

CASE REPORT

Examination of Newspapers

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This paper addresses the significance of applying a combination of tests involving paper, ink, writing offsets (image transfers), folds, printing processes, and defects to determine whether there were alterations within 3 newspapers. A brief overview of the examination methods is provided in a step-by-step analysis of this unusual case involving disputed inserts of a daily local newspaper. The examination revealed conclusively that the initially incorporated inserts had been replaced with the disputed ones.

The opinions and assertions contained herein are the private views of the authors and are not to be construed as official or as reflecting the views of the Hellenic Police/Forensic Sciences Division.

Introduction

One of the many given definitions of a document is something that contains legal information and is referenced as such in the Hellenic Judicial Code (Article 13). The Forensic Sciences Division (FSD) of the Hellenic Police in Athens is involved in bringing to light various factors involving the identity or nonidentity of a writer, the source of typewriting or printing, and/or determining alterations. The phrase “history of the document” is included in their work. Witnesses are frequently presented in court to describe in detail the preparation and history of a contested document, although the most accurate and complete story may be hidden within the document.

A document can be the product of a combination of several materials put together with common instruments such as pen, pencil, typewriter, and/or various printing processes. Each of these materials and instruments has individual and class characteristics that in combination help to personalize and identify the document’s source and history. Regarding suspected alterations to a document, it is essential for the document examiner to discover and evaluate correctly each of the factors relating to the document’s history. Proving that a document is altered can be a challenging problem, particularly when the

questioned item is something that is rarely in dispute such as alterations to printed newspapers.

Recently the authors were involved in a case where the inserts of 3 issues of a daily local newspaper were disputed. The issues were ostensibly published on separate dates. Examinations involved an assessment of the paper, ink, printing, folds, and printing defects to determine if the inserts had been altered.

Case Submission

In 2003, the Hellenic Police/FSD was called to examine a case from a small town in northwestern Greece. An individual was informed that some articles in the inserts of a local newspaper had libeled him. The man, who was offended by these articles, decided to take legal action against the newspaper publisher. For that reason he tried to find the corresponding articles in the municipal library. The librarian of the municipal library agreed to give the complainant photocopies of the suspected libellous articles found in 3 inserts of the daily newspaper. The next day when the man returned to the library for the photocopies, he discovered that the inserts with the suspected libellous articles had been replaced. The replacement inserts did not contain the articles in question. He was informed by the librarian that an unidentified person borrowed the specific issues early that morning.

The local police became involved in the case and submitted the items listed below for laboratory examination to ascertain whether the



Figure 1. Using transmitted light from the VSC2000 HR, differences in opacity were observed between the questioned newspaper (left) and its corresponding insert (right).

questioned inserts were original; i.e., whether the disputed newspapers and their corresponding inserts were prepared on their purported dates.

Three issues of the daily local newspaper dated September 8, July 28, and July 17, 2001, along with their corresponding inserts, were submitted and numbered Q1, Q2, and Q3 respectively. One issue of the same newspaper dated September 7, 2001, with its corresponding insert, was submitted as a known item and numbered K1.

Methods and Materials

Examination equipment included:

- Zeiss Stemi 2000C stereo microscope (Germany)
- Sony Digital Video Camera Exwave HAD (Tokyo, Japan)
- Image Pro Plus software version 4.5.1.29 from Media Cybernetics (Silver Springs, Maryland)
- VSC2000 HR by Foster+Freeman (United Kingdom)
- Fluorescent whitening testing plates by Ciba-Geigy Corporation (Toms River, New Jersey)
- Mitutoyo digital and dial caliper (Tokyo, Japan)

Microscopic examination of the printing process of the questioned and known material established that the printing process was offset.

Additional examination and comparison involved the paper, the folds in the paper, font size and style, intensity of print and ink color, line spacing, registration, and alignment of the columns and articles.

Results and Discussion

No significant differences were found between the questioned and known material regarding columns, symbols, frames, titles, spaces for photographs, registration, and advertisements. Comparative examination of the offset printing inks revealed no apparent differences between the questioned and known newspapers.

The thickness, length, and width of each page of the submitted newspapers were measured. Again, no differences were found between the questioned and known. However, differences were noted in the opacity, the whitening, and the color quality of the inserts in the questioned newspaper issues (Figure 1). In addition, the surface texture in the 3 questioned inserts had suspicious wrinkles. These wrinkles were not present on any of the pages in the questioned or known newspapers. Regarding the folds in the newspapers, the 3 questioned issues (inserts not included) had 3 vertical folds. In contrast, the corresponding inserts had 2 additional folds vertical to the page. These folds in each of the 3 inserts matched

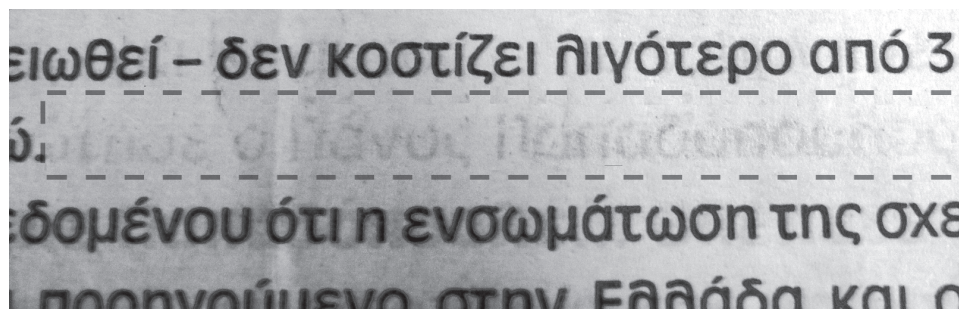


Figure 2a. Presence of offset marks on the Q3 insert (indicated by the dotted lines).

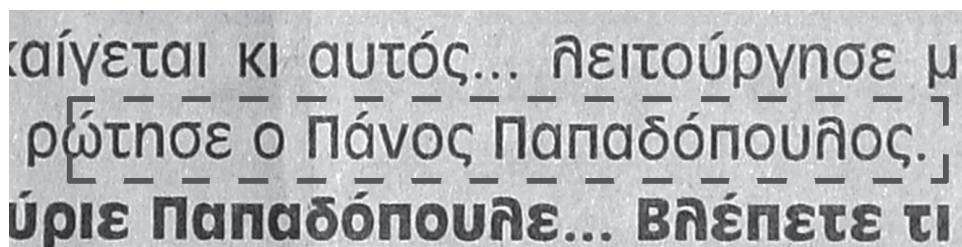


Figure 2b. A portion of the Q2 insert article showing the offset source found on the Q3 offset in Figure 2a (indicated by the dotted lines).

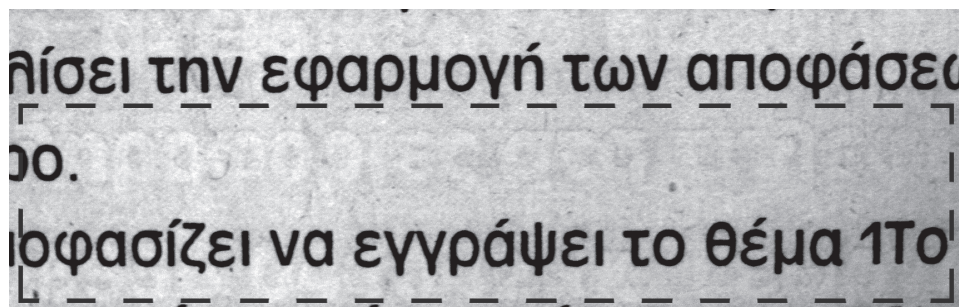


Figure 3a. The noninked print impressions on the Q2 insert (indicated by the dotted lines) are indicative of the presence of offsets created by contact with the printing roller.



Figure 3b. Black ink offset mark found on 1 questioned insert (right) and its mirror image (indicated by the dotted lines) found on another questioned insert (left).

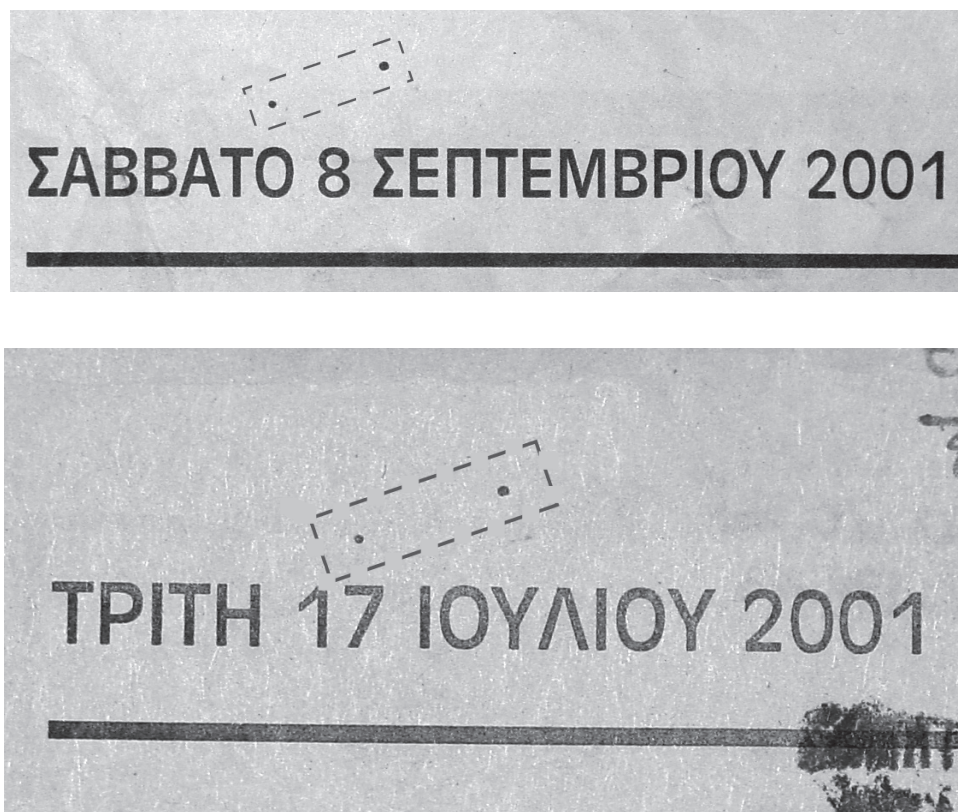


Figure 4. Ink spots (indicated by the dotted lines) similar in size and position were found on the Q1 (top) and Q3 (bottom) inserts. These spots appear only on the inserts and not on other pages of each corresponding newspapers.

exactly, indicating the questioned inserts were folded together—apart from their respective issues.

During a detailed examination of each sheet of newsprint, it was observed that only the questioned inserts contained scattered, partially visible print offsets. One explanation for the print offsets is that the pages came in contact with each other while the ink on the inserts was still moist (Ellen 1997), resulting in reversed-mirror offsets (Figure 3b). A 2nd explanation is that the insert pages came in contact with the printing rollers, creating noninked impressions (Figure 2a, 3a). The reading of partially visible print offsets was possible using various angles of lighting. The fact that offsets from pages of 1 insert were found on the pages of another insert was indicative of the questioned inserts being produced during 1 run rather than on the 3 separate dates.

Small deposits or traces of many different substances may be found on documents and may aid

in reconstructing their history. Many substances are placed there purely through chance contacts with foreign objects during the preparation of the document. Thus, stains of a similar pattern running across several pages can help to prove that the pages were produced sequentially during the same time frame (Hilton 1982). During the examination of the questioned inserts, small deposits of ink (spots that are common in offset printing) were found on every page of both questioned and known newspapers. The interesting finding was that specific matching spots were located only between the questioned inserts (Figure 4) and not on the corresponding questioned newspapers or in the known newspaper, including its insert. This was evidence that the disputed inserts were produced during the same printing run and not on the dates of their corresponding newspapers.

Finally, microscopic examination revealed that 2 of the 3 questioned inserts contained defects involving uneven ink deposits (loss in sharpness



Figure 5. Printed letters in the lower half of page 1 on 2 of the 3 questioned inserts contained uneven inking (indicated by the dotted lines) for Q2 (top) and Q3 (bottom).

of the impression) in the lower half of the 1st page (Figure 5).

Conclusion

The newspaper examinations in this case led to the conclusion that the 3 questioned inserts were printed during the same printing run, despite their different dates which corresponded with each newspaper. Although unusual and very interesting because of the forensic findings, this case helped the public prosecutor understand that someone had replaced the original inserts of the newspaper with the questioned ones with the intention of avoiding a prosecution for libel via media. This person probably was directly associated with the printing company that produced the daily newspapers that were the subject of this report.

References

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