EXHIBIT PP

Exhibit A: Summary of Relevant Variability in Recommendations Plugin Functionality*

	Apr. 2010 - Aug. 16, 2010	Aug. 16, 2010 - Oct. 20, 2010	Oct. 20, 2010 – Feb. 20, 2011	Feb. 20, 2011 - Apr. 13, 2011	Apr. 13, 2011 – July 9, 2014	July 9, 2014 - June 23, 2015	June 23, 2015 - Present**
Primary back end system	PHP back end	PHP back end	PHP back end	PHP back end	Taste back end	Taste back end	NA
Backup back end system	None	None	None	None	PHP back end	PHP back end	NA
Sampled back end system	None	None	Taste back end	Taste back end	None	None	NA
Considered aggregate, anonymous counter that included URL shares sent in a message from the Share plugin***	Yes	Yes	Yes	Yes	Only if primary system failed	No	NA
Considered aggregate, anonymous counter that included URL shares sent in a message from the Facebook website***	No	Yes	Yes	Yes	Only if primary system failed	No	NA
Anonymously displayed a URL shared only in a message	Highly variable	Highly variable	Highly variable	No	No	No	NA
Displayed a URL shared only in a message in an identifiable way	No	No	No	No	No	No	NA

* To the extent Recommendations information was configured to appear in a given Activity Feed, this variability also applies to Activity Feed.

**Recommendations was discontinued on June 23, 2015.

***This assumes that a URL share object was successfully created and the ▮▮▮▮▮ counter was successfully incremented.

11 month (pre-class) period discussed (incompletely) by Dr. Jennifer Golbeck

Class Period