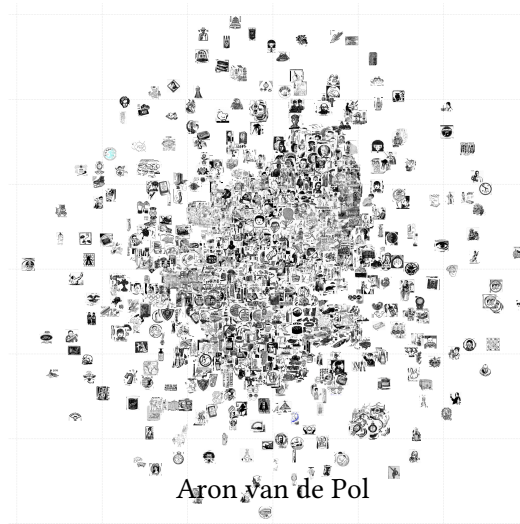


Pixels of Persuasion

AKSE 2025



Aron van de Pol

Leiden University Centre for Digital Humanities & Department of Korean Studies

2025-06-20



Morinaga Milk Caramels



Figure 1: Morinaga advertisement from Korea & Japan. Left: *Tonga Ilbo*, November 6, 1922. Right: *Ōsaka mainichi shinbun*, November 2, 1922, 4.



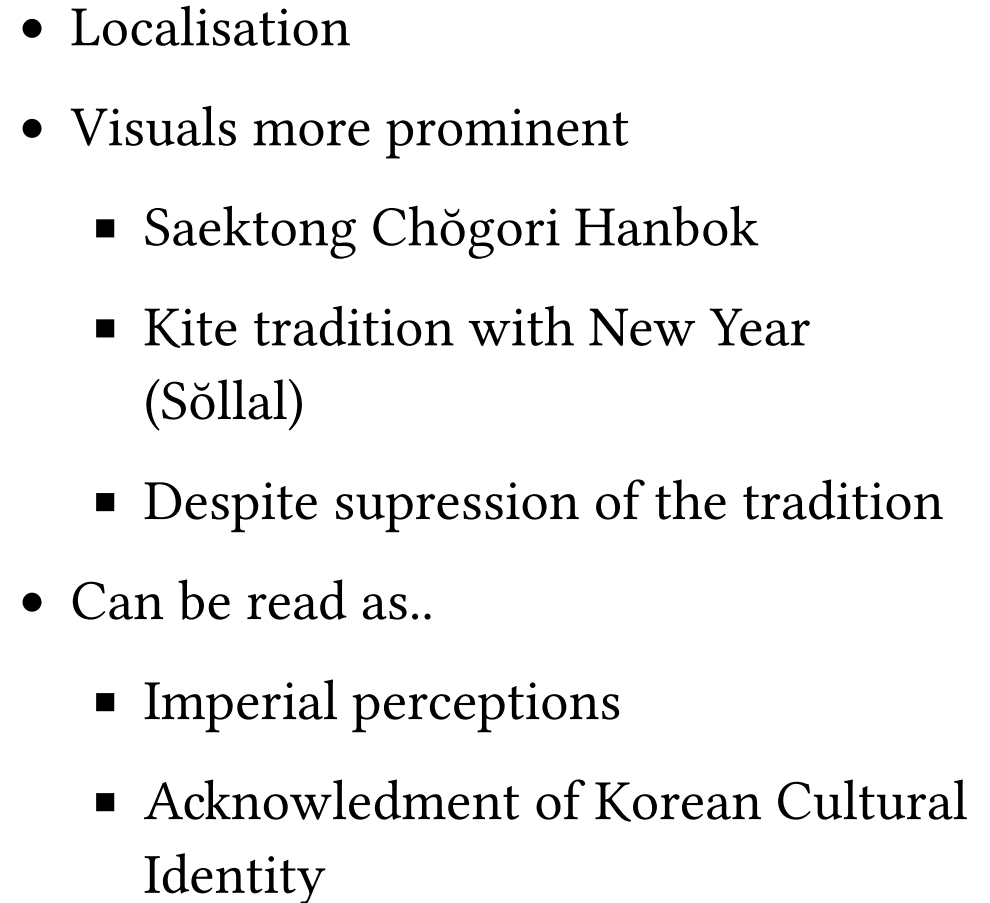
Morinaga Milk Caramels



Figure 2: advertisement for Morinaga *maeil sinbo*, July 7, 1930, 4

- Change in rhetoric
 - *For twenty million people in the country*
 - *The seventy million compatriots*
- Highlight on product rather than modern life
- Logo in *Han'gŭl* highlighted
- Step further in localising





Why Ads?

- Chronicle the marketplace itself¹
- Mirror and shape social norms²
 - How to look, What is modern?
- Stage the empire–consumer encounter³
- Preserve everyday experience⁴



1. Marchand, *Advertising the American Dream*; Oh, "An Analysis of Ginseng Advertisements in 1920-1930s Newspapers During Japanese Colonial Period".

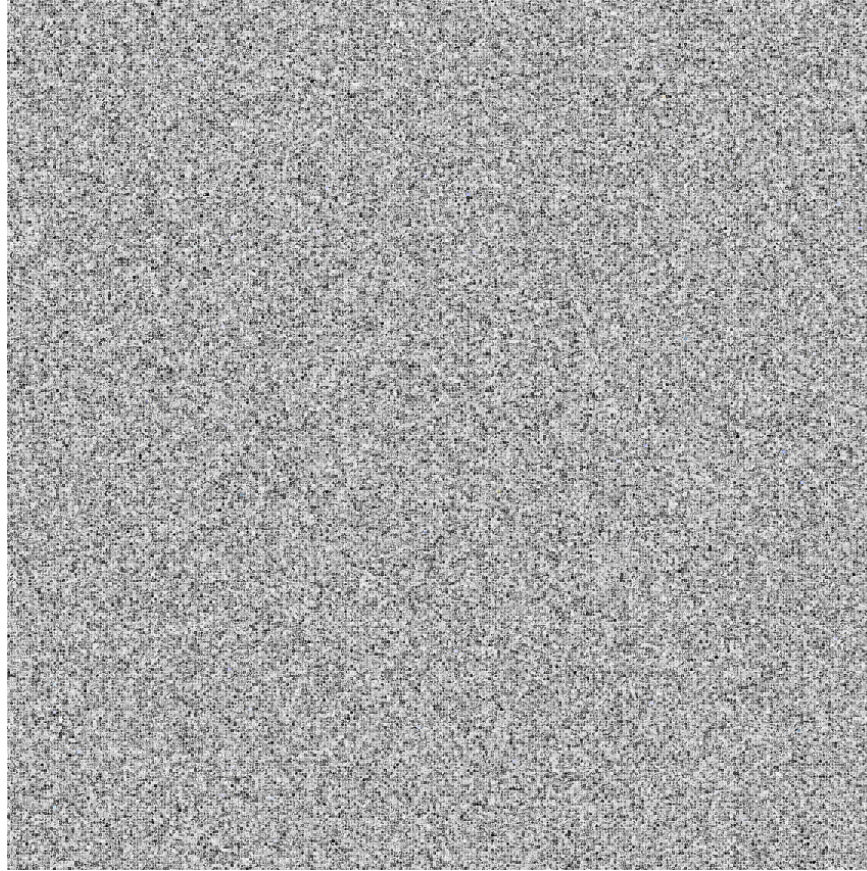
2. *Studies on Colonial Korea*: Chun, "Becoming Imperial Brands"; Chun, "Displayed Modernity"; Sô, *Sidae üi ölgul: Chapchi p'yoji ro ponün kündae* 시대의 얼굴: 잡지 표지로 보는 근대 [*The faces of magazines in modern Korea: Iconography, history and politics*]; or for this occurring in South Korean Society see: Fedorenko, *Flower of Capitalism*.

3. Chun, "Becoming Imperial Brands"; Chun, "Displayed Modernity".

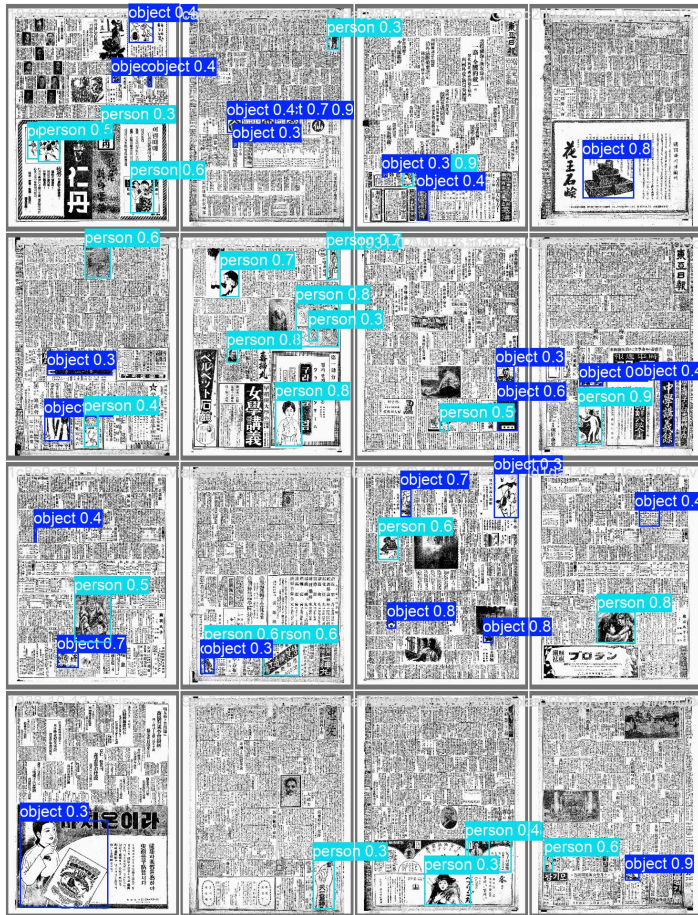
4. Marchand, *Advertising the American Dream*; Yoo, "Embodiment of American Modernity in Colonial Korea"; Ha, "Singminji siki manhwaajök p'yohyontüi chüngönhöng sinmun kwanggoe nat'an an kündaejök salmui üimi kusöngae" 시대의 시각 만화적 표현이 조망해 시대 만화적 표현의 그대



Searching for visuals?



Methodology



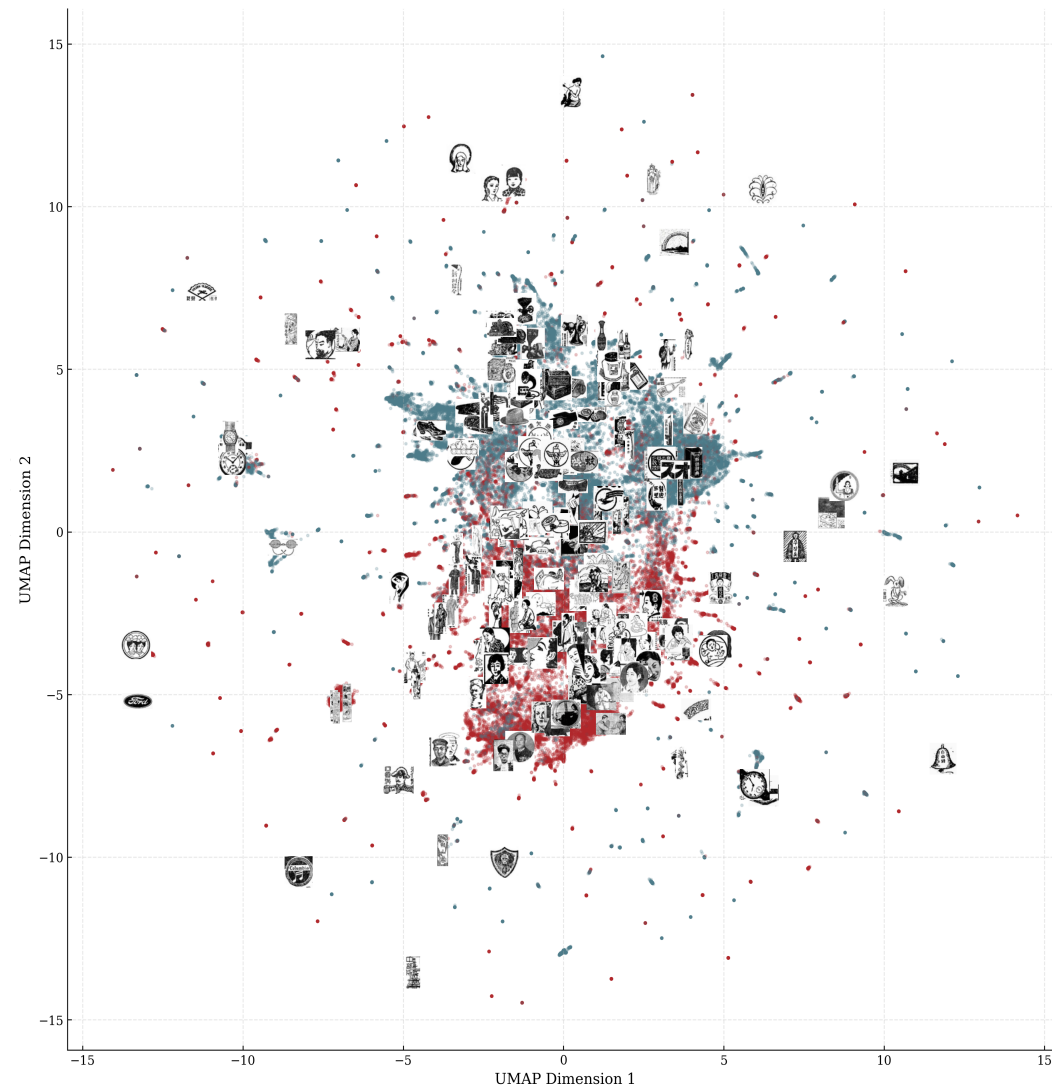
1. Label 1000 newspaper pages
2. Train YOLO Model to recognise advertisement illustrations¹
3. 'Cut Out' detected illustrations
4. Use CLIP model to generate 'embeddings'²
5. Work with embeddings to examine and search through visuals

Figure 4: Samples from YOLO detected illustrations



¹. Redmon et al., "You Only Look Once".

Embeddings Visualised



Clustering

Use Clustering Algorithm to form groups of visually similar illustrations

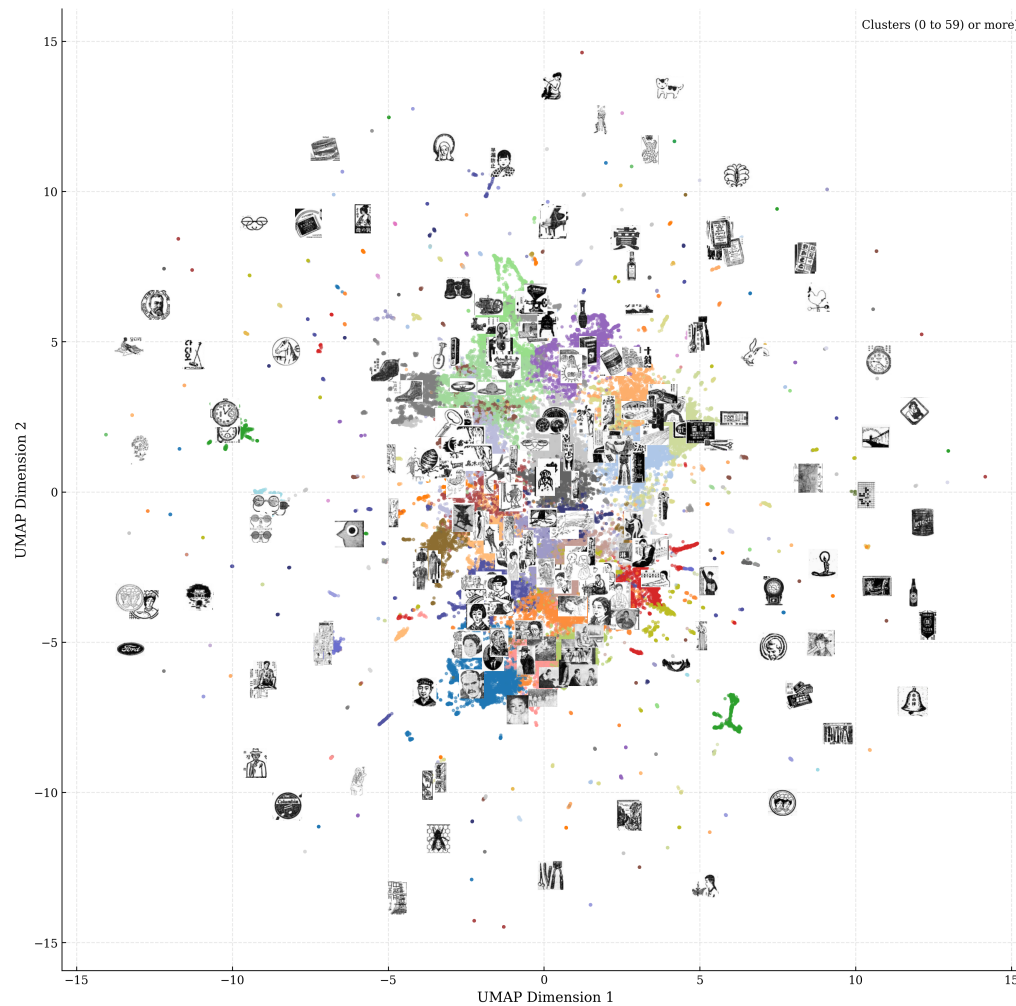


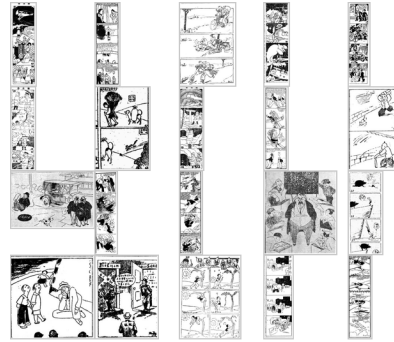
Figure 5: Embeddings Clustered using K-means



Clusters



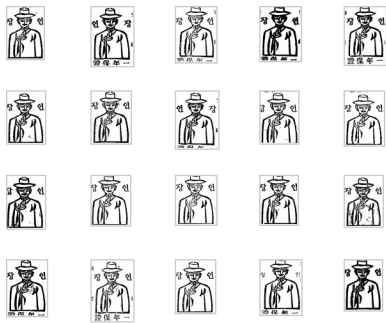
(a) Cluster 16



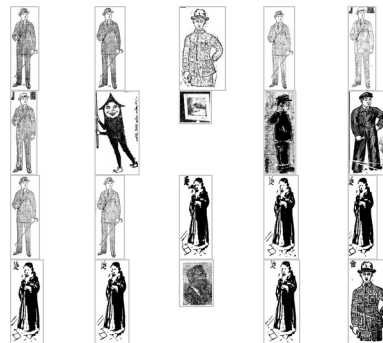
(b) Cluster 22



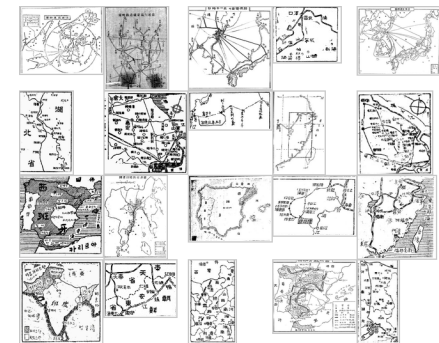
(c) Cluster 41



(d) Cluster 51



(e) Cluster 28

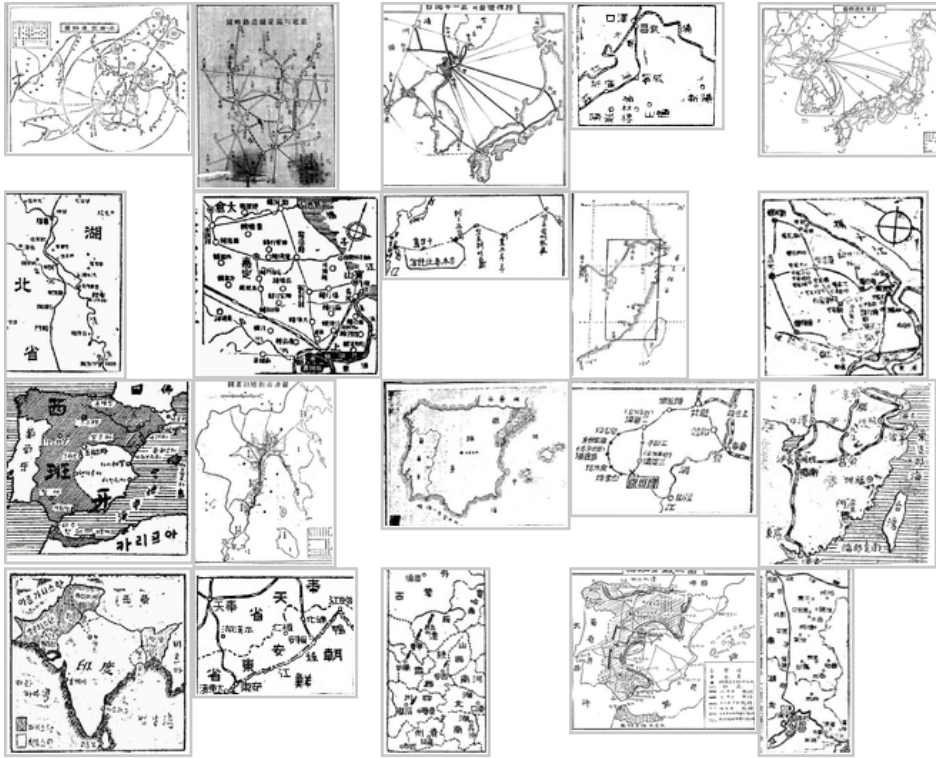


(f) Cluster 24

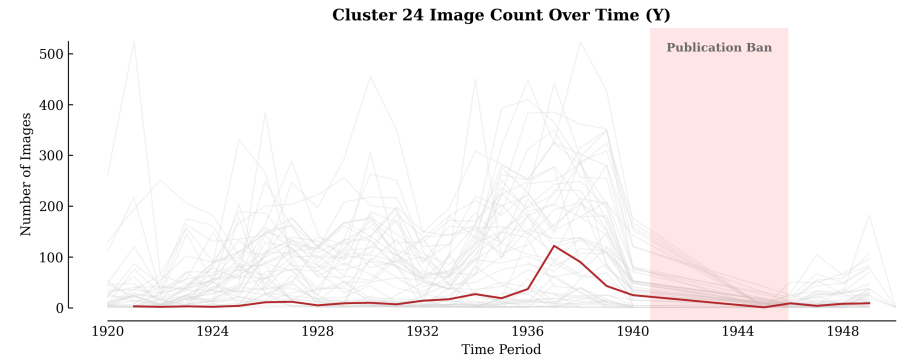


Figure 6: Samples of images in a given cluster

Temporal Trends



(a) Samples



(b) Trend



Figure 7: Cluster 0 Visualization

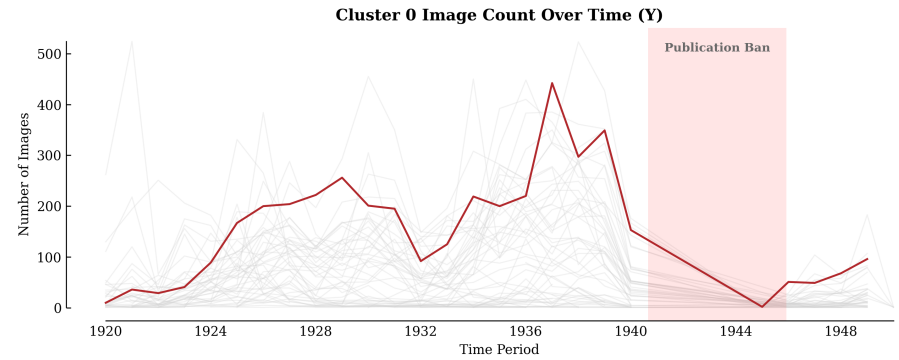




Temporal Trends



(a) Samples



(b) Trend



Figure 8: Cluster 0 Visualization

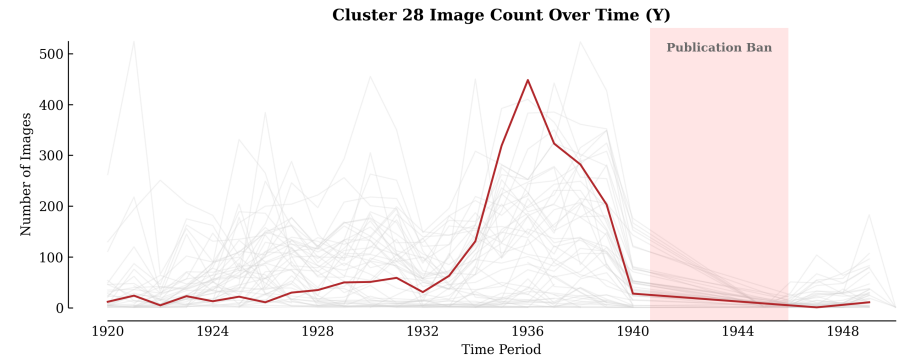




Temporal Trends



(a) Samples



(b) Trend



Figure 9: Cluster 28 Visualization



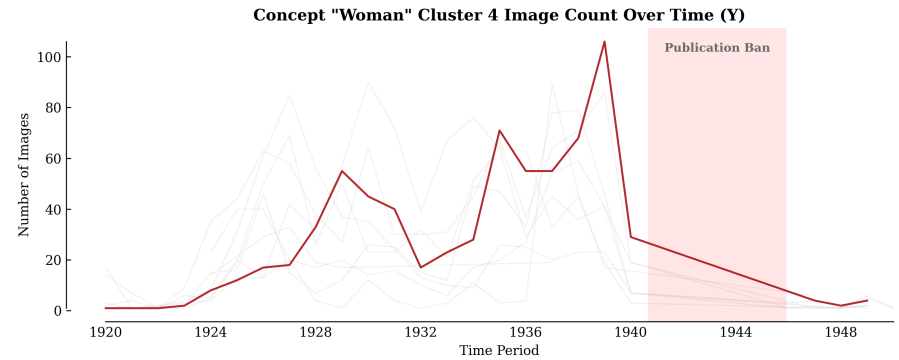


Word Driven Search

Search for keywords or concepts such as **woman**



(a) Cluster 16



(b) Cluster 22



Figure 10: Samples of images in a given cluster



Repeating Ads

Chain ID 0 | Items 135 | Unique Originals 124

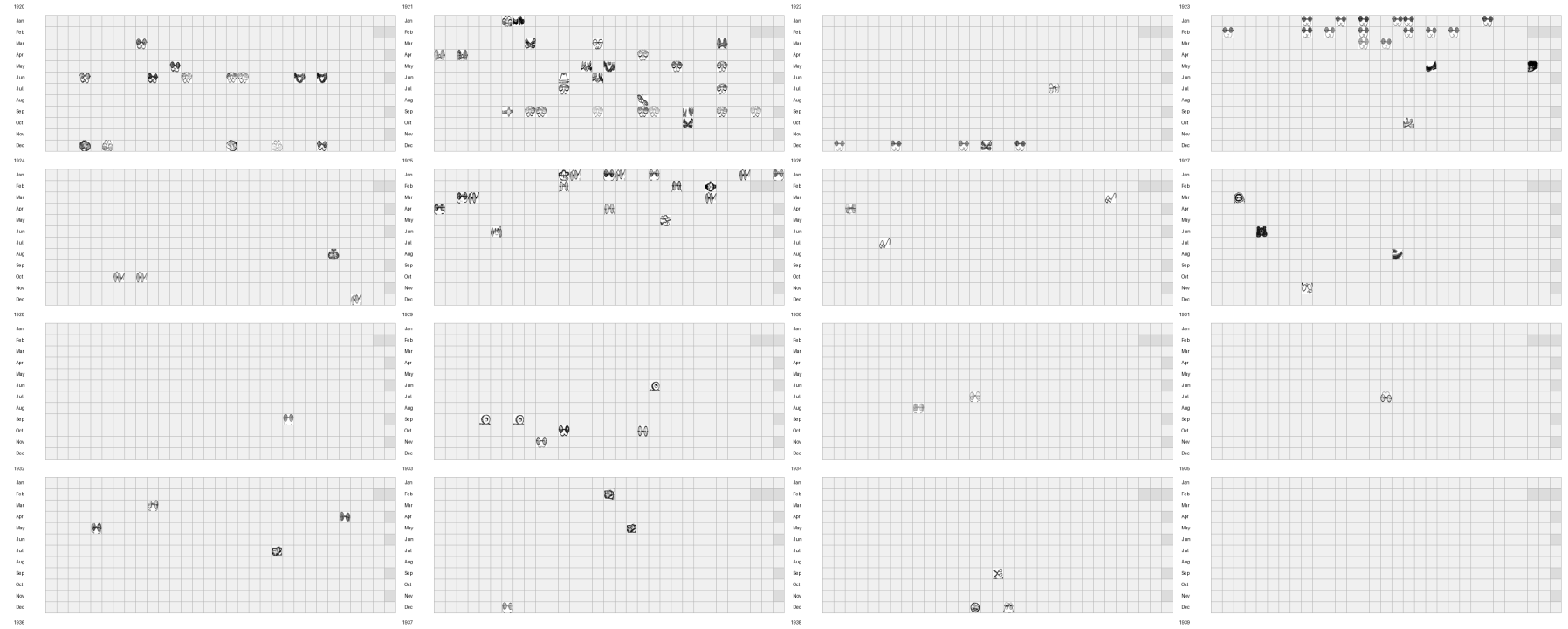


Figure 11: Glass illustration repetition



Problem

- Metadata
- What are we detecting?



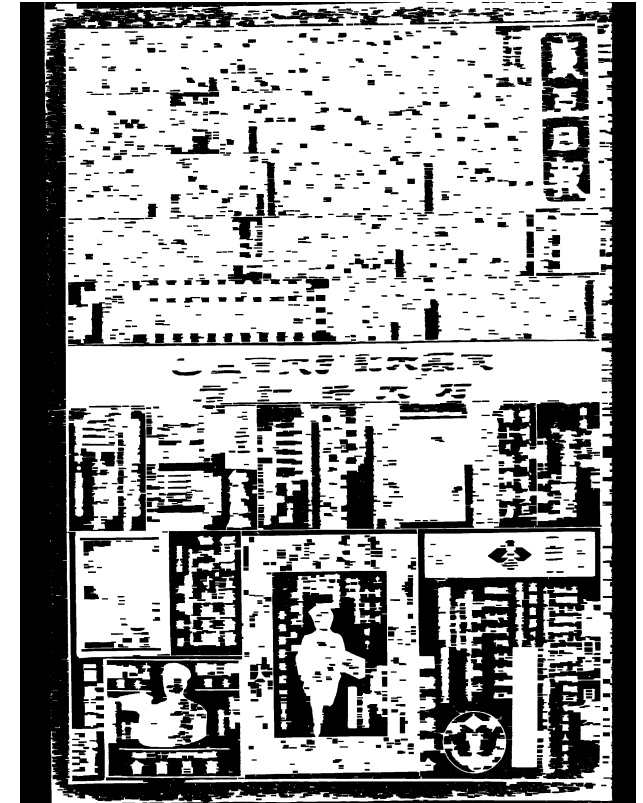
Parsing with SAM



(a) 1. Original Image



(b) 2. Binarization



(c) 3. Pixel morphing

Figure 12: Pre-Processing



Segmentation (multimodal)

With SAM (Segment Anything)¹



(a) Segmentation Map



(b) Bounding Boxes



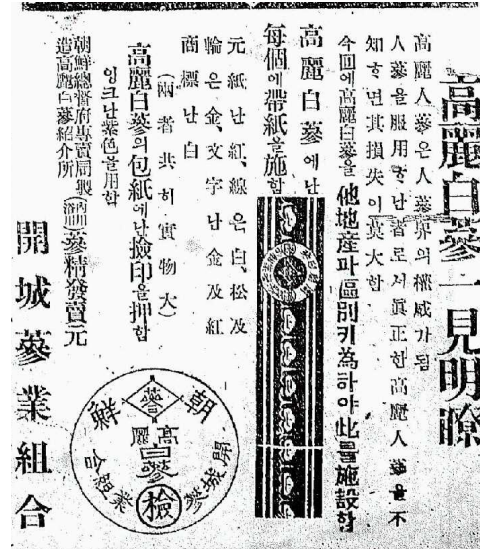
Figure 13



Boxes can be cutout...



(a) box 1



(b) box 2



(c) box 3

Figure 14: Box Cutouts



LLM (Large Language Model) transcription



Figure 15: box 1

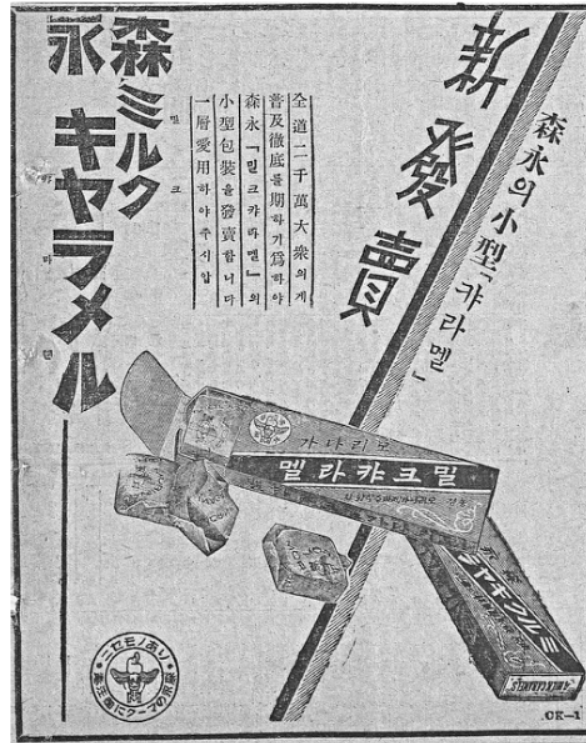
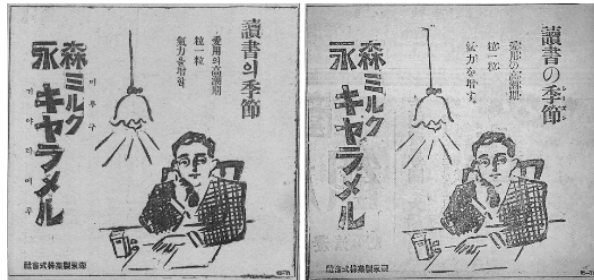
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1 {
2   "is_ad": true,
3   "company": {
4     "name": "朴德裕洋靴店",
5     "type": "Western-style shoe store"
6   },
7   "address": "京城寬助洞",
8   "product": "Western-style shoes and accessories",
9   "illustration_keywords": [
10    "businessman in suit",
11    "hat",
12    "briefcase",
13    "walking with purpose",
14    "early 20th-century lineart"
15  ],
16  "keywords": [
17    "洋靴店 (western-style shoe store)",
18    "割引 (discount)",
19    "附屬品 (accessories)",
20    "紀念曆 (commemorative calendar)",
21    "新舊曆 (new and old calendars)",
22    "歲暮割引 (end-of-year discount)",
23  ],
24  "promotional_details": {
25    "discount": "歲暮割引 (end-of-year discount)",
26    "offers": [
27      "product catalog and accessories",
28      "one-year commemorative calendar",
29      "new and old calendars"
30    ]
31  },
32  "location_context": "京城 (Gyeongseong, modern-day Seoul)",
33  "era": "Colonial Korea (early 20th century)"
34 }

```



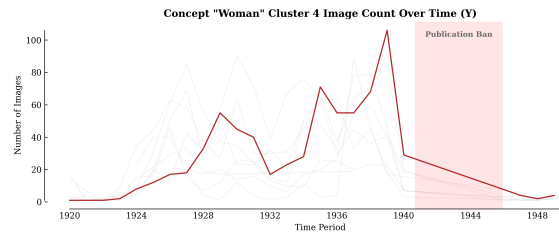
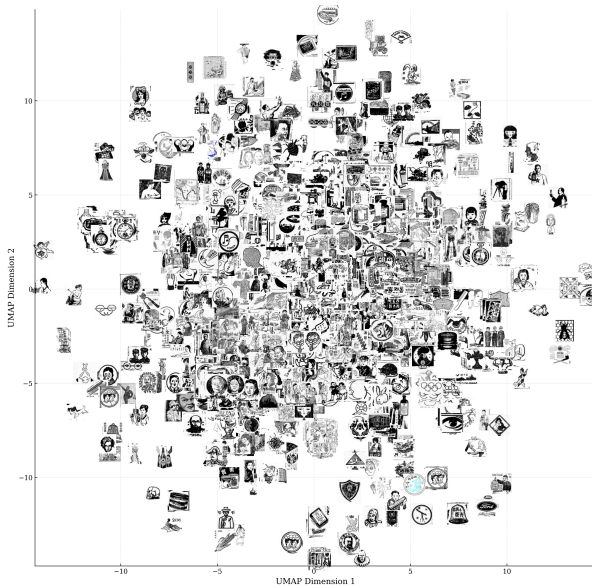
Morinaga's ads?



Thank you

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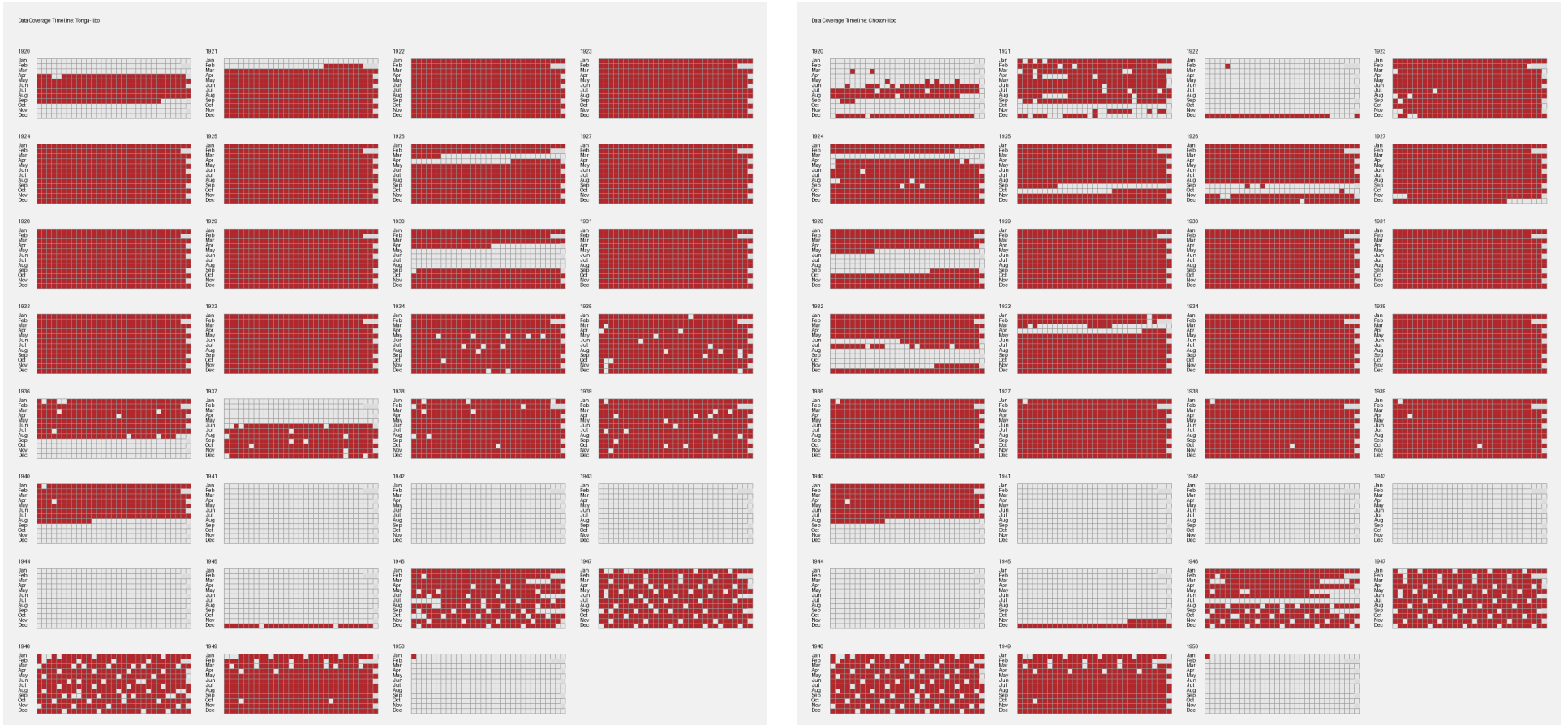


Supplimental Slides



Data

Gathered scans of Tong-a Ilbo (81,084) and Chosŏn Ilbo (77,192)



(a) Tong-a Ilbo

(b) Chosŏn Ilbo



Figure 16: Data coverage 1920-1950



