

**Comparing Comics and Manga to Komiks: Cross-Cultural (Dis)Similarities in
American, Japanese, and Filipino Comics**

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Abstract

Has the drawing style in the Philippines been influenced by Japanese manga, do the komiks resemble American comics more, or have Filipino artists created their own style? This thesis explored the differences in American, Japanese, and Filipino books based on attentional types delineating the framing or presentation of meaningful elements. This comparison was complemented with Spanish books as the Philippines has a long colonial history with Spain. The corpus of fifty books was analyzed with an ANOVA and k-means clustering. The ANOVA showed that Japanese and Filipino books make comparable use of attentional types. The predicted k-means analysis showed that the comics were primarily and equally divided over two clusters; the manga were clustered three times as much in one cluster compared to the other books, and older Filipino books were clustered separately. The differences in framing over time and across the countries are more apparent when the publication dates are considered; older and newer books were clustered differently. However, the fixed k-means analysis, where the books were forced into three clusters, indicated a strong similarity between the three countries. Only the old komiks formed the exception. The last k-means analysis contained books from Spain. Interestingly, the clustering indicated that books from Japan, the Philippines, and Spain could be categorized similarly, but American books are different. Together, these analyses indicate that the visual language regarding framing was distinct in older Filipino komiks, but newer komiks are more similar to Japanese manga than American comics. Altogether, these findings confirm the differences between American and Japanese framing and extend this knowledge by adding the Philippines to this cross-cultural understanding of visual language.

Keywords: comics, manga, attentional types, visual language

Comparing Comics and Manga to Komiks: Cross-Cultural (Dis)Similarities in American, Japanese, and Filipino Comics

Most of the time, if not always, comics are built out of panels, like the one marked in Figure 1. Sometimes these panels take up an entire page without a discernible border, or all of the panels melt together like a collage, but in essence, their function stays the same: each panel works together to convey a story. The quantity of meaningful information within a panel or lack thereof will be analyzed in this paper; this is called framing (Cohn et al., 2012). The framing structure of comics is an aspect of visual language and is related to the culture of the comics' country of origin. For example, comics from America tend to use more characters than Japanese manga (Cohn, 2011; Cohn et al., 2012). It could be that comics from the Philippines also convey information differently.

Figure 1

Examples of pages with "regular" bordered panels (a), no borders (b), and a collage (c)

(a) A page without borders, the first panel is outlined



(b) A page consisting of one panel



(c) A collage, the different panels are outlined



The Philippines has a long history of "cultural contact" even before the colonization by Spain and the United States and the brief occupation by Japan, as there are links with other (Asian) countries, such as China (Rodell, 2002, p. 8). While this history has led to a

nation with different racial origins, customs, and languages, most of its people would call themselves Filipino, one united group (Bernad, 1971). However, this unity may not be found within the graphic narrative or comic conventions of Filipino komiks (comics in Tagalog). Perhaps the American or Japanese influences remained apparent enough that they influenced the visual language within Filipino comics, making komiks more similar to either one or the other. The visual language might have developed with the Filipino language and culture, thus becoming an entity of its own. Although many structures are used in the visual language of comics, such as morphology and layout, the focus of this paper will be on framing. The reason is that the framing in American and Japanese books and the differences between the two countries have been studied (Cohn, 2011; Cohn et al., 2012). Since that is the case, focusing further on the framing might illustrate how the Philippines is situated compared to these two influences.

The overall structure of the introduction takes the form of three sections; the first section provides context regarding the analysed constructs. The second section will establish the cultural differences between American comics and Japanese manga structures. The second section gives a brief overview of the history of Filipino komiks. The third section lays out the consequential cultural and linguistic questions this thesis seeks to answer. In this paper, the terms books and comics will be used interchangeably with comics, komiks, and manga.

Theoretical Framework

Framing

Framing refers to how meaningful elements are featured within an attention unit, i.e., a panel (Cohn, 2007). Cohn states that there are two types of meaningful elements: active entities which engage in the action and inactive entities, which are background elements and can be omitted. If an element can be deleted without changing the narrative's meaning and without altering that sequence's meaning, then they are

considered an inactive entity. This test is also called the deletion test and is used to determine who or what is the focus of the narrative within the panel. An example of this is illustrated in Figure 2, where either the inactive entities (a) or the active entities (b) are deleted. Without the active entities, the panel no longer tells a coherent story. However, when the inactive entities are deleted, the narrative remains intact. The nature of these entities is not fixed, they can be one person, two people, a group, like in Figure 2, or even an inanimate object. The perception of whether an element is active or inactive is influenced by factors such as the depth, i.e. if it is in the background or foreground, centering, shading, and layout (Cohn, 2020a). By changing such factors, the author can guide the reader's attention and increase the reader's comprehension by letting them focus on the important information within the panel.

Figure 2

An example of the deletion test where the either the inactive entities (a) or the active entities (b) are deleted

(a) *An image without inactive entities*



(b) *The same image without the active entities*



Another aspect of framing is the attentional categories, which can be compared to the filmic shot scale. Both take the numbers and placements of the characters into consideration. However, the filmic shot scale is based on the distance between the subject and the camera and its categories are defined based on this distance. For example, the

extreme long shot, where the background is also shown and the long shot (head to feet) (Loschky et al., 2020). On the other hand, the attentional framing categories are based on the number of active entities and how much of that entity is shown (see Figure 3). The macro contains multiple active entities (Figure 3a), either partially or in their entirety. A mono depicts a single active entity; most importantly, this depiction also includes the face (Figure 3b). The micro contains less than an active entity, like a closeup without the face (c). An amorphic panel shows no active entities, only inactive entities (Figure 3d). Lastly, a null panel contains no meaningful information, as depicted in Figure 3e (Cohn, 2020b). As a result of this difference between shot scale and attentional types, both the extreme long shot and the long shot could be classified as a mono, so long as these shots would show a singular entity.

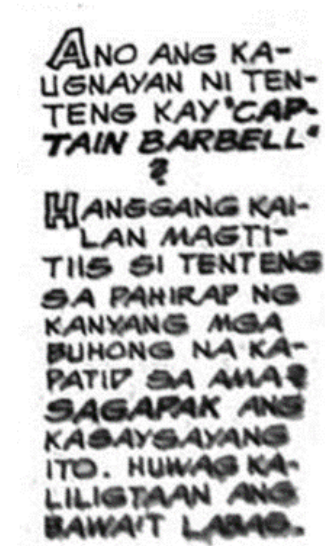
The processing of this information can also be referred to as the construction of an event model in the working memory. This model can eventually be stored in the long-term working memory. New information can be mapped onto an existing event model and thereby update it, but only if it is coherent with the event indices, such as time or entities, as is the focus of this paper (Gernsbacher, 1997; Zwaan & Radvansky, 1998, as cited in Loschky et al., 2020). To maintain a coherent mental model, a comprehender (in this case, the reader of a comic) should be able to bridge inferences if they perceive a lack of information, i.e., when there is a gap in the narrative or when events are causally related (Loschky et al., 2020). The ability to create a mental model relates to the reader's capabilities of the reader, which can depend on their familiarity with the material.

Cultural Differences Between Comic Structures

Previous research has established a difference in the types of transitions across panels between Japanese manga and mainstream American comics. American comics mostly made more use of action-to-action transitions; as such, there would be a distinct timelapse between panels. Shifts between characters and then between locations followed.

Figure 3

Examples of attentional framing categories

(a) *Macro*(b) *Mono*(e) *Null*(c) *Micro*(d) *Amorphic*

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While mangas are dominated by action-to-action, characters, and location transitions, they use an additional type. These concern a shifting focus between aspects of a scene (McCloud, as cited in Cohn, 2011). Another paper mentions another difference between manga and comics regarding the attentional types of panels. Japanese panels make more use of monos, followed by macros and fewer micros and amorphics. In American comics, on the other hand, the ratio between macros and monos was almost similar, although they also made little use of micros and amorphics (Cohn et al., 2012). The findings of both these studies align with another study on the difference in perception between East Asians

and Westerners. East Asians tend to pay attention to relationships and changes, whereas Westerners focus on focal objects (Masuda & Nisbett, 2001; Nisbett & Masuda, 2003). Nisbett and Masuda argue that this cognitive difference is driven by social structure and presence. These studies provide evidence that Japanese and Americans create different mental models and use different visual languages. The findings also suggest that these differences in visual language will be present in Filipino komiks, as this difference is cross-cultural. Due to the history of the Philippines, which includes strong influences from Japan on the one hand and the United States and Spain on the other, its visual language could relate to Asian, Western, or neither visual language.

The History Of Filipino Comics

Komiks, the traditional term for Filipino comics, gained popularity in the 1920s and were heavily influenced by the United States in the 1940s (Flores, 2004). Although the comics influenced the komiks, Filipino artists created a style that was heavier and more "ornate" than its counterpart: "baroque, which can be found in numerous Filipino cultural creations" (Flores, 2004, p. 53). As such, the komiks were unique visually and vernacularly. However, by the 1990s, the traditional komiks were more akin to American comics, as they were now in English, and the art style had changed (Flores, 2004, p. 53). This history might predict that framing in komiks has shifted from something more unique to being more like American comics. It could also be that the colonization by Spain has left a more significant imprint on the Filipino Visual Language than it has had on the grammar. Although Tagalog uses few Spanish syntactical structures (Reid et al., 2018), this impact nevertheless increases the likelihood of the komiks being more Western than Asian.

While historical appreciation of Japanese art by the Filipino elite has been recorded, there was little cultural interaction in the 1930s (Yu-Jose, 2001). Additionally, the interest of the Japanese in the Philippines was motivated by economic opportunities and anti-American movements (Hayase, 1999; Yu-Jose, 2001). However, the nature of this

interaction changed when the influence of Japanese culture became global. This globalization also affected the comics scene through the popularity of anime in the 1970s, which inspired many artists to create Filipino manga (Fondevilla, 2007). Filipino manga is defined as a manga that Filipino artists have transformed by using Filipino cultural context and, in some cases, Filipino language instead of English. These supposed transformations led to discussions amongst artists and critics. Some felt that the Japanese manga lead to more aesthetic freedom as the character designs do not adhere to strict cultural norms.

In contrast, others called Filipino manga a cultural appropriation of Japanese culture (Fondevilla, 2007). Fondevilla ascribes this to what he calls the "generic manga style" where a character is drawn without distinct facial features that can be attributed to a specific race, making the character racially ambiguous (Fondevilla, 2007, p. 449). The Filipino artists also use exaggerated features when drawing expressions, such as large sweat droplets and snot bubbles, which are similar to Japanese conventions. Examples of this visual morphology, where the form is different, but the meaning is the same, are shown in Figure 4. This particular example showcases the influence of Japanese conventions on Filipino comics. Cohn, Taylor-Wiener, and Grossman also proposed that this type of framing might relate to cross-cultural attention, which would motivate Filipino komiks to be consistent with other Asian comics rather than Western, i.e., American or Spanish books (Cohn et al., 2012). As such, the proposed influence of manga might go beyond the aesthetics, in which case the framing within komiks may have shifted to be more like manga than comics.

Research and Hypotheses

Most, if not all, of the literature, discusses the (dis)similarities between komiks, comics, and manga through the narrative and art style rather than the visual narrative system. However, none of these papers provide data to substantiate the differences or thereof. The aim of this thesis is to shine new light on this debate by assessing whether the

Figure 4

An example of visual morphology from Japanese Visual Language



Note. This figure was drawn by Neil Cohn. From "The vocabulary of manga: Visual morphology in dialects of Japanese Visual Language," by N. Cohn and S. Ehly, 2016, *Journal of Pragmatics*, 7(9), p.18.

current Filipino komiks are more in line with the attentional structure found in American comics or Japanese manga. The central question in this thesis is as follows:

What is the attentional framing structure of Filipino komiks, particularly in comparison to those from Japan and the United States?

To answer this questions, the following three competing hypotheses will be tested:

H1a: Filipino komiks will be more like American comics in their framing, with more macros than monos, and few micros or amorphics.

The American Visual Language uses more macros than monos (Cohn, 2011), if

comics influence Filipino komiks, then komiks should use a similar ratio. The older publications were created before the increased Japanese influence and it is therefore expected that k-means will reflect that the older komiks will be more similar to comics than manga. However, if there was no change over time, then the usage of attentional types within komiks will consistently be more similar to American comics.

H1b: Filipino komiks will be more like Japanese manga and use more monos, followed by amorphics, and micros.

The Japanese Visual Languages uses more monos than macros (Cohn, 2011), and if the komiks are more influenced by the manga, then they will make similar use of these attentional types. The k-means analysis is expected to cluster the newer publications more with manga than with comics. Additionally, if there was no change of time, then the older komiks would also resemble manga, possibly as a result of the Filipino's appreciation of art (Yu-Jose, 2001)

H1c: Filipino komiks will be distinctive from both American and Japanese books and differ from both Visual Languages.

If komiks differ from both to such an extent, they have a different visual narrative system. Should this hold true, then this would mean that the distinction between comics, manga, and komiks will be reflected in each ANOVA, both before and after the k-means clustering analysis and regardless of the publication date. If manga has indeed taken over, then the panels in the komiks should have more panels with monos, micros, and amorphic relative to mainstream American comics. However, if the komiks show variations that are different to both, then this would imply that they have their own visual narrative.

To complement the analysis with these two visual languages, the komiks will also be compared to ten Spanish books. Based on the research by Masuda and Nisbett and Reid et al., the komiks could be more Western and thus similar to the Spanish books.

Method

Stimuli

The materials used for the analysis consist of 10 Filipino komiks, 20 manga from Japan, 10 comics from the United States, and 10 books from Spain. Each sample contained comics from the genres horror, fantasy, superhero, and romance, as these are popular genres and are thus well represented. The comics were collected from various sources, including webcomics, scans of comics, and donations from authors and comic companies. They were annotated as part of the larger TINTIN Project corpus. All sources are listed in the Appendix.

The older book in the corpus was published in 1947, the most current one was published in 2021, and the combined total of panels was 5,717. The Filipino books ranged in publication dates from 1963 to 2021, with a mean date of 2006 and a total of 669 panels. The Japanese books contained fewer recent publications ranging from 1954 to 2007, with a mean date of 1986 and 2,672 panels. The comics from the United States ranged from 1961 to 2014, with a mean of 2005 and 1,038 panels. The publication dates of the Spanish books range from 1947 to 2018, with the mean date at 2005. A total of 1,338 panels were analyzed across the books from Spain. The annotation of a book was cut off after 20 pages.

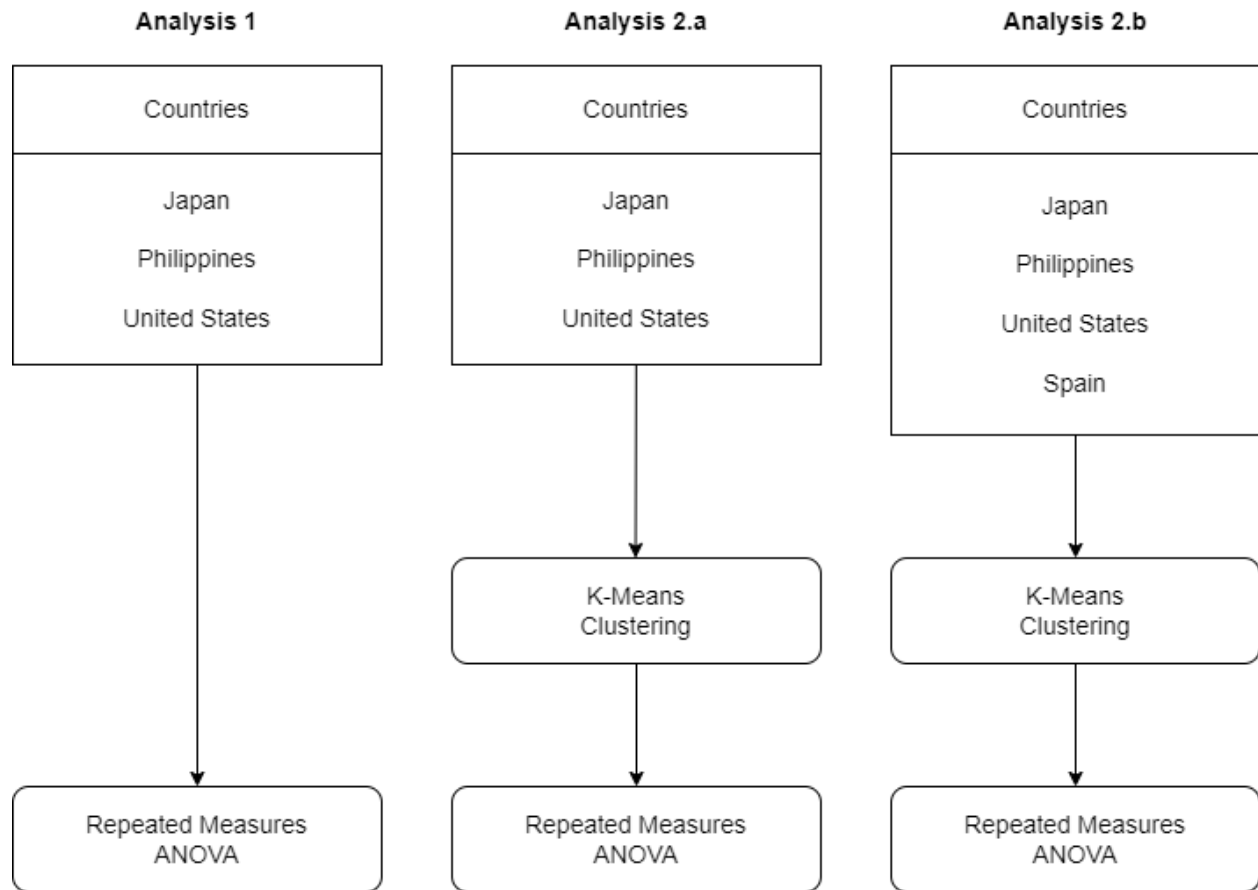
Procedure

Data was collected using MAST, an annotation software (Cardoso & Cohn, Under Revision). This software allows a coder to draw an area of interest, which in this case was each panel. Once the panels were drawn, they were individually annotated with their corresponding attention type according to the "VLT: Morphology: Framing Structure" annotation schema, see Figure 5 (Cohn, 2022b).

Each comic was coded up to approximately 20 pages, and the mean of each attention type was determined. The means of the attentional framing categories were used for each analysis. Four coders independently analyzed the framing structure of books in

Figure 6

A schematic overview of the conducted analyses



contained multiple active units, it was coded as a macro. A singular unit was coded as a mono, and if a panel contained less than a singular unit, it was coded as a micro. A panel without active entities and only inactive entities was an amorphic, and a panel without either, i.e., no information pertaining to the narrative, was coded a null.

Data Analysis

The attentional categories were analyzed using a 5 (Framing: macro, mono, micro, amorphic, null) x 3 (Countries) repeated measures ANOVA, where Framing is a within-group factor, and Countries is a between-group factor. This analysis of variance was

conducted to make a top-down comparison of framing across cultures. The second analysis used k-means clustering as a bottom-up approach to assess how the comics would be organized based on their framing types, not on imposed categorization based on their origin. Each book was divided into a group or cluster to make "the degree of similarity between two data observations is maximal if they belong to the same group and minimal if not" (JASP Team, 2022). The k-means clustering results are then used as input for a second ANOVA to assess the properties of the different clusters. K-means clustering and ANOVAs were first conducted using books from the USA, Japan, and the Philippines, and then again with Spanish books to add more context to the clusters. These repeated measures ANOVA were then a 5 (Framing: macro, mono, micro, amorphic, null) x 4 (Countries).

Results

Analysis 1: Repeated measures ANOVA

This analysis was conducted as a 5 (Framing) x 3 (Countries) repeated measures ANOVA with Framing set as the within -subjects effect and Countries as the between-subjects effect, to find the differences in framing between the countries. Significant main effects were shown for Framing, $F(4, 148) = 133.23, p < .001$. Post hoc analysis showed that this main effect occurred because the macros were more frequent than all other types ($p < .001$), monos more so than other types except for macros ($p < .001$), but micros, amorphic, and nulls were not (all $p < .05$). A significant interaction effect was found between Framing and Countries, $F(8, 148) = 3.09, p = .003$.

Simple main effects showed that framing types within each country differ (all $F > 31$, all $p < .001$). The Japanese books did not differ in their amount of macros and monos ($p = .210$), both of these types were used more than micros, which were used more than amorphics and those were used more than null panels (all $p < .001$). In Filipino comics, the macros and monos also did not differ ($p = 1$), but these were more frequent

than micros, followed by amorphics and even fewer null panels (all $p < .001$). American books used macros the most, followed by almost a third as many monos and fewer micros, very few amorphics and almost no null panels (all $p < .001$).

The averages of the attentional types per book are presented per country in Figure 7. Each dot represents one repeated measure, and these are connected with lines; thus a line in its entirety represents a book. The three countries differed significantly for only one attentional type when being compared. Macros in American comics were greater than Filipino and Japanese macros (all $p < .05$), but Filipino and Japanese macros did not differ ($p = 1$). However, the American, Filipino and Japanese mono did not differ significantly, neither did the American, Filipino and Japanese micros and amorphics (all $p < .05$).

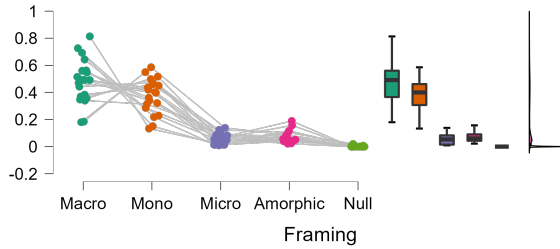
Analysis 2: k-means and ANOVA

This k-means clustering analysis was conducted to assess how the American, Filipino and Japanese would be organized based on their framing types, without regard to their origin. The optimal number of clusters for the k-means clustering can be based on the AIC (Akaike information criterion) value, where a lower value represents a better output; the BIC (Bayesian information criterion) value, where a lower value is also better, and a silhouette score can range from -1 to 1, where 1 is the best outcome. These values come into play when weighing the results of a predicted number of clusters and the results of a fixed number of clusters, which is based on the number of countries analysed. In contrast to the k-means analysis without a predetermined number of clusters, the hard partitioning algorithm is forced to sort the books into a fixed number of clusters based on the countries. Adding the fixed clustering supplements the predicted clusters, seeing how these outcomes were more condensed and perhaps more distinct as the clusters cannot exceed the total number of countries analysed.

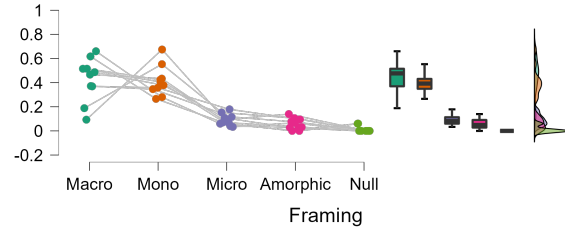
Figure 7

Raincloud plots with the attentional types per country (a) Japan (b) the Philippines (c) United States. Each dot represents the average of a book

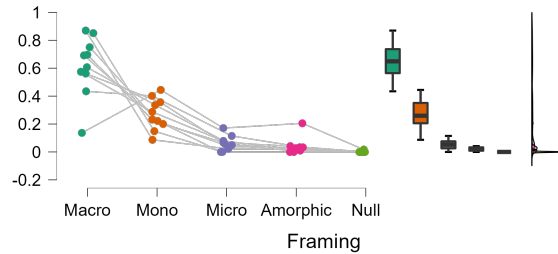
(a) *Japan: No significant difference between macros and monos*



(b) *The Philippines: No significant difference between macros and monos*



(c) *The United States: More macros than monos*



Analysis 2.a: Japan, the Philippines, and the United States

Predicted K-Means Clustering

The k-means clustering analysis was conducted to find out how the corpus consisting of books from Japan, the Philippines and United States would be organized based solely on the attentional types. The k-means clustering with a predicted number of clusters resulted in a total of four clusters (AIC = 100.69, BIC = 134.47, and silhouette score = 0.36). Cluster 1 was the biggest cluster with 22 books (silhouette = 0.315), cluster 2 was the smallest with 2 books (silhouette = 0.72), cluster 3 contained 9 (silhouette = 0.48), and cluster 4 contained 7 books (silhouette = 0.22).

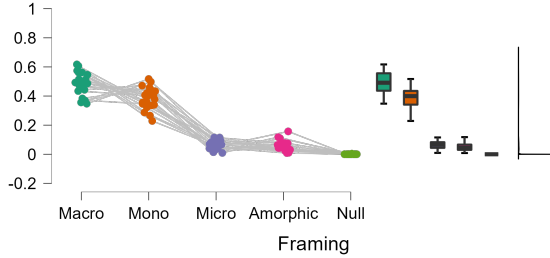
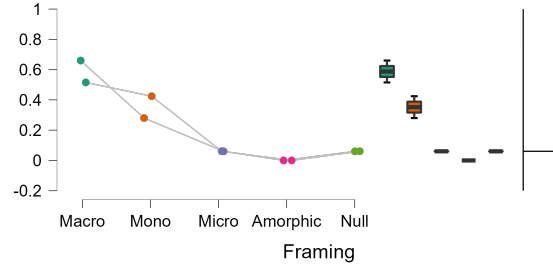
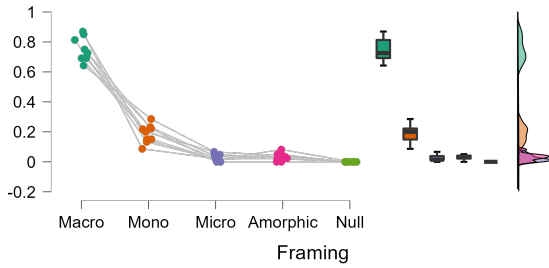
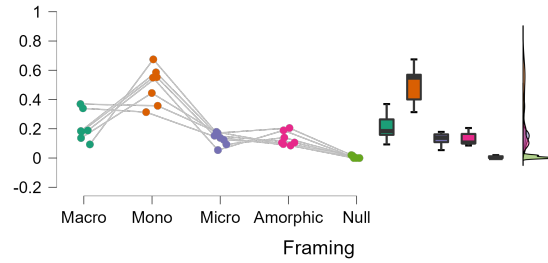
The resulting clusters obtained from the k-means analysis were then analysed with a 5 (Framing) x 4 (Clusters) repeated measures ANOVA with Framing set as the within-subjects effect and Clusters as the between-subjects effect, to investigate the properties of those clusters. Significant main effects were again shown for Framing, $F(4, 144) = 229.49$, $p < .001$. A significant interaction effect was found between Framing and Clusters, $F(12, 144) = 33.416$, $p < .001$.

The averages of the attentional types are presented per cluster in Figure 8. Cluster 1 used more macros than monos, followed by few micros, fewer amorphics and fewer null panels (all $p < .001$). Cluster 2 also used more macros than monos ($p = .029$), but used slightly more null panels than micro and amorphic panels, which were used the least (all $p < .001$). Macros were a lot more prevalent than monos in cluster 3, followed by nulls, micros and amorphics (all $p < .001$). The last cluster, cluster 4, contained more than double the amount of monos than macros, followed by null panels ($p < .001$), but the micros and amorphics did not differ significantly ($p < .05$).

The distribution of attentional types across the four clusters differed significantly. The difference between the macros in clusters 1, 3 and 4 differ significantly (all $p < .001$), with cluster 3 containing the most macros. However, the difference between cluster 1 and 2 was not significant ($p = .971$). Monos were most frequent in cluster 4 ($p = .002$), followed by cluster 1 ($p < 0.001$). The differences in monos between cluster 1 and 2 were again not significant ($p = 1$). The differences between the monos, micros and amorphics were not significant across the four clusters (all $p < .05$). These clusters were then plotted to find how they divide the books of the three countries, see Figure 9. The American comics were distributed almost equally across clusters 1 and 2, only *Spawn* was sorted into cluster 4. The Filipino komiks were mostly sorted to cluster 1 and to a lesser extent into cluster 4, two komiks were clustered in Cluster 2 (see b), namely *Captain Barbell* and *Darna* both of which are old publications. The Japanese manga are also mostly allocated to cluster 1. The books were then also separated based on the publication dates: books published after

Figure 8

Raincloud plots with the attentional types per predicted cluster

(a) *Cluster 1*(b) *Cluster 2*(c) *Cluster 3*(d) *Cluster 4*

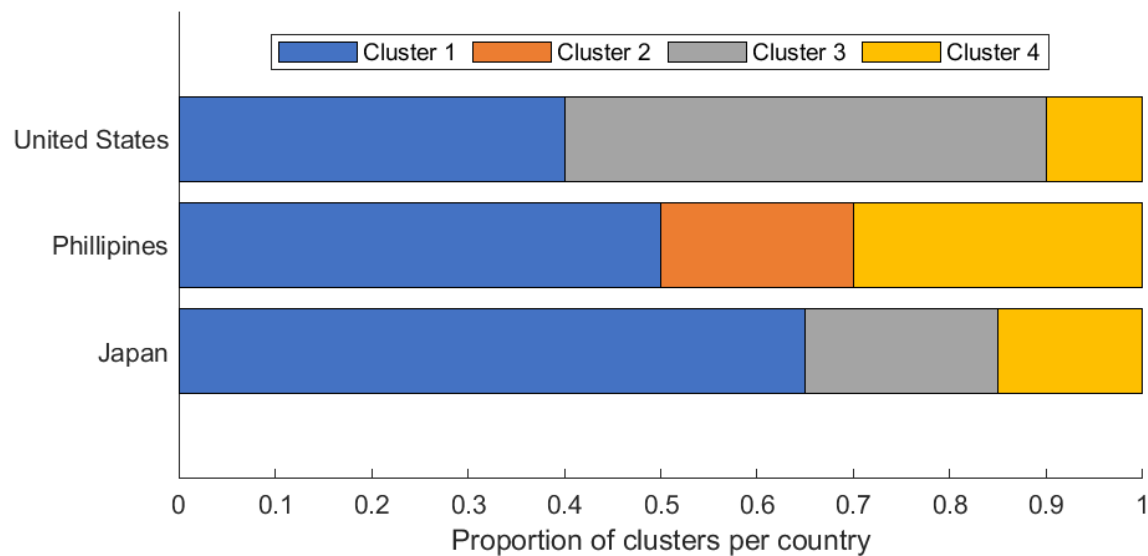
1980 were classified as new for this analysis but the exact publication dates are presented in Figure 10. These dot plots were used in all analyses where the publication dates were considered to illustrate the breakdown of the older and newer publications in more detail. The older American books are allocated mainly to cluster 1, the Japanese books are split equally into clusters 1 and 4. The older komiks are the only books that are split into a unique cluster. The proportions of the newer publications (published after 1980) are similar across the mainly two clusters, with one Japanese book (*Beserk*) as an outlier.

Fixed K-Means Clustering

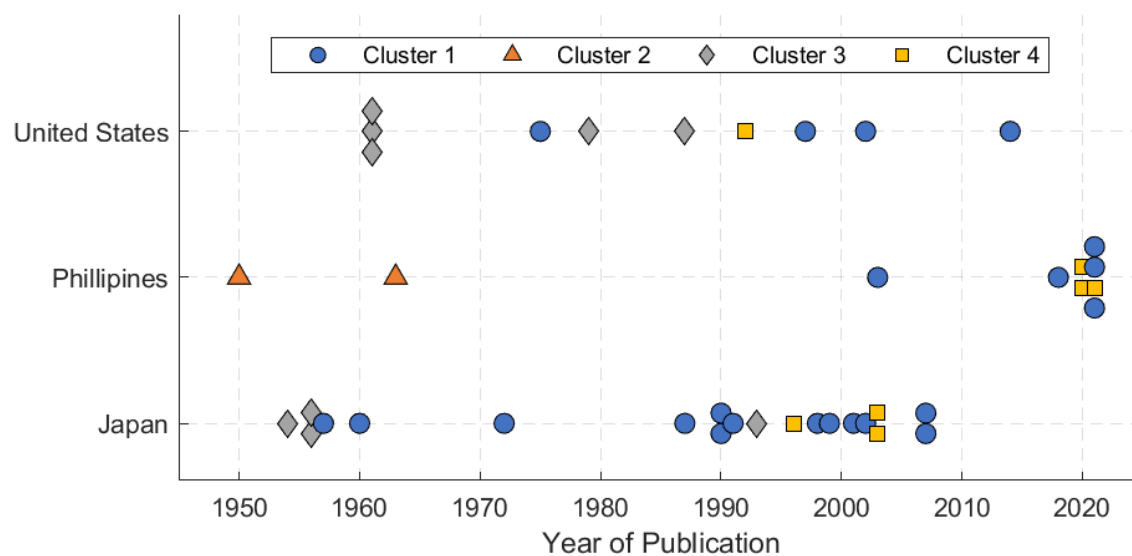
A follow-up k-means clustering with set to three clusters and a subsequent ANOVA was conducted. The fixed number for the second analysis was based on the three countries and the expected outcome of three visual languages. Compared to the predicted k-means

Figure 9

The predicted clusters divided over countries

**Figure 10**

The predicted clustering and publication dates of the American, Filipino, and Japanese books



clustering, the fixed k-means resulted in a higher AIC (115.00) and BIC (=141.32), but a lower silhouette score (0.39). Cluster 1 contained 25 (silhouette = 0.42), cluster 2 contained 13 (silhouette = 0.29), and lastly cluster 3 contained 2 books (silhouette = 0.72).

The 5 (Framing) x 3 Clusters) repeated measures ANOVA with Framing once again as the within -subjects effect and Clusters as the between-subjects effect. Both the main effect for Framing, $F(4, 148) = 95.83, p < .001$) and the interaction effect between Framing and Clusters $F(8, 148) = 21.04, p < .001$) remained significant.

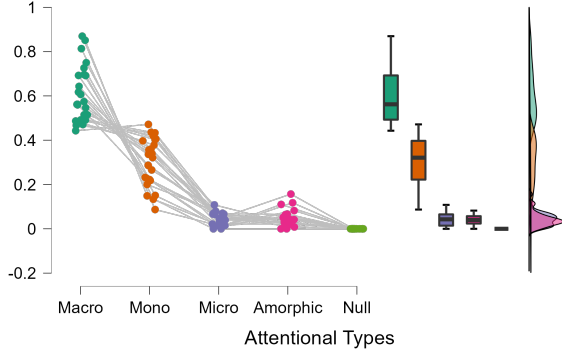
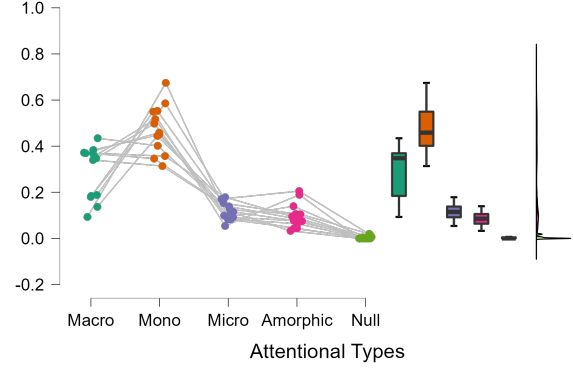
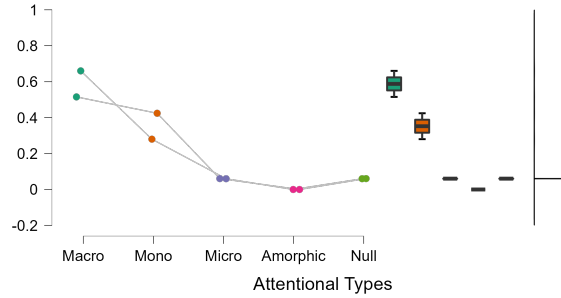
The averages of the attentional types of the fixed clusters are presented in Figure 11. Cluster 1 used almost twice as many macros than monos, followed by a few amorphics, fewer micros, and no nulls (all $p < .001$). Cluster 2 made almost twice as much use of monos compared to macros and three times as many macros than micros, followed by almost as many amorphics and almost no nulls (all $p < .001$). Cluster 3 did not differ significantly in the amount of macros and monos ($p = .234$). However, both of these types were used more than micros and nulls, which were used in equal amounts and no amorphics were used (all $p < .001$).

The difference between the macros in cluster 1 and 3 was not significant ($p = 1$), but the difference between these cluster and cluster 2 was ($p < .001$), with cluster 2 having the fewest macros. The difference across the clusters between the monos, micros, amorphics and nulls was not significant ($p = 1$).

Without taking the publication dates into account, the comics and manga seem to be clustered in a similar way, while the Filipino books resulted in a unique cluster, as illustrated in Figure 12. However, after taking both the country of origin into account and publication dates into account, the books published before 1980 were responsible for the difference found in Figure 12, as presented in 13. The old Filipino komiks form a cluster of their own, while the American and Japanese books are all allocated to cluster 1 (also illustrated in Figure 13. However, the newer books are all equally split over clusters 1 and 2.

Figure 11

Raincloud plots with averages of the attentional types per fixed cluster

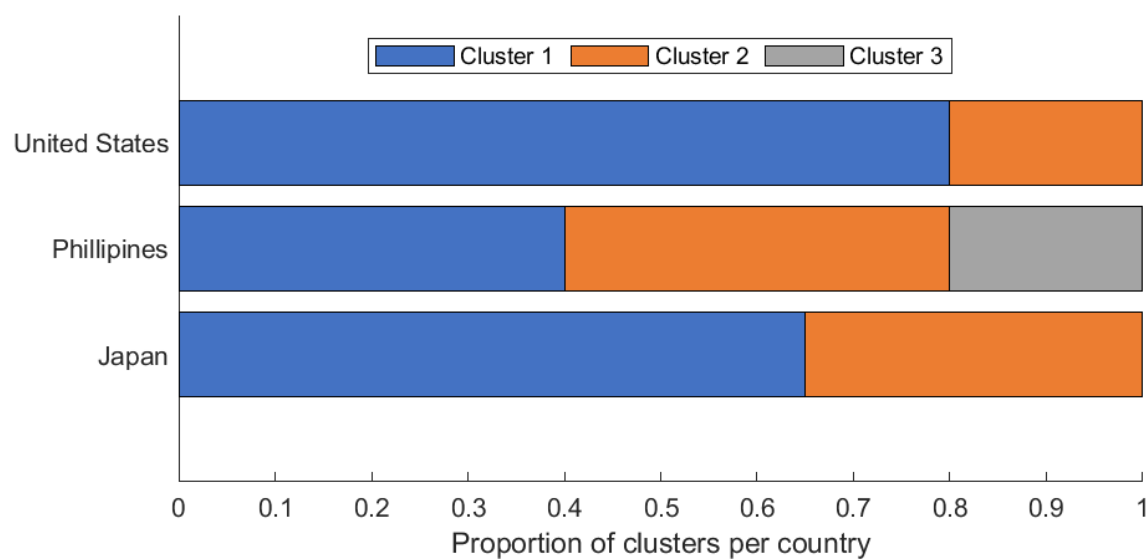
(a) *Cluster 1*(b) *Cluster 2*(c) *Cluster 3*

Analysis 2.b: Japan, the Philippines, the United States, and Spain

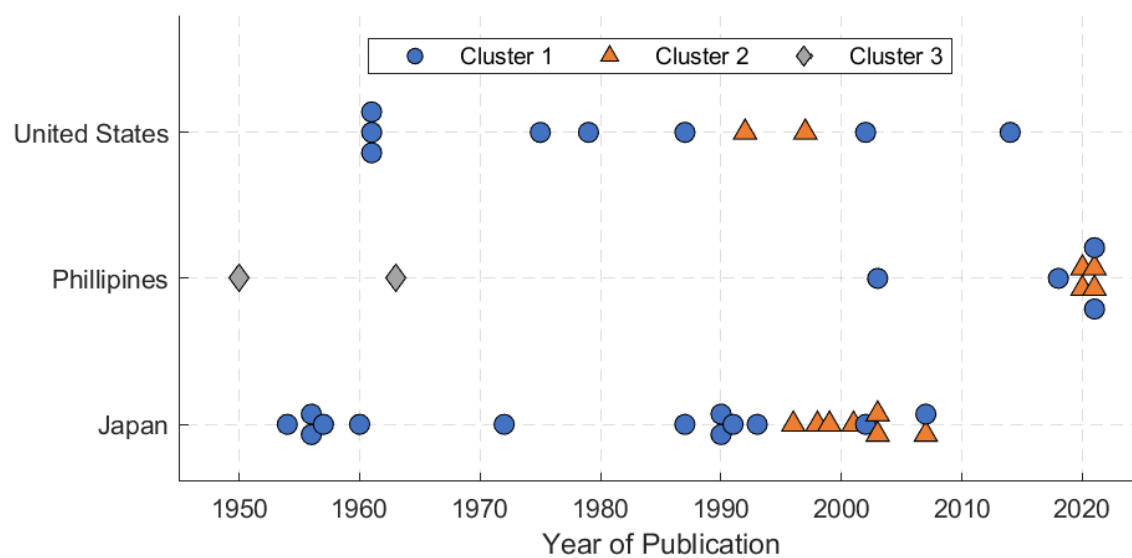
This k-means analysis included Spanish books to examine if the Filipino books have Spanish visual grammar in common despite the language having few Spanish syntactical structures as part of the grammar (Reid et al., 2018). The scores of the fixed k-means analysis were almost equal to the scores of the predicted clustering (AIC = 147.97, BIC = 186.21, and silhouette score = 0.34 compared to AIC = 135.57, BIC = 183.37, and silhouette score = 0.35). Both of these clusterings resulted in a outlier with one book and a silhouette score of 0.000, meaning that this particular cluster is either on or very close to the border of another one. Seeing how the outlier was present regardless of the number of

Figure 12

The fixed clusters divided over countries

**Figure 13**

The fixed clustering and publication dates of the American, Filipino, and Japanese books



clusters, it was removed from the dataset. Without *Ken Games*, the k-means clustering resulted in four clusters and an improved clustering output (AIC = 136.85, BIC = 174.68, and silhouette score = 0.34). This number is equivalent to the fixed number, which means that the subsequent ANOVA analysis needed to be conducted just once instead of twice, unlike the previous analysis.

The 5 (Framing) x 4 Clusters) repeated measures ANOVA showed main effect for Framing, $F(4, 176) = 66.37, p < .001$. Although there was no significant interaction effect between Framing and Clusters $F(12, 176) = 1.77, p = .056$, the results of the post hoc analysis were still included as the p-value is near significance.

Within Cluster 1, the macros were almost double the amount of monos, followed by an almost equal amount of micros and amorphics, and almost no null panels (all $p < .001$). Contrarily, the difference in cluster 4 between the larger number of macros compared to monos was not significant ($p < 1$), nor was the difference between the amorphics being more frequent than the micros and the lack of null panels (all $p < .05$). Cluster 3 also made more use of macros than monos, both of these were followed by fewer micros, then amorphics and lastly nulls. However, none of these differences were significant (all $p < .05$). This is likely due to the size of this cluster as it contains only two books (*Captain Barbell* and *Darna*). The averages of are presented in Figure 14. Note that cluster 3, consisting of only *Captain Barbell* was excluded from this comparison as well as the raincloud plots.

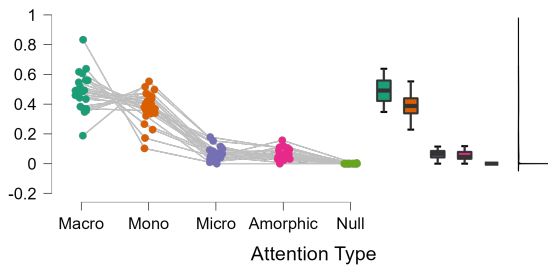
With the addition of the Spanish books, the books are proportioned differently compared to both the predicted and fixed clustering without the additional input of the Western books (Figures 9 and 12). To account for these differences, a comparison was made between Figures 10, 13 and Figure 16, thus taking the countries as well as the publication dates into account. In Figure 15, the American books are divided more into a single cluster than in the predicted cluster analysis. The American books clustering remained the same in this analysis compared to the fixed analysis, except for *Savage*

Dragon, which was clustered into cluster 2 instead of cluster 1, which is unique to this analysis. As for the komiks, the smaller clusters contain almost the same outliers. Cluster two contains two newer books (*Fluttering, Fleeing, and Freeing* and *Serendipity*) and one older book (*Darna*). The other two outliers, regarding komiks, are *Captain Barbell* and *Last Hope*. Unlike in previous analyses, the two older komiks are no longer clustered together. The Japanese books follow a similar pattern as the American books, as they are now clustered more into one cluster (cluster 4) compared to the analyses without the Spanish books. In addition, cluster 2 in the current analysis is the same as cluster 4 in the predicted cluster analysis, as are cluster 3 and 4 respectively. Lastly, the Spanish comics were either sorted into cluster 1 or cluster 4.

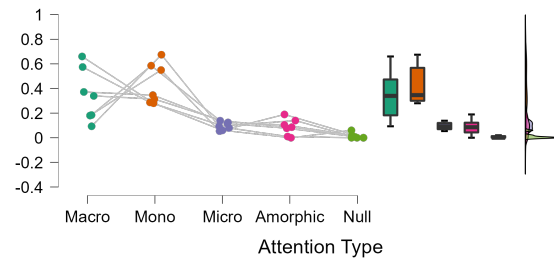
Figure 14

Raincloud plots with the attentional types per cluster

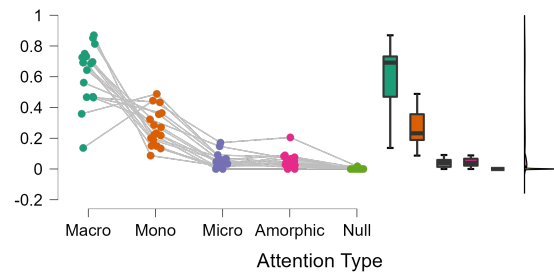
(a) *Cluster 1*



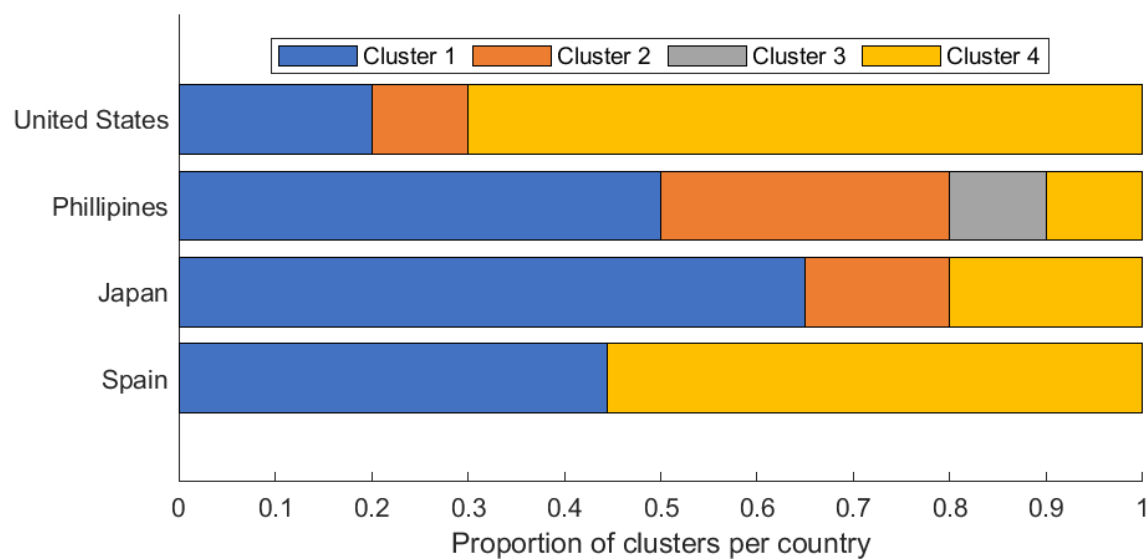
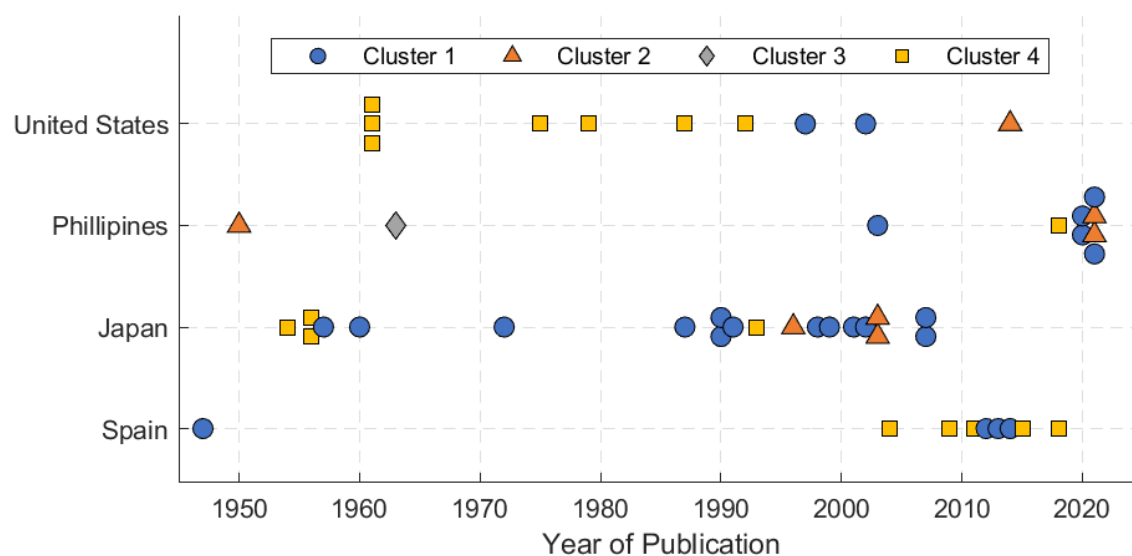
(b) *Cluster 2*



(c) *Cluster 4*



Note. Cluster 3 was not plotted.

Figure 15*The clusters divided over countries***Figure 16***The fixed clustering and publication dates of the American, Filipino, and Japanese books*

Discussion

The current study aimed to examine whether the Filipino komiks are more in line with the attentional structure found in American comics or Japanese manga and if they have their own or a similar visual narrative system based on this kind of framing. In order to find these differences, Japanese manga, American comics, Filipino komiks, and Spanish books were compared based on their attentional types.

In the analysis of attentional types across American, Japanese, and Filipino books, the American comics used more macros compared to both the Japanese and Filipino books. Neither the Japanese manga nor the Filipino komiks used a significantly different amount of macros compared to monos. Although the significant difference between the micros, amorphics, and nulls did not carry over across the countries, the overall results suggest that the difference between these books is based on their origin. This difference is in line with previous research (Cohn, 2011; Cohn et al., 2012; Masuda & Nisbett, 2001; Nisbett & Masuda, 2003). These findings also indicate that the framing within American comics is different than that in the Japanese manga and the Filipino komiks seem to be more in line with the former, supporting hypothesis H1b, which states that the Filipino komiks are similar to Japanese manga. This finding is consistent with what has been observed by others, reported by Flores who states that Filipino artists have been increasingly inspired by manga artists.

The same corpus was then analyzed to examine the books with more nuance, with a bottom-up approach using k-means analysis. The optimal number of clusters did not equal the expected number of two or three, which at first glance supports none of the hypotheses. However, upon closer inspection, the first analysis with four predicted clusters supported the hypothesis that the komiks are different from manga and comics because of the separation of the komiks published before 1980. In contrast, the newer publications from all three countries are similar in their visual language based on the attentional types used in these books. Furthermore, when the fixed k-means analysis was conducted with three

clusters, the old komiks remained outliers. This suggests that the visual language of komiks has shifted over time and has become more like comics, based on the attributes of the most prolific cluster 1. Cluster 1 contains books with more macros than monos, which is in line with previous studies on the attentional categories in American comics (Cohn et al., 2012), but this outcome contradicts the previous top-down analysis. Nevertheless, the fixed k-means clustering analysis showed an equal distribution of the newer komiks between clusters 1 and 2, suggesting that if the outcome of the k-means analysis is simplified, the Filipino komiks are neither more like manga nor like comics, but a combination of both, thus supporting neither hypothesis h1a nor h1b. While this does not mean that the Filipino visual language is fundamentally distinctive, it does mean that komiks mimic other aspects of the Filipino language and culture by synthesizing attributes from other countries and their languages and adapting them as their own (Bernad, 1971; Hunt, 1956; Rodell, 2002). As such, it could be argued that this analysis supports h1c.

To complement the comparison, the k-means analysis was repeated with Spanish books added to the corpus. The distribution of the four clusters across the countries is somewhat comparable. The most interesting thing is that the clustering of the United States and Japan is contrasting: where cluster 4 is more prominent in the former, cluster 1 is more prominent in the latter. The attentional types of these clusters are consistent with previous research: the "American" cluster 4 uses more monos than macros and can therefore be typed as comics, and the "Japanese" cluster 1 uses more monos. This is again consistent with previous findings (Cohn, 2011; Cohn et al., 2012; Masuda & Nisbett, 2001; Nisbett & Masuda, 2003), which suggests that the clustering of the Filipino and Spanish books is also fitting. The Spanish books followed a similar pattern as the Filipino komiks did in the fixed prediction, which suggests that newer publications, in general, have a visual language similar to both comics and manga, based on the attentional types. With the addition of this comparison, it also became apparent that the newer komiks are more like manga, as both clusters 2 and 4 share the traits found by Cohn and Cohn et al. Contrarily,

an older Filipino publication remained unique, which suggests that the framing of this particular book was strongly divergent compared to the others. Together with the results of the previous analyses, these results do not support the idea that Filipino komiks are different from American comics and Filipino manga regarding their visual language. Yet, the komiks have different patterns than both, which suggests that the individual books might be similar to either one, but the overall Filipino corpus is diverse to such a degree that it cannot be attributed to either country and might still be unique in its own right.

Limitations and further recommendations

This corpus analysis set out to examine the visual narrative language of the Filipino komiks based on attentional framing. Although the sample was representative of the types of comics as the most popular genres were included, further expansion of the corpus could lead to better AIC and BIC scores for the k-means analysis. Another weakness that would be addressed by increasing the corpus would be the imbalance between older and newer publications, as that could have affected the measurements. The paucity of older books from the Philippines, the United States and, more pressingly, Spain could have skewed the results. A natural progression of this work is to increase the corpus and analyze more domains of visual language. The present study provides an additional confirmation with respect to the differences between American, Spanish and Japanese visual narrative language and extends this knowledge by adding the Philippines to this cross-cultural understanding of visual narrative understanding.

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Appendix

The analysis used the following books, listed by country.

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United States

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