against whom there is a formal accusation based on strong suspicions of crime or a process of inquiry has been initiated. They were accused of having murdered the girl, cut her body into pieces and disposed of it. However, no body, weapon, cutting tools or conclusive material evidence was ever found. The trial by jury began on 12 October 2005 and, on 11 November 2005, Leonor and her brother João were sentenced to 20 years, and 19 years and two months in prison, respectively, for the murder and for profanation of the corpse of Joana.

3.4 The “Serial-Killer of Santa Comba Dão”

The news coverage of this case that became known as the “Serial-Killer of Santa Comba Dão” began with the arrest of a GNR corporal (The *Guarda Nacional Republicana* (GNR) is a security force which has a military structure and hierarchy), retired at the time of the crimes. The crimes are said to have occurred on 24 May, 2005; 14 November, 2005 and 8 May, 2006. These are the

dates when three girls disappeared from a village near Santa Comba Dão. Of the three disappearances, only the third led to a criminal investigation, as the first was dismissed by the family and the second left no evidence of foul play. The main suspect (António Costa), was well known and esteemed in the community, and even offered help in the searches for the girls. According to the *Jornal de Notícias*, the girls were all killed in the same manner – by asphyxia – wrapped in bags and thrown in the water. The first victim appeared in the sea near Figueira da Foz and the bodies of the other two were recovered in dams. The trial, that took place in Figueira da Foz, began on 4 June, 2007 was marked by some contention as to whether or not the defendant was mentally imputable for the crimes he was accused. António Costa was found guilty on three counts of murder and other crimes. On 31 July 2007, the ex-GNR corporal was sentenced to 25 years in prison.

3.5 The “Madeleine McCann” Case

In 2007, British citizens Kate and Gerry McCann were on vacation in the Algarve in a resort in Praia da Luz with their three children (Madeleine 3, Sean and Amelie 2-year-old twins). On May 3, Madeleine was reported missing from the room where the children were sleeping. The initial investigations by the Portuguese police and its scientific lab technicians were not able to find traces of Madeleine or a perpetrator. Meanwhile, a man that lived close to the Ocean Club, Robert Murat, was probed as a likely suspect and made an *arguido*, but no evidence of connection to the crime was ever found against him. In late July 2007, the British police brought in two trained cadaver and blood dogs to search Murat’s house. However, the dogs signalled human biological traces in the McCann's holiday apartment as well as in their rented car. The traces were collected and sent to a British laboratory. On 7 September 2007, after an interrogation by the Polícia Judiciária, the Ministério Público (Public Prosecution) decided to make Madeleine McCann’s parents *arguidos* for suspicion of their involvement in their daughter’s disappearance. On 7 January 2008, the *Correio da Manhã* announced that the final results of the examinations made by the *Forensic Science Service* in Birmingham pointed to a strong probability that the samples collected from the McCann's apartment and car were indeed Madeleine’s, but their sources suggested that the evidence might not stand up in court. On 21 July 2008 the inquiry on the case was finally closed by the Ministério Público owing to lack of evidence of any crime being committed by the three *arguidos*, Robert Murat, Gerry and Kate McCann.

4. The Cases and the Role of DNA evidence

According to the newspaper coverage of the selected cases, DNA identification was used in all cases, although it can be said to have had differentiated impacts and outcomes. Nevertheless, DNA technology was, at different stages of the cases, generally described as the key to solving the crimes. This section aims to describe, from the newspaper reports, the role and importance that DNA technology played in the selected cases. The “Meia Culpa” case was, and still is, referred to as the most violent crime ever committed in Portugal and it is one of the first mediatised criminal cases in Portugal to involve DNA evidence. The police investigation

employed most Judiciary Police agents of the region. In fact, in three days later it is reported that the police found the car that was likely used in the attack, as well as a jerry can and three hoods. The hoods, car and the jerry can were said to have been thoroughly analysed by the forensic laboratories. DNA seemed to play an important role until the suspects were detained and confessed. The *Público* gave DNA evidence some prominence, providing detailed articles that described the technology and its potential to “*decisively and unequivocally identify the material authors of the crime*” (Público, 1997). Particularly, in the case at hand, to identify the perpetrators of the crime from hairs collected from the hoods. On 27 April 1997, there is news of the detention of seven suspects and, on the following day, the swift resolution of the case is celebrated as a victory of the scientific police that was able to work through the pressure of the government and the public opinion, working for ten consecutive days and nights to solve the case. However, it can be said that it was not DNA technology that led to the identification of the authors of the crime, as in August 1997, it is revealed that the quick solution of the case was only possible because of another factor. It turns out that a relative of one of the boys that was hired to steal the car that would transport the trio of attackers told the GNR (National Republican Guard – a different police force) that she knew who had stole the car that was on the news, a red Rover. From this information, it was only a matter of following the thread of the connections among all the other suspects.

In the “Tó Jó” case, there was an almost immediate confession by the author of the crime, but the police suspected that he might not have acted alone. While awaiting trial, Tó Jó changed his version by stating that his wife and a friend, Nuno Lima, also took part in the crime. Stains collected at the crime scene were matched to one of the accomplices named by Tó Jó – Nuno Lima – and a medical examiner at the time of the crime had stated that, given the depth and angle of the multiple stab wounds, it was highly unlikely that the crime was committed by a single person. The defence argued that Nuno Lima’s blood at the crime scene could be explained since he used to sign letters to his friend with his own blood. An article in *Público* (Amaro and Campos, 2000) quotes the head of the forensic biology department saying that no samples of blood on paper were ever analysed in the case and also that the probability of error for DNA identification is almost null, although stating that it would be incorrect to say that it is 100% certain. During the trial of the three suspects, Nuno Lima’s defence lawyer requested a retesting of the samples. The results did not match to the suspect and he was acquitted, as was also Sara, against whom there was no evidence, except for Tó Jó’s testimony. Thus, while other forensic evidence such as the examination of the stab wounds pointed towards the involvement of more than one person, in this case, Nuno Lima’s lawyer request for re-examination of the samples may have prevented a wrongful conviction. In the “Joana” case, by the time it reached trial, the accusation produced a thesis of what happened which was based on the reconstitution of the crime made by Joana’s uncle. On the reconstitution, that was recorded on a videotape, which was shown in court, Joana’s uncle explained that the girl was killed by violent blows to the head and then, he and Leonor Cipriano, proceeded to dismember the body, storing the pieces in a freezer, and having disposed of it later. The news reports, allegedly sustained by investigative sources, said that Joana’s body could have been buried or fed to pigs. There were numerous searches for the body, including in nearby pigpens, but to no avail. The uncertainty regarding what had happened to Joana provided an ongoing dramatic series of news reporting. Forensic science and DNA technology received considerable attention in the news coverage, particularly in the *Correio da Manhã*, as several news articles voiced high expectations towards the results of the

analysis made to the allegedly large number of stains collected in the crime scene. Nevertheless, it was not possible to match any of the stains to Joana. In an editorial article of 12 November 2005, it is said that: “*Only science, CSI style, could have provided the decisive contribution. (...) I’m convinced that Leonor and João Cipriano are guilty. But what the heck... Couldn’t they have managed any tiny piece of evidence that would leave me with a clear conscience?*” (Catarino, 2005). In the *Diário de Notícias*, the way in which the collection of evidence was made is criticised, namely because the scene of the crime remained inhabited and a forensic examination only occurred more than a week after the disappearance of the girl (Oliveira, 2005).

On the case of the “Serial-Killer of Santa Comba Dão” DNA technology was used to identify the remains of the bodies of the victims which were found immersed in water. Also, there were traces that became important to secure a conviction, namely hair shafts and bloodstains matched to the victims that were collected in the backyard of the suspect’s house. While the importance of scientific evidence is emphasised in the various newspapers, it is the *Correio da Manhã* that draws on the association to forensic science fiction series like *CSI* and *Bones* to convey to the audience the relevance of forensic work in this case: “*The investigation was, in reality, similar to a mix of two television series – ‘CSI’ – where the analysis of the most insignificant piece of evidence is fundamental, and ‘Bones’, where the study of cadavers is an essential element*” (Ferreira, 2007). In the “Madeleine McCann” case DNA technology stepped into the limelight when, in late July 2007, the trained dogs allegedly detected the scent of a corpse in the McCann’s’ hired car and biological traces were collected. DNA analyses were described in the *Correio da Manhã* as being of paramount for reaching the “truth” about the case.

The months that followed were marked by a mix of exaggeration and speculation about what the DNA analyses could and would reveal. When, in January 2008, the results of the exams on the traces were reported to be final, there was speculation that Madeleine could be dead. However, the *Correio da Manhã* would say that without a body or a confession from the suspects, the Polícia Judiciária placed all hopes of solving the case on scientific evidence (Correio da Manhã, 2008). The usefulness of surveillance technologies was emphasised by the media (Machado and Santos, 2011: 315) while providing the audiences with a contrast between the technology and resources available in the United Kingdom and the existing conditions in Portugal. In this sense, surveillance technologies such as CCTV in public areas or DNA databases (the latter did not exist in Portugal until March 2010) were highlighted, particularly in the more popular *Correio da Manhã*, as elements that could be fundamental to help solve this and other criminal cases.

5. Discussion

The reporting of the cases allowed some preliminary conclusions about the characteristics of the coverage about the forensic uses of DNA technology. Firstly, from the cases, one can observe striking differences between “quality” and “popular” press when referring to DNA technology. While a “quality” newspaper like the *Público* offers the readers accurate descriptions of the DNA techniques that are being used and why, the “popular” *Correio da Manhã* draws frequently on associations with fictional television series, namely in the more recent cases, often rendering DNA technologies more spectacular and decisive to the cases than they really are. There were no significant distinctions regarding the coverage of the *Diário de Notícias* and the *Jornal de*

Notícias – the other two newspapers that were analysed. Secondly, it became apparent from the news reports of the cases that DNA technology proved effective in securing a conviction in one of the cases (“Serial-Killer de Santa Comba Dão”) and in the exoneration of a suspect in another (“Tó Jó”). In the remaining three cases, “Meia Culpa”, “Joana” and “Madeleine McCann”, DNA provided the newspapers with a dramatic theme, particularly in the two latter cases, where several newsworthiness factors enabled long-running news coverage (Jewkes, 2004), building narratives laden with uncertainty and expectation. However, in none of these two cases, DNA technology provided the solutions or feelings of closure that were anticipated in the newspapers. Thirdly, while there was strong emphasis on the potentialities of forensic science and DNA technologies, references to risks, contingencies or limitations (rendered more visible during the “Madeleine McCann” case), when mentioned, were ascribed to non-technical conditions, like human and/or organisational factors. For example, when talking about the *Low Copy Number* technique for DNA amplification, a news article states that: “*In England and in the USA the technique is already used on a daily basis but the necessary logistics demand a large budget. In Portugal, the greatest difficulty lies in the lack of genetic databases and the nonexistence of exclusively reserved areas to perform this type of analysis*” (Dâmaso et al., 2007). This news extract also provides a good example of support of DNA databases, even if the association between a specific forensic biology technique and the more general theme of genetic databases does not appear to be comprehensible.

Emilio Mordini, (2007) defines technology, not only as the manipulation of physical objects, but also as the social transformation of symbols and cultural forms, while the studies about the public acceptance of new technologies refers to determinants such as perceived risk, perceived benefit, trust, individual differences, among others (Gupta et al., 2011). Considering the symbolic content about DNA conveyed in the coverage of the cases, one might observe a continuum of its celebration as a “truth-finding” technology, where in spite of its irrelevance or inconclusiveness it benefited from an attributed status of decisiveness and near infallibility. Added to the burgeoning popularity of television series like *CSI* in which laboratory work and the production of scientific evidence are represented as the path for “truth finding” (Podlas, 2006: 431) the news reporting of these cases appears in an already primed cultural context where science and technology could provide the solutions to the crime problem. Biosurveillance and DNA databasing are a part of this cultural context as strategies of risk management that enable exclusion and separation between the good, law-abiding citizens and the criminal population (Van Camp and Dierickx, 2007: 261-2). This moral segregation of the focus of surveillance may very well be a relevant factor for the public acceptance of a biosurveillance technology like DNA databasing, since the perceived collective benefits outweigh any individual risks, as is the tone conveyed by the media coverage of criminal cases.

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