Comparison on Heterosexual and Homosexual Woman's Lonely Heart Ads in Taiwan: Taking *AllTogether* and *Lesbian* Board on PTT Web Forum as Examples

Yu-Hsuan Lin

National Taiwan University / No. 1, Sec. 4, Roosevelt Road, Taipei, 10617 Taiwan
linsarahyh@gmail.com

Abstract

This study aims to compare the lonely heart ads of heterosexual and homosexual women in Taiwan. The data was collected from the *AllTogether* (heterosexual) and *Lesbian* (homosexual) boards on the PTT web forum. Word frequency analysis and topic modeling were used to analyze the data. It was found that lesbians tend to state more on emotional and spiritual connection, using words that describe personality traits and changes in emotions. Heterosexual women, on the other hand, showed more concern about practical matters such as religion, occupation, and habits, possibly with the goal of building a family relationship through marriage and starting a family.

1 Introduction

Dating and mating are important research areas in many disciplines, including sociology and gender studies. Numerous studies discuss heterosexual mating preferences from various perspectives, comparing the differences between heterosexual men and women. In recent years, there have also been more and more research focus on homosexual partner choice. Among these studies, we can also see some studies comparing mating preferences between different sexual orientations, although the number is limited, it is not a completely unexplored area, particularly in the West. For example, Potârcă et al. (2015) showed that social tolerance and legal recognition of same-sex marriage are positively correlated with higher intentions of long-term dating and a stronger belief in monogamy.

However, when we focus on Taiwan, the first country in Asia to legalize same-sex marriage, there are very few such studies. Shieh and Tseng (2010) note that previous research on partnership formation and choice in Taiwan has mainly focused on the description of heterosexual relationships, and has been mostly interpreted through biological evolutionism, social learning theory, and social ex-

change theory to explain the concept of "marry within one's social class"(門當戶對) as well as marriage gradient. So far, there are less than ten papers in Taiwan that focus on homosexual mating preference, and there is almost no literature that compares the differences in partner choice among different sexual orientations. Therefore, in an aim to bridge this research gap I will compare more than 2,000 lonely heart ads of heterosexual and homosexual women published in AllTogether and Lesbian discussion boards of the PTT web forum from 2021 to 2022 and will reflect on the original heterosexual-based mating preference research and gender assumptions in Taiwan and how it compares to similar homosexual data, specifically lesbians.

2 Background

Taiwan has been a trailblazer for LGBTQ+ rights in Asia, legalizing same-sex marriage in 2019. Many researchers attribute the relatively positive attitude towards the LGBTQ+ community in Taiwan to how *queer theory* was one of the key theories flourishing in Taiwan's academic and cultural spheres in the 1990s and helped transform the public discourse on sexuality and gender in media and popular culture early on (Liou, 2005; Guo, 2023). However, just 15 years ago, it was still difficult to recruit LGBTQ+ participants for studies due to fear of stigmatization even in Taiwan (Shieh, 2010). More recent studies discuss the Lesbian communities in Taiwan more intimately by examining the outward expression of masculine inclinations, specifically *zhongxing* – gender neutrality in appearance –, and its relation to normative constraints and queer agency (Hu, 2019).

In Taiwanese lesbian culture, labels such as T, P, or versatile are frequently used. T stands for "tomboy," typically referring to individuals who exhibit relatively masculine traits in personality and appearance (e.g., very short hair). P comes from the

Chinese word "老婆(lǎopó)", which means wife or female spouse, signifying a more feminine quality compared to T. Versatile, in Chinese word "不分", refers to a state between T and P. Hu (2018)'s research highlighted how these labels dominate the realms of self-identity and community interaction among Taiwanese lesbians. With the influence of Western queer theory and deconstructionism entering Taiwan in the 1990s, these labels have also been influenced in terms of their usage and definitions. Traditionally, T and P are often seen as a pair of lesbian roles, but various combinations, such as T-T, P-P, and diverse self-labeling (e.g., "masculine P", "long-haired T", and "versatile-P"), have become common expressions in the community.

There are several papers that focus on comparing women of different sexualities' choice of partners (see e.g. Potârcă et al. 2015 and Ybarra and Mitchell, 2016). Russock (2011) analyzed personal advertisements with an evolutionary interpretation and found that heterosexual women had a tendency of resource-seeking and offered more physical attractiveness. A study by Veloso et al. (2014) also showed that heterosexual women emphasize the characteristics of good provision of resources and emotional investment in long-term relationship. Also, they point out that homosexual women's partner selection pattern resembles to both heterosexual man and woman. But Willis (2014) stated that lesbians have higher expectations for their female mates than straight men have for theirs, and women are preferred over men for emotional and social needs regardless of sexuality. Shieh and Tseng (2010) interviewed 33 homosexual couples in Taiwan in order to find their mate choosing preference, found that except for their homosexual identity and shared socialization experiences, their preferences are almost identical to those of heterosexual counterparts. Li and Lu (2020)'s analysis focused on the Desiring Self and Desiring Others texts of Taiwanese lesbians and gay men on dating websites. He pointed out that even in same-sex relationships, there continues to be an expectation of pairs of masculine/feminine and active/passive roles. This implies that homosexual communities still have mate expectations influenced by traditional gender roles associated with norms in heterosexual relationships. However, overall, there is relatively limited research both domestically and internationally that specifically explores and compares the dating preferences and differences among women with different sexual

orientations and the underlying reasons for these preferences.

3 Data and Method

3.1 Data Selection

PTT Bulletin Board System is the largest web forum in Taiwan. According to the Institute for Information Industry (for Information Industry, 2017), PTT is one of the most used social websites in Taiwan after Facebook, Instagram, and YouTube. The main language used on PTT is traditional Chinese. There are many boards in PTT, and different interests and topics are gathered under each board. *Alltogether* is a board about matchmaking, which consists mainly of lonely heart ads primarily written by heterosexual men and women who are looking for a partner. The *Lesbian* board is a lesbian-oriented community that includes renting together, chat group recruitment, news, and lonely heart ads. These lonely heart ads usually consist of a long self-introduction and some ideal criteria for a future partner. PTT is also easy to crawl for its text-based interface and does not limit crawling or scraping.

The paper employs a Python script with 'BeautifulSoup' library to scrape data from PTT. The script iterates through *Alltogether* and *Lesbian*, extracts data from each article, including author names, board names, article titles, publication times, and content. The data used in this study consists of all lonely heart ads, whose titles included "徵男" (looking for males) on Alltogether, and "自介" (self-introduction) and "她介" (introducing my friend) on Lesbian, posted between 2021-2022. A total of 899 posts were collected from Lesbian and 1472 posts were collected from Alltogether.

3.2 Segmentation, POS Tagging & Stop word removal

Segmentation and POS tagging were conducted through CKIP (Yang and Lin, 2023), a natural language processing tool for traditional Chinese language developed by Academia Sinica in Taiwan. A list of stop words was filtered out to make the analysis process more efficient.

3.3 Counting Frequency

The basis of this study is a simple statistical comparison of the word frequency in both sets of data. First, the number of occurrences of each word in the text was calculated and then normalized by dividing the total number of occurrences of the word

by the total number of words to get the percentage of the word in the text. Next, I compared the words that appeared more than 10 times on both boards. If the word is more than 2 times more likely to appear in one of the boards than the other, it is judged to be the more used word of that specific board.

3.4 Topic Modeling

Topic modeling is a statistical model used to discover abstract topics in a series of documents. It assumes that each document is associated with one or more topics and that each topic will have a corresponding word distribution. I used a simple Latent Dirichlet Allocation (LDA) model to process the data for this study. Only words whose POS tagged by CJIP are non-predicate adjective (A), common noun (Na), proper noun (Nb), place noun (Nc), nominalized verb (Nv), active intransitive verb (VA), active causative verb (VAC), active pseudo-transitive verb (VB), active transitive verb (VC), stative intransitive verb (VH), stative pseudo-transitive verb (VI), and stative transitive verb (VJ) were included. I used topic modelling to try to identify the differences in topics that homosexual and heterosexual women talk about when seeking a spouse.

4 Results

The calculation of word frequency shows that there are indeed many differences in word usage between lesbian and heterosexual females. The more used words of lesbian woman can be divided into several categories including but not limited to the following:

1. Nouns related to sexual orientation. For example, "女朋友"(girlfriend), "性別"(sexuality), and "伴侶"(partner).

2. Nouns referring to emotion and thoughts, such as "共鳴" (resonance), "情緒" (emotion), "理想" (ideal), "靈魂" (soul), and "心事" (have something on one's mind).

3. Nouns related to the length of hair.

4. Explicit and clear adjectives to describe personal characteristics and relationships.

5. Verbs to describe inner feelings, especially about love. For instance, "吸引" (attract), "愛上" (fell in love with), "嚮往" (long for), and "樂意" (willing to).

6. Verbs describing future prospects, such as "走過" (walk through), "尋找" (look for), "開" (start), "邁向"(toward), and "建立" (build).

For heterosexual women, their more used words can be divided into several categories including but not limited to the following:

1. Nouns related to males.

2. Nouns of region name.

3. Nouns of real-life information, such as "宗教" (religion), "寵物" (pet), "房貸" (housing loan), and "職業" (job).

4. Verbs describe living habits and practical future plans of forming a family, such as "抽菸" (smoking), "煮飯" (cook), and "生子" (give birth).

5. A series of descriptive adjectives that do not involve actual details. From "强" (better; strong), "良好" (well), "正常" (normal), to "不良" (bad).

6. Adjectives about body image, which are "胖" (fat) and "瘦" (thin) mostly.

4.1 Inconclusive results from topic models

As for topic modeling, it is unfortunate that the calculated keyword combinations, despite achieving a coherence score of 0.48 in text from Lesbian and 0.4 from Alltogether, are difficult to discern the correlation and consistency between them. These texts could not be successfully classified into several clear themes thus we can not even make a comparison between the two sets. The possible reason is that lonely heart ads themselves are already a very specific category. They consisted mainly of self-introduction and requirements for the future partner. According to the previous frequency analysis, though, we can find that the words and concerns of women with different sexual orientations do differ, the LDA algorithm itself has a larger granularity and is perhaps more suited for classifying articles compared to a subdivision of content within the same topic.

5 Conclusion and Discussion

According to the result of counting word frequency, we find that lesbians are more concerned with spiritual, emotional, and inner communication and connection. They have more adjectives that explicitly

describe their (or their ideal partner's) personalities, as well as verbs and nouns that describe change of heart states. They have more spiritual interaction requirements for their potential partners. Lesbians use many verbs that describe abstract nouns to illustrate the stages and progress of the relationship. In contrast, heterosexual women care about more practical issues, they reveal themselves or ask potential partners for more details about their place of residence, occupation, religion, and so on. There is also more information and requirements about having a specific habit or not, for example, drinking and smoking. Also, marriage and giving birth are also more used words by heterosexual women, all of these imply that heterosexual women's lonely heart ads are not only about finding a partner for love but also about building a family relationship based on a permanent life together. However, they use many adjectives that do not have a clear statement of the object, such as well, good and bad, to state something about themselves or their counterparts, as compared to homosexual women's use of adjectives.

In addition, there are differences in the vocabulary related to physical appearance in the texts of the two sexual orientations. Terms like hair, long hair, and short hair are frequently mentioned in lesbian texts. Li and Lu (2020)'s research also identified this phenomenon, noting that the term "long hair" often appeared positively in the narratives on Taiwanese lesbian dating webstes between 2013 and 2015. It was frequently mentioned alongside other feminine attributes and was highly favored. This suggests that long hair and the femininity it symbolizes were preferred qualities. Seven years later, the data on PTT forum still found that hair length remained an important label used by lesbians for dating and self-introduction. Hair length and the gender qualities it represents continue to be significant factors in lesbian dating preferences. On the other hand, terms like "fat" or "thin" are frequent in vocabulary related to appearance in heterosexual women's texts. This indicates that body shape and its association with attractiveness may be more important in heterosexual relationships.

The findings on heterosexual women seem to be consistent with past findings that women are more concerned with resource exchange in relationships. However, the comparison with lesbians allows us to question the way in which this result has been interpreted in terms of biological evolutionary theory in the past. If this condition is particularly pronounced for heterosexual women only, is it a consequence of the social construction of heterosexual romantic relationships?

Lastly, the main limitation of this study are the sampling of data and the limitations of textual analysis itself. For the former, although PTT is the largest online forum in Taiwan, there are still many other dating apps and physical dating events. The people gathered on PTT must have a certain degree of bias compared to the population as a whole, rather than a random sampling. As an online community, PTT is likely to have its tendency of age group, political stance, and so on. In addition, as a single ad contains both self-introduction and requirements for potential mates, we can only make a tentative distinction in the analysis process by inference due to the lack of a fixed format for the postings. As for the latter, textual analysis's limitation lies in the diversity of norms and expectations among different groups, influencing what individuals choose to disclose or withhold in their written texts. While lesbians in the study appeared to prioritize spiritual aspects over material considerations compared to heterosexual women, it does not imply lower material preferences for lesbians or vice versa. These differences may stem from different communication cultures, etc. It's crucial not to equate textual expressions with actual mate selection criteria. To obtain a more comprehensive understanding, future research should integrate textual analysis with fieldwork and interviews, enabling a nuanced exploration of partner preferences within cultural and social contexts.

6 Future work

In order to have a better understanding of the mate preferences of Taiwanese of different sexual orientations, I think we can

1. cross-compare more commonly used words by including information of men

2. collect data from the dating app, which will give more categories on personal interests and expectations, and make it easier to carry out detailed topic model

3. interpret the study of mate preference into a larger context of "doing gender" for discussion and comparison.

7 Code

Please find all the code at the following url: `https://github.com/hiitslin/taiwan_les_and_hetero_comparison`

References

Institute for Information Industry. 2017. Bacheng yishang taiwanren aiyong facebook. line zuowen shequnwangzhan longtou. yiren pingjun yong shige shequn zhanghao. nian qingren gengai youtube he ig[more than 80% of taiwanese love facebook. line is the leading social networking site. one person has 4 social media accounts on average. young people prefer youtube and ig]. Institute for Information Industry.

Wangtaolue Guo. 2023. Queers on the move: sinicizing queer theory and theorizing queerness in taiwan. *Perspectives*, 31(2):220–234.

Y.-Y Hu. 2018. Compelling categories, shifting identities: Social media, transnational cultural politics, and "t/po/bufen" lesbian identity formation. *Taiwan Journal of Anthropology*, 16:1–50.

Yu-Ying Hu. 2019. Mainstreaming female masculinity, signifying lesbian visibility: The rise of the zhongxing phenomenon in transnational taiwan. *Sexualities*, 22(1-2):182–202.

Po-Wei Li and Chia-Rung Lu. 2020. Articulating sexuality, desire, and identity: A keyword analysis of heteronormativity in taiwanese gay and lesbian dating websites. *Sexuality and Culture*, 24:1499–1521.

Liang-ya Liou. 2005. Queer theory and politics in taiwan: the cultural translation and (re) production of queerness in and beyond taiwan lesbian/gay/queer activism. *NTU studies in Language and Literature*, 14:123–154.

Gina Potârcă, Melinda Mills, and Wiebke Neberich. 2015. Relationship preferences among gay and lesbian online daters: Individual and contextual influences. *Journal of Marriage and Family*, 77(2):523–541.

H. I. Russock. 2011. An evolutionary interpretation of the effect of gender and sexual orientation on human mate selection preferences, as indicated by an analysis of personal advertisements. *Behaviour*, 148(3):307–323.

W Shieh and H. Tseng. 2010. Entering into couple relationship: An explorative study of gay and lesbian partner-selection preference in taiwan. *The Journal of Guidance Counseling*, 32(2):27–46.

Wen-Yi Shieh. 2010. Gay and lesbian couple relationship commitment in taiwan: A preliminary study. *Journal of Homosexuality*, 57(10):1334–1354.

Vivianni Veloso et al. 2014. Comparison of partner choice between lesbians and heterosexual women. *Psychology*, 5(02):134.

Jarryd T Willis. 2014. Partner preferences across sexual orientations and biological sex. *Personal Relationships*, 21(1):150–167.

Mu Yang and Li-Huai Lin. 2023. Ckip transformers for traditional chinese.

Michele L Ybarra and Kimberly J Mitchell. 2016. A national study of lesbian, gay, bisexual (lgb), and non-lgb youth sexual behavior online and in-person. *Archives of sexual behavior*, 45(6):1357–1372.

A Appendix

A.1 More Commonly Used Words for the *Lesbian* Category

A.2 Part of Classified More Used Words on Alltogether

Original Word	English
伴侶	partner
女孩	girl
女朋友	girlfriend
姊姊	older sister
少女	girl
性	sex
性別	sexuality
老婆	wife
議題	issue (often refers to social aspect)

Table 1: Nouns related to sexual orientation

Original Word	English
傷害	harm
內心	in one's heart
共鳴	resonance
困擾	harass
心事	something on one's mind
心思	mood; thought
情感	emotion
感受	feeling
煩惱	worries

Table 2: Nouns refers to emotion and thoughts

Original Word	English
髮	hair
短髮	short hair
長髮	long hair

Table 3: Nouns related to length of hair

Original Word	English
(VH)上進	enterprising
(VH)中性	neutral
(VH)可靠	dependable
(VH)合得來	hit it off
(VH)多元	diverse
(VH)孤獨	lonely
(VH)安心	at ease; relieved
(VH)專注	concentrated
(VH)帥氣	good-looking (refers to male)
(VH)平淡	dull; ordinary (refers to lifestyle)
(VH)廣泛	wide range of
(VH)悶騷	mild on the outside but wild on the inside
(VH)正經	serious (refers to personality)
(VH)浪漫	romantic
(VH)清秀	decent looking
(VH)溫柔	gentle
(VH)無趣	boring
(VH)獨特	unique
(VH)相似	similar
(VH)真實	real; true
(VH)純	pure
(VH)細水長流	small but steady stream (refers to condition of relationship)
(VH)細膩	attentive; considerate
(VH)舒適	comfortable
(VH)親密	intimate; close
(VH)誠懇	sincere
(VH)變好	getting better
(VH)貼心	thoughtful
(VH)驚喜	surprise

Table 4: Explicit and clear adjectives to describe personal characteristics and relationships

Original Word	English
偏	-like
勝過	better than
受	(passive voice expressions)
吸引	attract
失去	lose
愛上	fall in love with
沈迷	be addicted to
認同	identify with; agree to
同意	agree
喜歡上	like
嚮往	long for
感受	feel
感受到	feel
明白	understand
關心	care

Table 5: Verbs to describe inner feelings, especially about love

Original Word	English
尋找	look for
帶來	bring
建立	build
接近	get close to
擁抱	embrace
放下	let go
準備好	be prepared to
開啟	open; start
走過	walk through
邁入	toward
邁向	toward
交給	leave something to
探索	discover

Table 6: Verbs describe prospection to future

Original Word	English
男	male
男人	male
男生	boy
異性	opposite sex

Table 7: Nouns related to males

Original Word	English
宜蘭	Yilan
彰化	Changhua
新北	New Taipei
新竹	Hsinchu

Table 8: Nouns of name of region

Original Word	English
宗教	religion
寵物	pet
小孩	kid
年次	year of born
房貸	housing loan
業務	job description
碩士	master degree
習慣	habit
職業	job
股票	stock
規劃	plan (refers to future)
身高	height
公司	company
大學	university
學校	school

Table 9: Nouns related to real-life information

Original Word	English
抽煙	smoking
抽菸	smoking
減肥	lose weight
煮飯	cook
生子	give birth
結婚	getting married

Table 10: Verbs describe living habit and practical future plan of forming family

Original Word	English
不良	bad
佳	good
強	better; strong
有限	limited
正常	normal
正當	decent; legitimate
特殊	special
相對	relatively; comparatively
良好	well

Table 11: A series of descriptive adjectives that do not involve actual details

Original Word	English
胖	fat
瘦	thin

Table 12: Adjectives about body image

A.3 Result of LDA Model

Perplexity	-8.964043551
Coherence	0.4853863106

Table 13: Coherence score of LDA model of Lesbian

Perplexity	-8.96394623
Coherence	0.40502346209

Table 14: Coherence score of LDA model of Alltogether

```
[(0,
  '0.008*"專長" + 0.004*"不菸" + 0.004*"電腦" + 0.004*"意思" + 0.004*"開玩笑" + '
  '0.004*"線上" + 0.004*"投射" + 0.003*"衝浪" + 0.003*"道理" + 0.003*"劇情"'),
 (1,
  '0.008*"旅伴" + 0.008*"活潑" + 0.008*"順利" + 0.005*"敏感" + 0.005*"烘焙" + 0.005*"廚房" '
  '+ 0.004*"上進" + 0.004*"新北" + 0.004*"牡羊" + 0.004*"台北市"'),
 (2,
  '0.014*"重視" + 0.007*"正向" + 0.005*"可靠" + 0.005*"室友" + 0.004*"生理" + 0.004*"芋頭" '
  '+ 0.004*"異性戀" + 0.004*"電視" + 0.004*"普通" + 0.004*"新鮮"'),
 (3,
  '0.009*"勝過" + 0.007*"女" + 0.006*"台" + 0.006*"介" + 0.005*"正負" + 0.005*"私訊" + '
  '0.005*"必要" + 0.005*"少女" + 0.004*"平台" + 0.004*"真相"'),
 (4,
  '0.004*"作品" + 0.004*"劈腿" + 0.004*"念" + 0.004*"老師" + 0.003*"香水" + 0.003*"設計" '
  '+ 0.003*"評價" + 0.003*"認證" + 0.003*"美國" + 0.003*"結局"'),
 (5,
  '0.009*"月亮" + 0.007*"疾病" + 0.005*"休假" + 0.004*"圈內人" + 0.004*"看過" + '
  '0.004*"依靠" + 0.004*"駕照" + 0.004*"刺青" + 0.004*"女友" + 0.004*"熊"'),
 (6,
  '0.006*"認同" + 0.006*"菜" + 0.005*"紅娘" + 0.005*"擁有" + 0.004*"行程" + 0.004*"不同" '
  '+ 0.004*"講話" + 0.004*"上菜" + 0.004*"眼" + 0.004*"熱情"'),
 (7,
  '0.007*"獨立" + 0.006*"單身" + 0.006*"長髮" + 0.005*"新" + 0.005*"重要" + 0.005*"簡單" '
  '+ 0.005*"短髮" + 0.004*"外表" + 0.004*"伴侶" + 0.004*"菸"'),
 (8,
  '0.007*"不良" + 0.005*"睡" + 0.004*"狐" + 0.004*"姐姐" + 0.003*"老闆" + 0.003*"氣氛" + '
  '0.003*"飲料" + 0.003*"套房" + 0.003*"靈性" + 0.003*"起床"'),
 (9,
  '0.009*"騎" + 0.008*"歌" + 0.006*"藝術" + 0.006*"冷氣" + 0.006*"故事" + 0.005*"立" + '
  '0.005*"內向" + 0.005*"腦袋" + 0.004*"勇氣" + 0.004*"步道"')]
```

Figure 1: Result of LDA Model

```
[(0,
  '0.007*"跨年" + 0.006*"晃晃" + 0.006*"適中" + 0.006*"附照" + 0.006*"醜" + 0.006*"補" + '
  '0.005*"外出" + 0.005*"你我" + 0.004*"邊緣人" + 0.004*"哈哈哈"'),
 (1,
  '0.009*"年輕" + 0.007*"生日" + 0.007*"臉" + 0.007*"好聽" + 0.006*"放假" + 0.006*"聲音" '
  '+ 0.005*"補充" + 0.005*"剩下" + 0.005*"勇氣" + 0.004*"鼓起"'),
 (2,
  '0.005*"村" + 0.004*"型" + 0.004*"百岳" + 0.004*"恆春" + 0.004*"幼稚" + 0.004*"系列" + '
  '0.004*"肚子" + 0.004*"燒肉" + 0.003*"吃完" + 0.003*"清淡"'),
 (3,
  '0.005*"學生" + 0.005*"推文" + 0.004*"條件" + 0.004*"台語" + 0.004*"醫生" + 0.004*"編輯" '
  '+ 0.004*"臺灣" + 0.004*"名單" + 0.003*"寂寞" + 0.003*"碰面"'),
 (4,
  '0.007*"買" + 0.006*"東西" + 0.005*"健康" + 0.005*"接受" + 0.005*"情緒" + 0.004*"男" + '
  '0.004*"選擇" + 0.004*"想法" + 0.004*"適合" + 0.004*"學習"'),
 (5,
  '0.008*"遇到" + 0.007*"條件" + 0.007*"祝福" + 0.007*"重要" + 0.006*"幸福" + 0.005*"男生" '
  '+ 0.005*"花" + 0.005*"成熟" + 0.005*"浪費" + 0.004*"媽媽"'),
 (6,
  '0.015*"台灣" + 0.007*"安溥" + 0.007*"貓貓" + 0.005*"林口" + 0.005*"產品" + 0.005*"電話" '
  '+ 0.005*"新加坡" + 0.004*"交" + 0.004*"遠距" + 0.004*"留"'),
 (7,
  '0.018*"小孩" + 0.013*"單身" + 0.011*"正常" + 0.010*"結婚" + 0.010*"婚姻" + '
  '0.008*"生活圈" + 0.008*"簡單" + 0.006*"出門" + 0.006*"紀錄" + 0.006*"習慣"'),
 (8,
  '0.016*"真相" + 0.010*"照片" + 0.009*"活動" + 0.009*"體重" + 0.008*"下班" + 0.007*"旅遊" '
  '+ 0.007*"台北" + 0.006*"單身" + 0.006*"戶外" + 0.006*"罐頭"'),
 (9,
  '0.011*"喝" + 0.009*"拍" + 0.009*"酒" + 0.008*"露營" + 0.006*"熱情" + 0.006*"韓劇" + '
  '0.005*"品質" + 0.005*"相近" + 0.005*"咖啡" + 0.005*"風景"')]
```

Figure 2: LDA model of Alltogether