


The framing of subjectivity: Point-of-view in a cross-cultural analysis of comics

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ABSTRACT

In visual narratives like comics, the most overt form of perspective-taking comes in panels that directly depict the viewpoints of characters in the scene. We therefore examined these subjective viewpoint panels (also known as point-of-view panels) in a corpus of over 300 annotated comics from Asia, Europe, and the United States. In line with predictions that Japanese manga use a more 'subjective' storytelling style than other comics, we found that more manga use subjective panels than other comics, with high proportions of subjective panels also found in Chinese, French, and American comics. In addition, panels with more 'focal' framing, i.e. micro panels showing close ups and/or amorphic panels showing views of the environment, had higher proportions of subjective panels than panels showing wider views of scenes. These findings further show that empirical corpus analyses provide evidence of cross-cultural variation and reveal relationships across structures in the visual languages of comics.

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Introduction

Perspective-taking is an important aspect of narrative experience across modalities and can be thought of as the point of view or perception of a situation presented by a narrative, also called 'focalisation' (Genette 1980; Maier and Steinbach 2022). In visual narratives, perspective-taking pervades all images, as a visual depiction necessarily involves taking a perspective on a scene (Branigan 2012; Mikkonen 2017). Subjective perspective-taking most overtly appears in point-of-view (POV) or subjective viewpoint panels, where the visual depiction reflects the perceptual viewpoint of a character in the scene. While such subjectivity in comics has been widely theorised (Borkent 2017; Horstkotte and Pedri 2011; Maier and Bimpikou 2019; Mikkonen 2017; Packard 2016; Round 2007; Thon 2016), only minimal empirical analysis has examined how it manifests in the interpretation of actual comics (Moisich, In prep), and little work has systematically compared subjectivity across comics from different cultures (Cohn 2011). Here we make such a comparison by conducting a corpus analysis of 360 comics from Asia, Europe, and the United States to ask two questions: First, does the use of subjective panels

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vary across comics from different countries? And second, how do these representations of point-of-view interact with aspects of panel framing?

Subjectivity of character’s viewpoints can be encoded in several conventional ways in visual narratives (Jahn 2021; Mikkonen 2012, 2017). These often depend on the viewpoint taken on an object, such as framing a person to have the image look over their shoulder or look at a scene with a viewpoint from behind a person. The idea here is that the viewer is looking at the same direction as a character in the scene. This is taken one step further with a point-of-view image (POV), where the image takes the viewpoint as if it was being looked at by a figure in the scene.

In some cases, intrinsic properties of POV panels cue their subjectivity, while in others, it is created by the juxtaposition of images with each other (Thon 2016). For example, parts of a viewer’s body might be shown in a panel (Figure 1a), the shape of a panel could look like binoculars or the scope of a gun (Figure 1b), or an eye might cue a point-of-view, as might an angle of view chosen explicitly to seem like it is coming from a character’s eyes (Figure 1c). However, other subjective views arise because of the interaction of panels next to each other, an observation argued even in early film theory by Kuleshov (1974) which has recently undergone experimental analysis (Barratt et al. 2016; Calbi et al. 2019). In these cases, one panel might show the observer, with another panel showing the subjective viewpoint, with the inference being that the observer is viewing that scene. These subjective panels may no longer convey such subjectivity in an obvious way if taken out of context.

What then are the cues that signal subjectivity to a reader or viewer? Besides the explicit cues such as frames simulating percepts (scopes, telescopes and binoculars) and

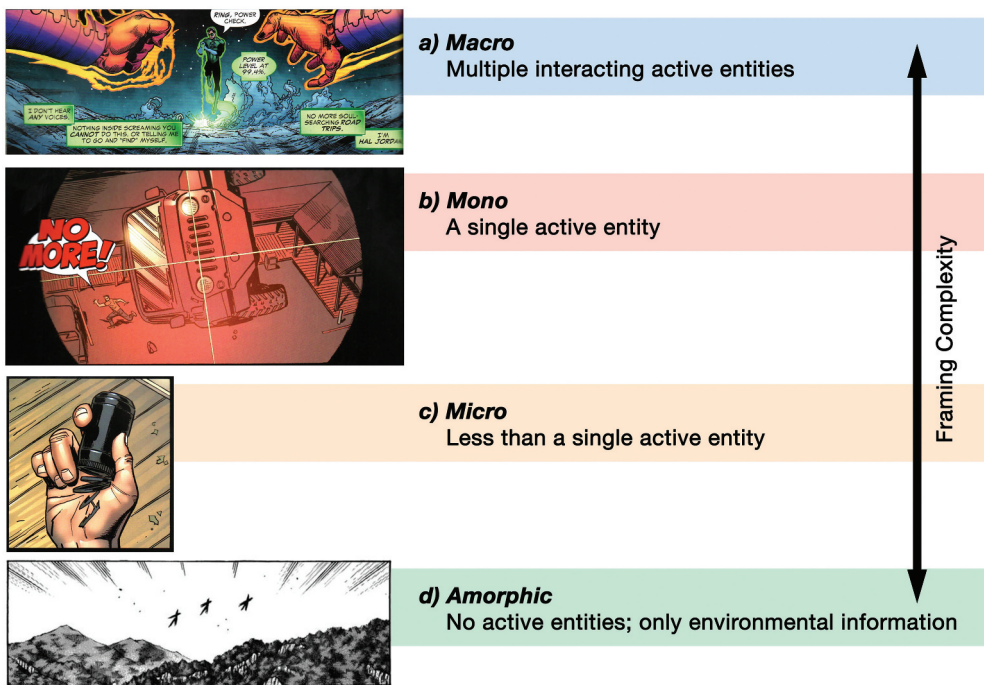


Figure 1. Subjective viewpoint panels using different types of attentional framing categories.

angles chosen to suggest an eyeline (Branigan 2012), more subtle cues have also been claimed to create a sense of subjectivity. A consistent claim has been that the subjective perspective, or internal ‘focalisation’ more broadly (Genette 1980), aligns with more ‘focal’ framing of a representation, where a viewpoint uses less information and/or tighter ‘shot scale’, such as a close-up or extreme close-up of film shots. Studies of shots in film provide mixed support for this idea. In general, point-of-view shots that depict a character’s viewpoint constitute 2–10% of shots in films (Cutting and Candan 2013, 2015; Salt 2016), and analysis of 24 films suggest point-of-view shots actually have longer shot scales than the average of all shots in a film (Cutting, personal communication). However, experimental evidence has shown that greater attribution of mental states was given to more focal shot framing in an animated film (Bálint, Blessing, and Rooney 2020; Bálint and Rooney 2019). These findings lead us to the question: can we find further evidence for a relationship between subjectivity and the framing of content in panels?

Theorising of drawn visual narratives have operationalised framing not only for how objects are presented, as in the shot scale of films (long shot, close ups, etc.), but also for the amount of information that they convey (Cohn, Taylor-Weiner, and Grossman 2012). Panels are comprised of active entities, which contribute to the semantics of the individual image and its sequence, and inactive entities, which provide meaningful information but which is not central for the overall message. The *attentional framing structure* of a panel thus can differ in the amount of active entities they depict (Cohn 2013). A macro panel is one that depicts multiple active entities, no matter their filmic shot presentation. For example, the macro in Figure 1a uses a subjective (POV) viewpoint, as do all the examples in Figure 1. A mono panel uses only one active entity, as in Figure 1b where the single character is throwing the ancillary object of a car. A micro shows less than one active entity – usually a body part or portion of a face – here canonically with a close-up viewpoint, as in Figure 1c. Finally, an amorphic panel depicts no active entities, showing only aspects of the scene or environment, as in Figure 1d. Altogether, the complexity of framing reduces across macros, monos, micros, and amorphic panels.

Experimental analysis of framing in relation to focalisation has suggested that less complex framing – i.e. more ‘focal’ framing – invites more attribution of internal mental states. Moisich (In prep) presented participants with panels from a graphic novel and asked them to assess panels for their focalisation. More panels with focal framing, particularly micros, were thought to convey internal focalisation, while no difference was shown across framing types for external focalisation. Notably, despite differences in their attentional framing structure, filmic shot scale showed no consistent relationship with attribution of focalisation.

This relationship of focalisation for framing structure is interesting given that corpus analyses have suggested differences in framing between comics from the United States, Europe, and Asia. Early corpus analyses found that Japanese manga contain less active information per panel than both American mainstream and indie comics (Cohn 2011; Cohn, Taylor-Weiner, and Grossman 2012). Indeed, the earliest of these studies also was the first to empirically analyse subjective (POV) panels in comics (Cohn 2011). Subjective panels were more prevalent in Japanese manga (1.6%), than in American comics (1%), and subjective panels overall in manga correlated positively with monos and micros. However, no analyses looked at the framing of the subjective panels themselves.

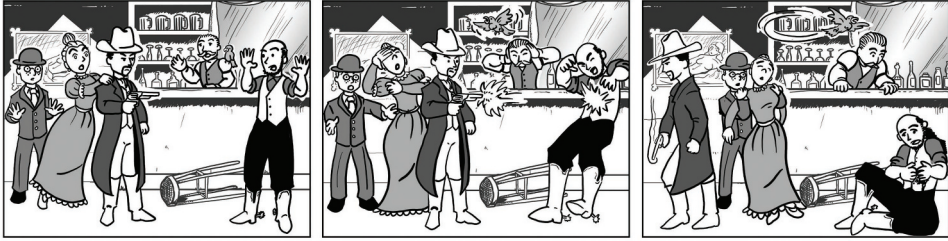
These findings of more focal framing in manga have been extended in subsequent analyses, showing that Asian comics (Japanese manga, Chinese manhua, and Korean manhwa) all use greater proportions of monos than macros, with increased proportions of micros and amorphous panels (Cohn 2020), consistent with other claims of manga using many close-ups or environmental panels (Shamoon 2011; Tsai 2018). In contrast, comics from Europe (Sweden, France, Germany, the Netherlands, Flanders) use almost double the number of macros than monos, with few micros or amorphics. Comics from the United States had a slightly smaller macro-mono ratio but still used more macros than monos and with moderate proportions of micros and amorphics. These proportions were consistent across genres in US comics (mainstream, indie), although they have changed over time and with influence from Japanese manga (Cohn 2020; Cohn, Taylor, and Pederson 2017).

The framing of information in panels has consequences on the narrative structure of a visual sequence. Sequences that use panels that convey less information (monos, micros and amorphics) will more directly show readers pertinent information but will place 'back-end' demands on a reader to infer characters belonging to a whole spatial environment, since a scene is not shown in total across panels. In contrast, sequences using macro panels will be more explicit about the spatial relationships of their contents, but may place demands on 'front-end' processes of visual search and attentional selection for readers to rapidly identify the relevant active entities of a broader scene. Thus, modulation of framing can place demands on different aspects of a readers' comprehension processes (Cohn 2020; Cohn and Foulsham 2020; Loschky et al. 2020).

One possible explanation for the presence of more subjective storytelling in Asian comics would relate to cross-cultural differences in attention itself. Experimentation has found that, while people from American culture, and to a lesser extent, European cultures direct attention at the primary characters of a visual scene, those from Asian cultures will also fixate surrounding aspects of the environment in the visual field (Masuda and Nisbett 2006; Nisbett and Masuda 2003). In this context, American and European comics might use an 'objective storytelling' method with more macros, as in Figure 2a, because authors implicitly expect readers to fixate on the primary elements in a panel. In contrast, Asian comics use more focal framing (monos, micros and amorphics), as in Figure 2b, to specifically depict the relevant information within each panel. This more 'subjective storytelling' uses the sequence to simulate a reader's attention as if they were moving their eyes around a scene (Cohn 2013). In other words, reading a sequence with panels using focal framing would give a sensation that a reader was placed within a scene and the panels show their viewpoint as they look around at its different component parts ('subjective'), as illustrated in Figure 2c. Meanwhile, macro panels maintain a separation that leaves the reader able to view a scene in totality ('objective').

The implication of this 'subjective storytelling' viewpoint is further supported by the idea that focal-framing aligns with focalisation or subjectivity in a visual narrative (Moisich, In prep). Indeed, Japanese manga specifically have been claimed to use more 'subjective' techniques to immerse readers into stories. McCloud (1993) claimed that manga storytelling enhances subjectivity through the increased use of panels showing environmental information (in our terms, amorphous panels) which cast a 'wandering eye' on a scene. He further claimed that manga show subjective views of motion by setting lines behind a object, which he claimed gives the sense that the viewer is moving along

a) “Objective” storytelling



b) “Subjective” storytelling



c) Simulated scan path of subjective storytelling

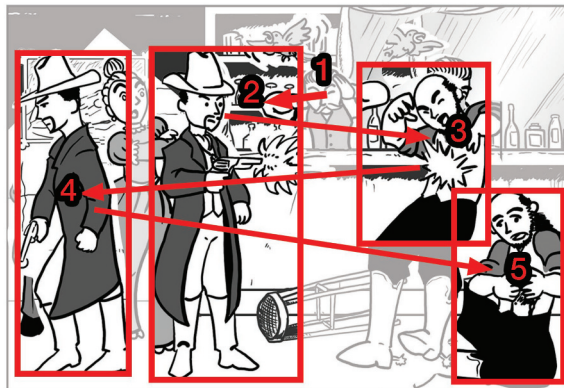


Figure 2. a) an “objective” storytelling technique showing full scenes in each panel, contrasted with b) a more “subjective” storytelling technique selecting portions of the frame at a time. Subjective storytelling which may be akin to c) where the eye scans across the parts of a scene.

with that moving object. Indeed, such background lines have been shown to give an enhanced sense of motion compared to regular motion lines (Ito, Seno, and Yamana 2010).

Based on these findings, we may predict an association between framing and subjectivity, but we might also ask: does subjectivity differ across cultures and genres? Specifically, we hypothesise that more subjective panels would be found in Japanese and other Asian comics compared to comics from Europe and the United States, as in prior work (Cohn 2011). To answer these questions, we conducted a corpus analysis of 360 stories from comics annotated within the Visual Language Research Corpus (Cohn,

Table 1. Comics analysed from the visual language research corpus.

Country/Type	Years	# of stories	Total Pages	Total Panels
China	1946–2016	13	349	2,212
Japan (Josei)	2002–2015	10	226	2,179
Japan (Seinen)	1985–2014	10	213	1,839
Japan (Shojo)	1987–2010	22	697	5,136
Japan (Shonen)	2014–2014	41	1,132	10,548
Korea	2014–2014	15	326	2,227
Belgium/Flanders	2002–2013	40	633	6,560
France	1981–2014	25	599	5,658
Germany	1987–2007	19	450	1,680
Netherlands	1940–2016	41	809	6,788
Sweden	1980–2011	23	384	1,532
USA (Indie)	2002–2014	12	409	1,611
USA (Mainstream)	1940–2014	72	1,557	12,336
USA (OEL Manga)	1991–2006	17	406	3,436
Total		360	8190	63742

Cardoso, Klomberg, & Hacimusaoğlu, In prep), specifically analysing panels with subjective viewpoints and their relation to panels' attentional framing structure.

Methods

Materials

We analysed data from the Visual Language Research Corpus (VLRC), focusing on comics which included annotation of panels for both subjectivity and attentional framing (Cohn et al., In prep). Comics were selected through convenience sampling, drawing from sources of comics available through the public domain and through a random selection of donations of comics given by various comic companies. More information about the corpus and data from the VLRC are available at <http://www.visuallanguagelab.com/vlrc> and Cohn (2022). Altogether, we analysed 360 total stories throughout the comics, consisting of 63,742 total panels across 8,190 pages (see Table 1). We analysed books from Asia (China, Japan, Korea), from Europe (Flanders, France, Germany, the Netherlands, Sweden), and the United States. Japanese manga were further represented by the four primary demographics of shonen (boys'), shojo (girls'), seinen (men's), and josei (women's) manga. Comics from the United States included both mainstream comics (e.g. superheroes and power fantasies) and indie comics (e.g. graphic novels). Original English Language (OEL) manga were comics ostensibly using the Japanese Visual Language consistent with manga but created by English speakers in the United States.

The VLRC was annotated by 12 coders who completed at least one semester of coursework in Visual Language Theory and underwent training and practice protocols before annotating comics as part of the corpus. Further details can be found in Cohn et al. (In prep).

Areas of analysis

We analysed two primary dimensions: whether panels showed a subjective point-of-view and the attentional framing type of panels. Subjective panels were determined

by whether panels explicitly showed the point-of-view of a character in the story. This assignment was binary, with subjective panels being assigned a '1' and all other panels assigned a '0.'

Attentional framing structure was based on the number of 'active' entities (typically characters) in a panel. Active entities are those that contribute to the sequential meaning (Cohn 2013) and were assessed through a deletion test: if a sequence was no longer coherent if an entity was imagined as being omitted, then that entity was 'active.' Panels were assigned categories based on the number of active entities that they contained, in line with prior research (Cohn 2011, 2020; Cohn, Taylor-Weiner, and Grossman 2012). Macro panels depicted multiple active entities (Figure 1a), while mono panels depicted only a single entity (Figure 1b). Micro panels depicted less than one entity (Figure 1c), such as using a close-up presentation of a portion of a character (like their hand or eye). Amorphic panels depicted no active entities (Figure 1d), such as aspects of the environment of a scene, or the exterior of a location (like a building). Panels that could not be readily assigned to these categories were deemed 'ambiguous', such as fully black panels or those with only text.

Data analysis

We conducted three types of analyses. First, we determined the number of comics containing at least one subjective viewpoint panel. We then calculated a proportion of comics using subjective panels out of all comics in the corpus, and secondarily the proportion of comics using subjective panels out of all comics within any given culture's comics and/or their subtypes. A logistic regression was used to compare these proportions of comics using subjective panels across countries.

Our second analysis calculated the frequency of subjective panels appearing within comics that used them. We omitted comics that used no subjective panels, and then calculated the frequency of subjective panels out of the total number of panels in that comic. These means were then used in linear mixed models which compared the dependent variable as the proportion of subjective panels across the fixed effect of countries, setting the comics as random effects grouping factors.

A similar analysis was used in comparison of the framing types of subjective panels. We calculated the number of subjective panels of each framing type (macro, mono, micro, amorphic) in each book and divided them out of the total number of panels in that book. These means were then compared in linear mixed models setting subjective panels as dependent variables, with fixed effects of framing types and country, and a random effects grouping factor of each comic.

Finally, to see how frequent subjective panels were within framing types, we calculated the number of subjective panels out of the total number of a framing type in each book (i.e. the total number of subjective macros out of all macros). These means for subjective panels were then set as the dependent variable in a linear mixed model, with fixed effects of framing types and country, and a random effects grouping factor of each comic.

Results

Subjective viewpoints

Overall, only 42% (151/361) of the comics in the corpus contained subjective panels. A logistic regression suggested that the frequency of subjective panels varied across countries ($\chi^2 = 50.4, p < .001$). However, no uniform consistency appeared within or across continents. As depicted in Figure 3a, subjective panels were found in more Japanese manga (66%) and Chinese manhua (60%), then in French bande dessinée (52%) and American comics (47%). Fewer books with subjective panels appeared in Flemish comics (38%), while low proportions of books (<20%) appeared in books from Korea, the Netherlands, Germany, and Sweden.

Additional nuance came from analyses of subtypes within Japanese manga and comics from the United States. Within Japanese manga, 81% of shonen (boys') manga used subjective panels, with high proportions of josei (women's) and seinen (men's) manga

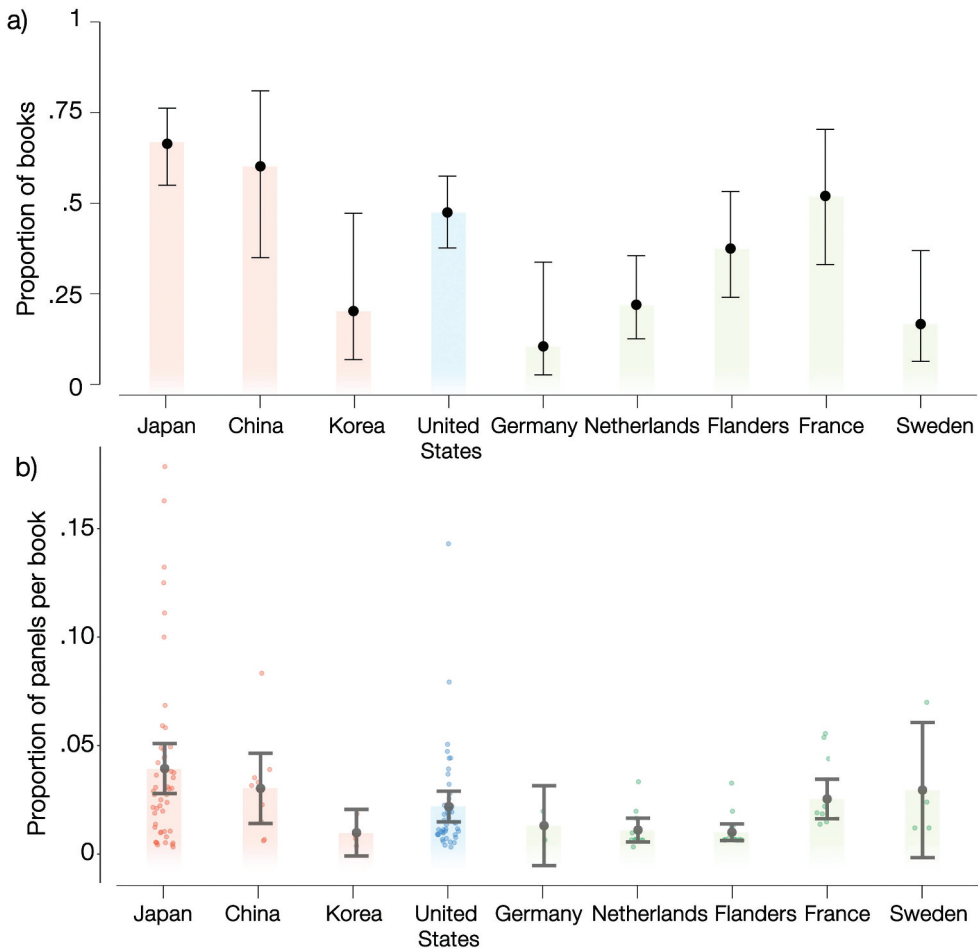


Figure 3. The proportion of a) books that use subjective panels across countries (error bars show 95% Confidence Intervals), and b) panels that use subjectivity (error bars show standard error).

(50%), and then shojo (girls') manga (46%). In comics from the United States, the highest rates of books using subjective panels came from indie comics (67%), then OEL manga (59%), and finally mainstream comics (40%).

We next omitted all comics that contained no subjective panels at all, so that our remaining analyses only focused on the 151 comics with subjective panels. Here we asked: When a comic has at least one subjective viewpoint, what proportion of panels show a character's point-of-view? Across all books that used them, subjective panels constituted an average of 2.6% of panels per book. We again found a difference in the frequency of subjective panels used across countries ($F = 2.6, p < .05$). As depicted in Figure 3b, Japanese manga and Chinese manhua used the highest frequency of subjective panels, followed by Swedish, French, and American comics.

Further breakdown into subtypes showed that, for Japanese manga, shonen manga (4.7%) used the highest frequency of subjective panels, with intermediate rates appearing in shojo (3.1%) and seinen (2.9%) manga, and the lowest rates in josei manga (1.1%). In comics from the United States, indie comics had the highest frequency (3.9%), followed by mainstream comics (2.1%), and then OEL manga (1%).

Subjectivity and framing types

We next assessed the attentional framing types of subjective panels to investigate our hypothesis that subjectivity aligns with more focal framing. We first examined the framing types of all panels to give a basis for the variation in attentional framing used in our subsequent analyses. Attentional framing types differed overall ($F = 1535, p < .001$), since macros were more frequent than monos, which were more frequent than amorphics and then micros (see Figure 4). Framing types also differed across countries ($F = 43.4, p < .001$). As reported elsewhere (Cohn 2020), European comics used substantially more macros than monos, American comics had a slightly smaller ratio of macros being greater than monos, while Asian comics had greater than or equal amounts of

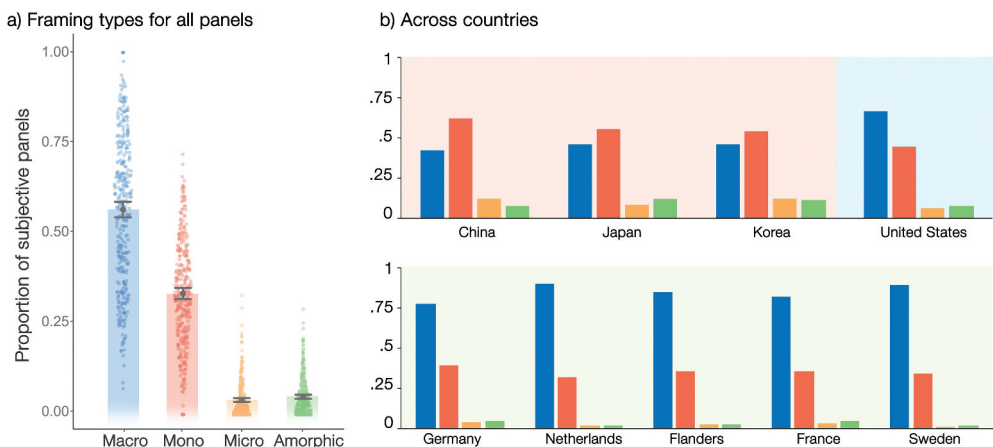


Figure 4. Proportion of different framing types used across panels in our corpus, both a) across all comics, and b) across countries in our corpus. Individual dots represent each analyzed comic. Error bars represent standard error.

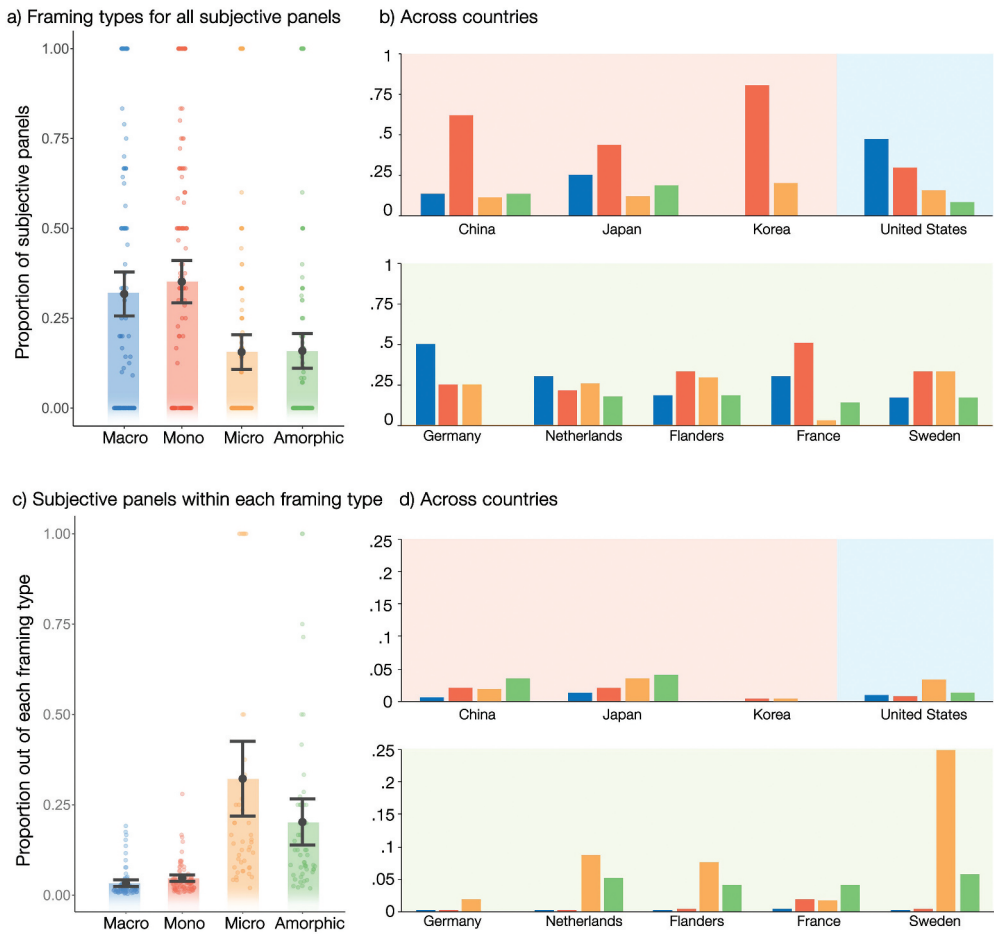


Figure 5. The proportion of subjective panels of a given framing type out of all panels, both a) across all subjective panels, and b) across countries, and the proportion of framing types using subjective panels, both c) across all subjective panels, and d) across countries. Individual dots represent each analyzed comic. Error bars represent standard error.

monos compared to macros, along with greater amounts of micros and amorphic panels (Figure 4).

We then examined which framing types were used by subjective panels. As shown in Figure 5a, framing types differed across subjective panels ($F = 68, p < .001$), with subjective macros (32%) and monos (35%) appearing the most, followed by micros (16%) and amorphics (16%). Framing types of subjective panels also differed across countries ($F = 4.8, p < .001$). In general, subjective monos were greater in comics from Asia, while those from Europe were less consistent in their patterning and those from the United States descended in framing complexity (see Figure 5b).

This analysis characterised the relative proportions of framing types in all subjective panels. However, the proportion of framing types themselves are not equally distributed. As in Figure 4, macros and monos were far more prevalent than micros and amorphics, and these categories differed across cultures. The predominance of macros and monos

are indeed reflected here, with more subjective macros and monos than micros or amorphics. Thus, to assess how frequent subjective panels were relative to the distribution of their framing types, we next calculated the proportion of subjective panels for each framing type out of the total number of that framing type in a given book.

The proportion of subjective panels again differed across framing types ($F = 37.3$, $p < .001$), but with a different distribution of frequencies. Here, as depicted in [Figure 5c](#), the proportion of subjective micros was greater than that of subjective amorphics, which were both greater than subjective monos and then subjective macros (all $ps < .001$). Framing types of subjective panels also interacted with countries ($F = 5.4$, $p < .001$). In general, all countries yielded the same trend for greater proportion of subjective panels to be used with more focal framing, particularly micros and/or amorphic panels, as in [Figure 5d](#).

Discussion

This study examined how subjective viewpoints taken by panels are used in comics from Asia, Europe, and the United States, and how they manifest in different types of framing. We hypothesised that Japanese manga may use a greater proportion of subjective viewpoint panels than comics from other places, while subjective panels would maintain a more focal attentional framing. Our analysis supported both of these hypotheses, although with additional complexities.

Overall, our analysis found that subjective viewpoint panels constituted only on average 2.6% of all panels in a comic. However, they varied in frequency, with an upper range until 15%. These frequencies are broadly consistent with the rate of POV shots found in prior corpus analyses of comics (Cohn 2011) and film shots (Cutting and Candan 2013, 2015; Salt 2016). In relation to films, this proportion is interesting given that there are typically a substantially smaller number of total panels in a comic than there are shots in a film. Yet, if they maintain a similar overall mean frequency of subjective viewpoints, it may imply a broader characteristic of subjective viewpoints maintained in visual storytelling. However, such a relationship may not be surprising given the links between drawn and filmed narratives, not the least being that films often are preceded with storyboards, sometimes drawn by comic artists, which provide a groundwork for the visual narrative structure prior to filming.

We next explored the differences in proportions of subjective panels across cultures. While basic framing types differ in ways consistent between continents (i.e. Asia, Europe, or North America), no such overarching consistencies were found for subjective panels across continents. However, certain countries indeed did use higher proportions of subjective panels than others. As predicted, a greater number of Japanese manga used subjective panels than any other country, followed by Chinese manhua, French bande dessinée, and American comics, and the frequency of subjective panels within those comics followed a similar trend. A further analysis of subtypes in both Japanese and American books showed that substantially more shonen manga used subjective panels than any other type of manga, while indie comics and then US manga used subjective panels more than mainstream comics in the United States.

Overall, this finding provides evidence that Japanese manga are using more subjective panels than comics from other places, and further provides support for claims that manga use

more ‘subjective storytelling’ broadly. Interestingly, the greatest proportion of books using subjective panels came from shonen manga, with shojo manga using subjective panels the least out of all manga. Given that shojo manga have often been described as conveying the emotions and mental states of their characters (Prough 2010; Takahashi 2008), often in contrast to shonen manga, it implies that subjective viewpoints may not be the primary means of conveying such internal focalisation, which instead may be conveyed through other means, like visual morphology (Cohn and Ehly 2016; Shinohara and Matsunaka 2009; Takahashi 2008).

In addition, the analysis of subtypes of comics from the United States also connects to the prevalence of subjective panels in manga. Prior analysis of the VLRC found that many comics from the United States, particularly those designated as indie comics or US manga, clustered with Asian books (Japanese manga, Chinese manhua, Korean manhwa) in their framing and changes in meaning across panels (Cohn 2020). That the highest proportions of books using subjective panels also came from these subtypes, in contrast with mainstream comics, may provide additional support for the influence of manga on American authors.

Our second question posited whether subjectivity aligned with more focal framing, as has been found more broadly in experiments about framing and internal focalisation (Bálint, Blessing, and Rooney 2020; Bálint and Rooney 2019; Moisich, In prep). We first found that overall, subjective macros and monos were more prevalent than subjective micros and amorphic panels. This seemed to imply that subjective panels did not have a preference for focal framing, and the distribution of these subjective panels varied across countries. However, these frequencies reflected the total number of subjective panels found across books, and the greater proportions of macros and monos reflected the overall frequency of those framing types. That is, there were more subjective macros and monos because more macros and monos were used in general.

We thus followed this analysis by looking at the proportion of subjective panels within each of the framing types. For example, out of all macro panels, how many were subjective macros? In this analysis, we found that subjective panels constituted greater proportions of micros and amorphics than macros or monos. The high proportions of subjective amorphics also implies the idea that views of the surrounding environment may show a ‘wandering eye’ around a scene (McCloud 1993). This general trend of point-of-view focused within micros and amorphics was consistent across cultures. Such results align with experimental findings that micros and close-ups are particularly motivating of interpretations of internal focalisation (Bálint, Blessing, and Rooney 2020; Bálint and Rooney 2019; Moisich, In prep), and it supports our hypothesis that focal framing aligns with the representation of subjective viewpoints.

These findings raise additional questions both about the use of subjective viewpoint panels more broadly across other comics of the world and the use of other cues to signal subjectivity or internal focalisation. First, although our annotation here broadly characterised subjective viewpoints, it did not characterise the particular cues used within those panels to signal subjectivity. Further specificity across annotation could therefore record information like the angle of viewpoint taken in a panel, or whether panels show body parts of the gazing character (e.g. Figure 1a), maintain a clear eye line (e.g. Figure 1c), or use additional framing on the panel such as a scope or binocular shape (e.g. Figure 1b). Additional annotation could identify subjective viewpoints that arise out

of the interaction between panels across a sequence, beyond the cues within a single panel.

Second, representations of point-of-view are one of several techniques that cue or suggest the internal mental states of characters. For example, panels might not overtly depict a character's perception but may maintain an overall view of a scene from the perspective of a character while they are situated in it, such as looking over their shoulder (Jahn 2021; Mikkonen 2012, 2017). Additional analysis could examine the contextual circumstances that give rise to subjectivity panels in a sequence. Further analysing these types of focalisation techniques could offer insights into the range and use of conventions inviting readers to attend to character's viewpoints, and how those techniques may interact with aspects of attentional framing and/or storytelling styles.

Finally, additional work can examine how these techniques interact with visual storytelling that directly depicts internal mental states of characters beyond just visual perception. For example, visual narratives often directly visualise characters' memories (possibly in full flashbacks), dreams, imaginations, fantasising, speculating about hypothetical futures, and/or foresights (Klomborg & Cohn, In prep; Maier and Bimpikou 2019). All of these scenarios may directly depict the mental activities of characters in a scene and expand further than just the depiction of visual perception, and they are cued from a variety of structures (Klomborg & Cohn, In prep). Further examination of how these situations interact with cues of focalisation and/or subjective viewpoints can offer an even more encompassing view of the ways visual narratives express the perceptions and mental states of their characters, and the techniques that they use to do so.

To summarise, we have here provided an empirical corpus analysis of subjective viewpoints in panels of comics from the United States, Europe, and Asia. We have confirmed our predictions that Japanese manga use greater numbers of subjective panels, as do books from China, France, and the United States compared to those of other countries in our corpus. In addition, while the distribution of attentional framing types of subjective panels largely reflects the framing of panels overall in a comic, greater proportions of micros or amorphics showed subjective viewpoints. This substantiated the broader idea that focal framing aligns with and reinforces subjectivity. Altogether, these findings reinforce that empirical research of comics can illuminate their structural properties and sponsor further insights into the ways that the visual languages used in comics around the world may vary.

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