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IDENTIFICATION OF LETTERPRESS AND HALFTONE PRINTING

SIA RAM GUPTA

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EDITOR.

Letterpress printing, also called relief printing, is the oldest form of printing known to us. In spite of all modern devices of communication, printing has retained its pre-eminence and is still most commonly used for producing books, magazines, newspapers, catalogues, and the like. Many are inclined to believe that "printing" being the product of a mass type casting and mechanical reproduction does not lend itself to a scientific comparison and identification as to its source and and is therefore an effective screen for committing crime. There has accordingly been a gradual increase in the use of printing as a means of producing defamatory, libelous, seditious or anonymous posters and handbills, and spurious certificates, diplomas, and degrees. There has been even a fraudulent printing of books otherwise protected under copyrights. An inquiry in a case like this often arises to fix the responsibility of printing such matter with any degree of scientific accuracy upon a suspected press.

The identification of printing is based on the general principles, viz. the existence of an adequate combination of class and individual characteristics exceeding the limits of an accidental coincidence. In the case of a human being, the class characteristics are the stature, build, complexion, etc. while the individual characters are the moles, scars, birth-marks, and other facial peculiarities or deformities. In the case of typewriting, the class features are the style and size of the type faces conforming to the specifications designed by the manufacturer while the individuality in typewriting is brought about through imperfections in the printing of type faces and through the wear and tear of the machine resulting in defective spacing, positioning, slant, mutilation and weight of type faces.

In printing, the class characteristics may be grouped under body size and type face designs. The body size of a type is responsible for the width

of a line and the depth of a column. The unit of measurement is the point which is one-twelfth of a pica, 6 picas making an inch. The body size in metallic type varies from 6 points up to 72 points, larger ones being made mainly in wood. According to the type face, the authoritative composition manual distinguishes between eight main designs. The body size and the type face design thus stamp a printing with its class characteristics. So far as the individual characteristics are concerned, they come into existence as a result of defective setting in the matter of relative spacing, positioning, slant and weight of type faces or are due to the mutilations and imperfections in these type faces. This applies both to the setting through hot-metal composing machines (monotype or linotype) as also to hand composition. The defects in the former, being a mechanical setting, however are less numerous.

It is true that the identity of a disputed poster, pamphlet, book, or other printing can be established in restricted conditions and the frequency of identifying the source is far less than that in the case of a typewritten matter since the identification of printing necessitates the recovery of either a proof copy of the questioned printed matter to be used as a standard or the seizure of the form with the matter before the press dismantles it. The proof copy as such or a sample obtained from the seized matter is then used as a standard for comparison with the questioned printing. In the absence of such standards, it may not be possible to positively link the disputed matter with any printing press by obtaining fresh samples with a recomposed identical matter from the mass of similar types in use in the press.

The identification of printing in a case of the Agra district is illustrated below. A book entitled *Savitri*, approved as a text for Intermediate classes of the U.P. Board, was published by one Sri Noor Mohammed & Sons of Gonda. The book being in

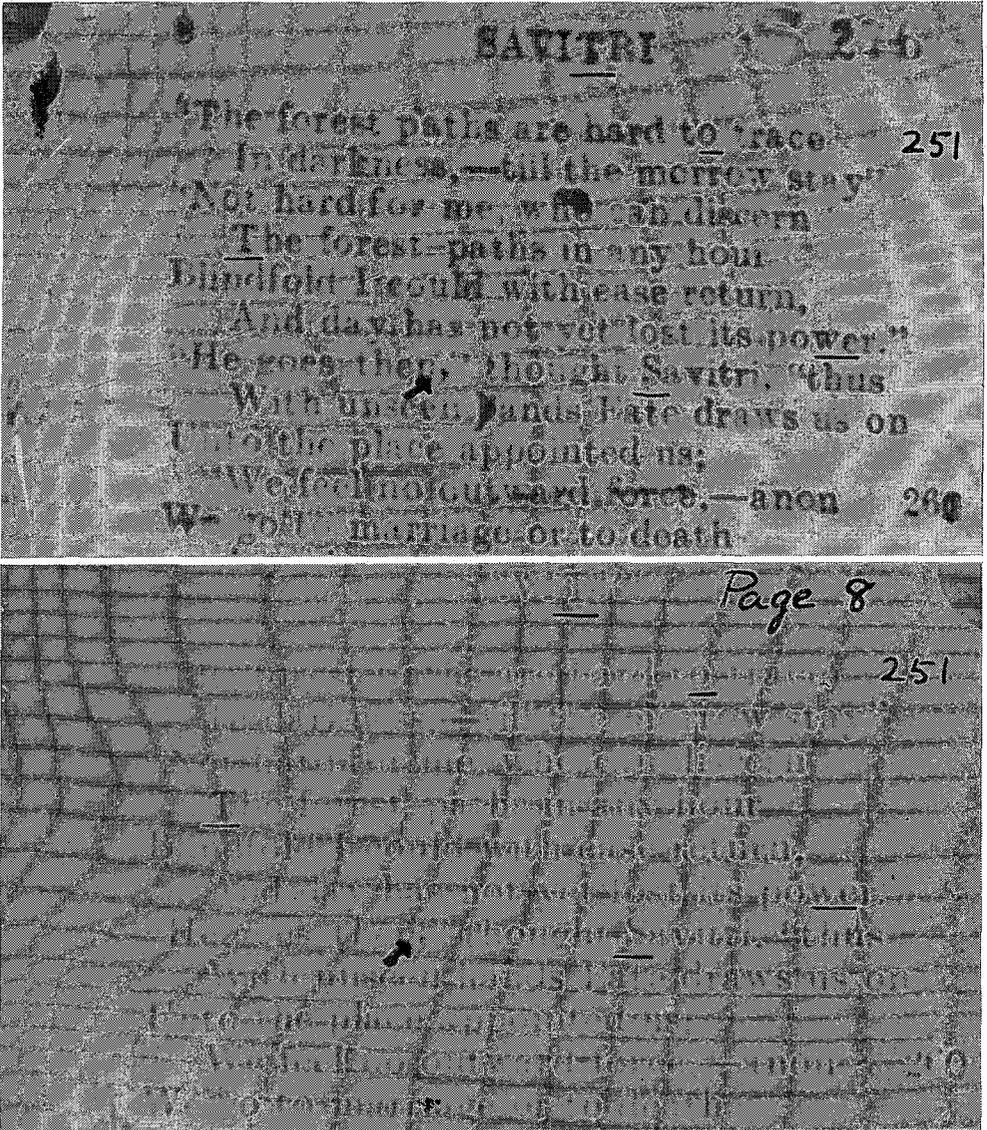


FIGURE 1

The headline and first eleven lines of page 8 are reproduced—the proof copy at the top and the questioned book below. Some of the individual points of comparison are marked and include: Headline, "SAVITRI", the spacing of the "T"; line 251, "to", the relative position of the "o"; line 254, "The", the weight and position of the "T"; line 256, "power", alignment of the "w" and "e"; line 257, "then", the missing serif on the second foot of the "n", and "Savitri", the "S" off-its-feet.

great demand provided an incentive to another press to illegally print it against the copyright. From the suspect press were recovered a large number of copies of the book which on a comparison with the genuine book were found to be unauthorised. The investigator very intelligently thought of organising a raid to look for the proof

copies and was successful in recovering some pages from the press premises. Besides a similarity in the class characteristics, the proof copies matched with the corresponding pages of the unauthorised publications in the individual features showing that the suspect books and the proof copies had been printed from the same form and matter. This

provided an important link in the chain of prosecution evidence. Some of the similarities between the proof sheet and page 8 of the book are shown in figure 1.

Closely connected with the letterpress printing is the halftone block printing used for the reproduction of pictures and illustrations in title covers. To prepare a halftone block, the model is photographed and its image is transferred to a metal surface by photoprinting. The reproduction of the tonal values is obtained by disintegrating the picture into a large number of exceedingly small sized dots, say 100 dots per inch in a line, which blend into various tones. In spite of the fact that

the method employed to obtain a block is mechanical, individualities in particular those of a microscopical nature, arise in course of the etching and engraving which will differentiate one block from another even though each one of them may have been produced from the same model. These individualities are made use of in linking a block with the pictures printed from it. This aspect is also illustrated by the Agra case cited above wherein a halftone block along with the aforesaid proof copies had been recovered from the suspect press. Sample copies obtained from this block were found to completely match with the title pages of the illegally printed book.