

# Social Computing

## Class Test - 3

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Q 2.4.  
=

In this paper we measure the PMI using a formula,

$$PMI(c, w) = \log \frac{P(c, w)}{P(c) \cdot P(w)}$$

where  $c$  is a class (men or women) &  $w$  is word.

It shows how strongly connected words are to gender.

Here,  $P(c)$  can be estimated by the proportions of biographies about men & women.

#

Here, the maximum value of this PMI is 1.

When the PMI of any word is 1, it means that the word is very much strongly representing one gender.

#

The minimum value of this PMI is 0.

And at this point it shows that the word is not at all connected to that gender.

Q4 = (i) The Use Limitation Principle is violated.  
Here the user data is getting disclosed,  
made available for purposes other than  
specified.

(ii) The individual participation principle will  
get violated. The user ~~will~~ should have  
the right to get their personal data  
modified, which is violated here.

(iii) The Collection Limitation Principle is getting  
~~not~~ violated here. There should be limits  
to the collection of personal data & such  
data should be obtained by lawful and  
fair means.

Q. 2.3 = # The four key features that can be used  
to detect Sybil are :-

- ① IP address Tracking
- ② Content Analysis
- ③ Account Activity Statistics.
- ④ User Complaints.

# These detectors assume that Sybils form tight-  
knit groups that can be detected by looking for  
~~some~~ small groups in graph.

However Sybils do not form tight-knit groups, these detectors will not function - that is these detectors are not capable of detecting loosely connected or disconnected Sybils.

Also temporal analysis of social links <sup>as</sup> indicates that these connections are often formed randomly.