

Psychological Abstracts in Braille:  
A Preliminary Report

J.M. Gill

Warwick Research Unit for the Blind  
University of Warwick  
Coventry CV4 7AL  
England

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## 1. Introduction

The enormous increase in scientific publications has made the task of keeping up-to-date yet more difficult. A sighted scientist may regularly scan the journals in order to find articles of specific interest. However increasing use is being made of abstract journals which list recent publications with a summary of the contents of the articles.

However there is a small group of scientists who do not have direct access to the abstract journals - the blind. It is rarely satisfactory to get a sighted friend or colleague to read the abstract journal in order to locate articles of specific interest. However most blind scientists can read braille which is better than audio recordings for material which has to be scanned.

It would be impractical to produce a complete abstract journal in braille; a typical monthly abstract journal would require 1000 braille pages which consumes about 700 mm of shelf space. However the quantity of braille can be reduced to sensible proportions by just transcribing the abstracts likely to be of interest for each blind scientist.

## 2. The experimental system

One identifiable group of blind scientists is the psychologists. In cooperation with the American Psychological Association a pilot scheme has been established to provide selective listings of Psychological Abstracts in braille.

The system is:

(i) Each blind psychologist specifies his or her interests in terms of the subject indexing system used by Psychological Abstracts.

(ii) Each month the American Psychological Association sends a digital tape to Warwick Research Unit for the Blind. The tape contains all the abstracts appearing in Psychological Abstracts.

(iii) A computer program automatically selects the abstracts of interest to the individual blind psychologists.

(iv) The text is automatically translated to contracted English braille at a speed of 5000 words per minute.

(v) The braille is directly embossed on manilla paper at a speed of 7200 braille cells per minute.

(vi) The braille is bound and dispatched to the blind person.

### 3. Evaluation

The pilot system has been operational for over a year with a small number of blind subjects; production has been in excess of 1,000,000 braille cells per month. A braille questionnaire (Appendix 1) was sent to the experimental group and there were ten replies (mean age 32.1 years). Table 1 summarises the main results.

Question number	Subject	Mean	SD
7	Braille misconstructions	4.5	0.5
8	English v. American braille	4.7	0.6
9	Physical quality	4.7	0.5
10	Single-sided embossing	4.1	0.8
11	Selection of abstracts	3.6	0.9
12	Limit of 100 pages	3.6	0.9

Table 1. Summary of results on the acceptability of the pilot scheme, using a 1 to 5 scale (1 - unacceptable, 5 - perfectly acceptable).

The results show that the limitations from using an automated system are not a serious drawback for this application. The main problem is the efficiency of retrieval. However there are a number of methods available for increasing the selectivity; some of these methods will be tested during the coming year.

### Conclusions

A braille current alerting service could be an important aid for a blind scientist. This pilot scheme has shown that a totally automated production system is viable for this application.

### Acknowledgements

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Appendix 1      Text of questionnaire

Braille Psychological Abstracts

From Dr. J.M. Gill, Warwick Research Unit for the Blind, University of Warwick, Coventry, England.

The pilot experimental system seems to be over the initial teething problems. However there is still considerable room for improvement; for instance the method of indexing. At present I am using a set of 80 classification codes but there are two other indexing systems I could use: brief subject terms (circa 720 terms) or a full subject code (circa 4000 terms). I do not want to go to a more complex system unless it is absolutely necessary. One other possibility, which I have found satisfactory with Braille INSPEC, is to use the 80 classification codes with 3 logical operators (and, or, not).

In order to improve the pilot scheme I would be grateful if you could answer the following questions and send the replies, in ink print or braille, to me as soon as possible.

1. Name?
2. Age?
3. Occupation?
4. Do you teach psychology?
5. Do you do research related to psychology?
6. Do you supervise psychological research?

The following six questions use a 1 to 5 scale. For example 1 is very poor, 2 poor, 3 average, 4 good and 5 very good. You should just write down the number which best describes your own opinion. In these questions I have given you the end points of the scale although you can answer with any number between 1 and 5.

