MULTIMODALITY AND CROSS-MODAL COHESION IN MANGA
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Abstract
Manga with their distinct style and symbolism represent a growing reading trend in the world. Manga use an established set of symbols to convey various emotions. Manga have generally been more experimental in layout than Western comics. They are more fragmentary and contain more panels that enhance the dynamism of the story. We aimed to outline methodological approaches to the analysis of manga; to summarize specific features of manga as a separate medium; to analyse how multimodal cohesion is created in manga; to reveal various types of relations between visual and verbal modes. Manga is a multimodal discourse, combining several modes, mainly visual and verbal. The aural mode is represented by linguistic and visual signs, e.g. jagged borders of a speech bubble or the size and boldness of letters. We applied methods originally designed for the film analysis to the analysis of manga, in particular, Tseng’s (2013) theory of cross-modal cohesion, based on tracking cross-modally realized characters, objects, actions, and settings. This analysis included building cross-modal cohesive chains. We argue that it is possible to track cross-modal cohesion in manga, based on the interaction of visual, verbal, and aural components of identity chains. Besides, the interaction between visual and verbal modes was revealed by analysing text-image relations. In this paper we have outlined manga-specific features, distinctive features of manga’s page layout, cinematic devices, which manga borrowed from films, some of which may be used as focalisation-marking devices.

Key words: manga, multimodality, cross-modal cohesion, identity chain, text-image relations.

1. Introduction
Manga represent a growing reading trend in the world. The term ‘manga’ was used for the first time by a poet Santo Kyoden in 1798, and in 1814 Katsuhika Hokusai began to publish his collected sketchbooks Hokusai Manga (McCarthy, 2014). Manga literally means whimsical pictures or sketches. These are Japanese comics characterized by distinct style and symbolism, inherent in their visual form and texture.

Manga have received much critical attention recently. This medium has been addressed by theorists, educators, literacy researchers to raise awareness about manga, to explain their popularity, especially among young people. Researchers of manga have focused on such issues as the style peculiar to manga (Otsuru, 2022); the impact of using manga to enhance creativity among students in the classroom (Veeramuthu & Ganapathy, 2022); ways of representing music in manga and audio-visual cross-modality (Hsu & Chiang, 2021). Some theorists study particular types of manga, such as digital manga (Rohan, Sasamoto & O’Brien, 2021) or eromanga (Casiello, 2021).

One of the manifestations of the growing popularity of manga was the largest ever exhibition of manga held outside Japan, which was open at the British museum in 2019. The exhibition focused on the development of manga as a world-wide phenomenon and its influence on other cultural forms.
Manga as a type of comics possesses comics-specific features. Among such features Kukkonen (2013, p. 24) names a speech bubble, a speed line and an onomatopoeic effect. Speed or motion lines are used to indicate motion within a static image. There are also techniques used in comics for the graphic expression of feelings, for instance pictograms, emanata (graphic signs like dashes, droplets, stars).

The page layout is an essential comics element that “gives overall coherence to the narrative discourse” (Groensteen, 2013, p. 96). Manga have generally been more experimental in layout than Western comics.

This paper has several tasks: to outline methodological approaches to the analysis of manga; to summarize specific features of manga as a separate medium; to analyse how multimodal cohesion is created in manga; to reveal various types of relations between visual and verbal modes.

Firstly, we will consider the theoretical framework of the manga theory, focusing on multimodal interaction between different modes. Then we will proceed to analyse two manga: A Midsummer Night’s Dream (2016), which is a modern adaptation of Shakespeare’s play, and Beauty and the Feast (2021), which makes apparent allusions to the fairy tale Beauty and the Beast by a French novelist de Villeneuve. These are transmedia stories, which unfold across multiple platforms, with each new text making a distinctive and valuable contribution to the whole (Jenkins, 2006, p. 95). Readers of each new retelling of such tales will have certain expectations based on their previous encounters with this transmedia world. Besides, these are digital manga. Digital multimodality opened new opportunities for visual storytelling (Belova, 2021, p. 19), and manga is a deeper form of visual storytelling. Digital technology is changing manga due to the possibility of using different display modes (slide show, fade-out, zoom in, etc.), deeper immersion in the fictional world, greater degree of interactivity.

2. Method
Manga are multimodal narratives, in which elements of visual, verbal, and to some extent aural modes interact to create meaning. The aural mode in manga is restricted to the cases of onomatopoeia, the use of jagged borders of speech bubbles or the size and boldness of letters, corresponding to the way they are pronounced: the bigger and bolder the letters, the louder and more emotional the speech.

Multimodal approaches to narratives presuppose the analysis of interaction between different modes. There are various classifications of the text-image relations (Stöckl, 2009; Martinec & Salway, 2005; van Leeuwen, 2005; Kong, 2006; Cohn, 2013; Bateman, 2014). For instance, Martinec and Salway (2005) have introduced a detailed classification of the text-image relations, which is based on two broad categories: status and logico-semantic relations. Logico-semantic relations are divided into two large groups: expansion and projection. Expansion includes elaboration, extension, and enhancement. In elaboration, the image and the text may be of the same level of generality (exposition) or the levels might be different (exemplification) and either the text can be more general than the image or vice versa. Extension is connected with adding new semantically related information, and enhancement specifies circumstantial information to do with time, place, reason, etc. As for projection, it accounts for cases when some information is re-represented in the other mode, for instance, diagrams that summarize texts or projection of wording in speech bubbles and meaning (ideas) in thought bubbles in comics (Martinec & Salway, 2005, pp. 354-55).

The research in the area of multimodality applicable for the present study is the theory of cross-modal cohesion in films (Tseng, 2013). Tseng’s approach is based on tracking mono- and cross-modally realized characters, objects, actions, and settings. This analysis includes building cross-modal cohesive chains. The basic unit of analysis in films is a shot. Each shot transcription contains the visual track and image description (including words of the characters and offscreen voice). Based on this information, identity chains are constructed to understand how multimodal cohesion is achieved. Identity chains may involve characters, objects, settings, etc. For example, a chain begins by presenting a participant, and is extended whenever they appear again. Components of identity chains may belong to visual, verbal, and aural modes, and their interaction creates cross-modal cohesion (Tseng, 2013, pp. 154, 120).
Though this approach is applied by its author to the film medium, our hypothesis is that it has a universal nature. We have already demonstrated that the analytical methods applied to filmic cohesion and interunit relations are equally applicable to digital narratives as a means of analysing multimodal cohesion (Yefymenko, 2021). We also claim that this approach may be applied to comics, and manga in particular. In this case, a panel in manga is the equivalent of a shot in films.

Following our hypothesis, we applied the theory of cross-modal cohesion in film (Tseng, 2013) to the analysis of cohesion in manga. Cohesion “refers to relations of meaning that exist within the text, and that define it as a text” (Halliday & Hasan, 1976, p. 4). Cohesive ties in the analysed manga have been revealed by constructing identity chains. As mentioned before, identity chains refer to characters and objects represented cross-modally in visual and verbal modes (Tseng, 2013, p. 3). We selected a segment of Beauty and the Feast manga for analysis, namely a part, where the two main characters have a picnic under a cherry blossom tree (Satomi, 2021, pp. 122-125). We identified five identity chains: of two characters (Yakumo-San and Yamato), two objects (a cherry blossom tree and a picnic blanket), and food, brought for the picnic. All these objects are important for plot unfolding. Yakumo, Yamato and food identity chains have the largest number of links. Yakumo and Yamato are the main characters of manga, so it’s quite logical that their identity chains are long. As for the food identity chain, it is represented only in 7 out of 15 panels, but an extensive description of food, brought by Yakumo to the picnic, makes this chain containing 20 links the longest among the analysed. And it should not come as a surprise, bearing in mind that Beauty and the Feast focuses on food and various Japanese dishes. The two remaining identity chains (of a cherry blossom tree and a picnic blanket) consist of 6 and 8 links respectively. All the five identity chains are represented cross-modally with the help of visual (marked with [v]), verbal (indicated by inverted commas) and aural elements (given in brackets).

3. Results and discussion
The identity chains, constructed in the process of analysis, are summarized in Figure 1:

<table>
<thead>
<tr>
<th>Yakumo</th>
<th>Yamato</th>
<th>cherry blossom tree</th>
<th>picnic blanket</th>
<th>food</th>
<th>image</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>[v]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>[v] ‘I’</td>
<td>[v] ‘it’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>[v]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>[v] ‘I’</td>
<td>[v] ‘picnic blanket’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>[v]</td>
<td>[v] (fwap)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
'we', 'I'
'we', 'I'
'rice balls', 'bok choy', 'turnips', 'eat'
'I'
'you'
'food'
[v], (scarf)
[v]
[v]
[v]
[v]
[v]
[v]
[v]
[v]
[v]
[v]
Visual narration is the leading mode. All the panels contain visual elements except one panel, consisting of only two speech bubbles with verbal elements, belonging to the identity chains of Yakumo, Yamato, and food. 10 panels contain verbal narration, introduced in speech and thought bubbles. Identity chains ‘Yamato’ and ‘picnic blanket’ are realized cross-modally with the help of visual, verbal, and aural elements, the remaining three chains contain elements from visual and verbal modes. The aural mode in the analysed chains is represented by onomatopoeic words ‘fwap’, imitating the sound of spreading the picnic blanket, and ‘scarf’, associated with the sound of eating. Interaction of components of identity chains creates cross-modal cohesion.

Drawing from Groensteen and Kukkonen theories on comics and graphic novels and our own research, a number of manga-specific features have been identified, which distinguishes manga from Western comics. First of all, manga relies on an established set of symbols, which convey various emotions. For instance, blushing, represented by a sequence of diagonal lines across the characters’ cheek bones and nose, indicates embarrassment, often caused by love. For instance, both Hermia and Lysander are blushing, when he swears that “… in that same place tomorrow truly will I meet with thee” (Appignanesi, 2016, p. 32). Nervousness of Lysander is also represented by a sweat drop hovering near his head (Figure 2).

Extreme emotional states of characters in manga, particularly anger, fear, begging, or romantic feelings are marked by a distortion of their faces. When Lysander tells Hermia about his desire to marry her, the girl’s face loses its distinctiveness as the entire top half of her face becomes shadowed over (Figure 3).
In the world of manga, a character’s appearance plays an important role. In *A Midsummer Night’s Dream*, all the major characters are slender and beautiful with large, round eyes and the elaborate hair styles. Yamato from *Beauty and the Feast* has an athletic figure, while Yakumo (a 28 year-old ‘beauty’ and Yamato’s neighbour) has a more curvy body compared to Yamato’s girl friends from high school. Japanese legends idealize beauty and youth, and manga borrows a lot from them by creating beautiful young men and women, who should be admired by the readers.

Colours play an important role in any narrative containing visual components, but it not in the case of manga, because manga are traditionally done in black and white.

Page layout has its distinctive features in manga. Larger number of panels on a page makes manga more fragmentory than traditional comics. As a result, sometimes it takes more time to establish connections between all the panels. Besides, the increased number of panels on a page shows dramatic tension and enhances the dynamism of the story. In Figure 4, Helena, who is in love with Demetrius, decides to follow him into the forest. In separate panels, a reader sees the close-up of Helena and Demetrius, parts of their bodies, their running silhouettes, and Oberon, observing all this.
The analysed manga often use aspect to aspect transition between panels (McCloud, 1994), highlighting particular actions within one scene, instead of describing different places or people. It can be explained by the fact that the setting in Beauty and the Feast is restricted mainly to Yakumo’s apartment, while the events of A Midsummer Night’s Dream happen in Athens or in a nearby forest. Sometimes the basic action is depicted at the centre of a page, and side panels focus on details. For instance, one of the panels highlights a note in Oberon’s hand, which is not readable in the central panel (Figure 5).

**Figure 5. Page layout: a side panel focusing on details of a central panel**
(Appignanesi, 2016, p. 160)

Panels are not always clearly defined in manga—they may be framed by thin lines or may have no frames at all. A Midsummer Night’s Dream contains a number of panels, where flowers and petals are used as a frame (Figure 6) or where parts of characters’ bodies (a hand, hair) exceed the borders of the panels (Figure 7), thus lifting the restrictions imposed by frames.

**Figure 6. Frames in manga** (Appignanesi, 2016, p. 75)

**Figure 7. Exceeding panels’ borders** (Appignanesi, 2016, p. 60)
Another important element of page layout is a speech bubble. Speech bubbles, being a comics-specific element, represent different characters’ speech and feature different edge designs. One character’s dialogue might be inside perfectly oval speech bubbles, while words of another might appear inside a bubble of an irregular geometric shape. If a character is upset, angry, or in other emotional state, a speech bubble may become jagged, with pointed edges, to reflect the tone of voice. In the example from *A Midsummer Night’s Dream* Demetrius’s angry words are placed in bubbles with pointed edges, while Helena’s words of love are in heart-shaped bubbles (Figure 8).

![Figure 8. Speech bubbles (Appignanesi, 2016, p. 67)](image)

When characters are thinking, their thoughts sometimes appear without any bubble at all, and may simply float in air, as is the case with Helena’s thoughts (Figure 9). In *Beauty and the Feast* if something unusual happens or some unexpected thought strikes the character, it appears without any bubble against the black background (e.g. HE FELL ASLEEP!! (Satomi, 2021, p. 32)).

![Figure 9. Representation of thoughts in manga (Appignanesi, 2016, p. 37)](image)

Comics, and especially manga, are closely related to cinematic language, they try to mimic a camera’s eye in the use of the panels on the page. In this respect we can talk about focalization. For instance, one of medium-specific markers in manga signaling focalisation is a direct gaze. Kress and van Leeuwen point out that such gaze “creates a visual form of direct address” (Kress & van Leeuwen, 2006, p. 117). Manga use many cinematic devices including close-ups, which increase readers’ engagement with the characters; panning—moving the viewer through the scene by using multiple panels (and in the case of Titania and the ass in Figure 10 different panels even have no frames, so it
really looks like shots of the film); jump-cuts, unlike panning, involve change of time or place: for instance, in *A Midsummer Night’s Dream* we see 3 pairs of lovers in 3 different places (Figure 11).

![Figure 10. Cinematic devices in manga: panning (Appignanesi, 2016, p. 154)](image1)

![Figure 11. Cinematic devices in manga: jump-cuts (Appignanesi, 2016, p. 200)](image2)

Both manga contain multiple examples of such focalisation-marking device as eyeline match, when in the first of the sequence of two panels a character looks at somebody or something, and the next panel has the image of that character or object (e.g. in Figure 12 Theseus and Hippolyta look at Hermia, Lysander, Demetrius, and Helena). These are instances of mediated focalisation, because the reader sees the image from the character’s point of view. Another example of mediated focalisation is the over-the-shoulder shot (Figure 13). Such examples can also be found in both manga.

![Figure 12. Cinematic devices in manga: eyeline match (Appignanesi, 2016, p. 164)](image3)

![Figure 13. Cinematic devices in manga: over-the-shoulder shot (Appignanesi, 2016, p. 168)](image4)

The temporal structure of both manga is nonlinear with some flashbacks. Flashbacks are indicated by a shift in scene, but often the background literally changes color as well. For instance, in a flashback Yamato recollects his childhood, when he lived with his family, and these panels have a grey background.
Both *A Midsummer Night’s Dream* and *Beauty and the Feast* are multimodal narratives, where the three channels—visual, verbal, and to a certain extent aural—interact to create narrative meaning. The visual channel includes images of the main and secondary characters, objects, settings etc. Verbal narration in manga is introduced mainly in speech and thought bubbles, and rarely in narration boxes (usually at the beginning or at the end of the book). For instance, *Beauty and the Feast* begins with the narrator’s words, placed into the narration box: “This is Shuko Yakumo, 28 years old. She has a secret she can’t tell anyone. Her hobby is cooking.” (Satomi, 2021, p. 3).

There is also an aural mode, which is represented in manga by using linguistic and visual signs. It was already mentioned that the shape of text bubble may indicate the tone of voice. It is believed that manga uses a more varied list of sound effects than Western comics, inspired again by the use of sound in film. In one of the examples, found in *A Midsummer Night’s Dream*, the sound of a bell is rendered with the help of onomatopoeia (kin-kang), and the sound of music—by the depiction of notes. Some other examples of onomatopoeic words are those describing movement (shuff-shuff), hissing (whoof) and falling down (thud). Onomatopoeic words in *Beauty and the Feast* are mainly connected with the process of eating (e.g. clatter, gobble (Satomi, 2021, p. 28), crunch (Satomi, 2021, p. 38), munch (Satomi, 2021, p. 60)).

Analyzing types of the text-image relations in manga, it’s worth mentioning that exemplification relations are quite widespread. As a rule, the text contains demonstrative pronouns *this*, *that*, *these* or a personal pronoun *it*, while a picture shows an image of an object mentioned. For instance, Yakumo says “… have these if you’d like …” (Satomi, 2021, p. 25), meaning by *these* rice balls depicted in the picture. Or in another example, “Yakumo says “Try not to drop it” (Satomi, 2021, p. 109), and the image explains that she means snack. According to Martinec and Salway (2005, p. 351), in such cases “text subordination is realized by deixis from text to image”.

An example of enhancement may also be found in *Beauty and the Feast*: “You are still growing … so getting all your meals from convenience stores is no good” (Satomi, 2021, p. 27). The picture gives the reason, why meals from convenience stores are no good,—because we see only junk food in Yamato’s apartment. In *A Midsummer Night’s Dream* there are some references to the modern world, e.g. at one point Theseus receives the incoming call from Egeus and they are talking using large monitors (Appignanesi, 2016, p. 16). In this case we have the text-image relations of extension, because a new information is added by the image, which is missing in the text.

### 4. Conclusions

In this paper, we have summarized specific features of manga as a separate medium, in particular, a wide use of symbols, which convey various emotions, and cinematic devices. A distinctive style of manga’s page layout together with the increased number of panels on a page and their various shapes enhances the dynamism of the story.

We proved our hypothesis that multimodal tracking of characters, objects, setting in the form of identity chains (Tseng, 2013) originally designed for film analysis may be applied to reveal cohesive ties between different parts of manga. Identity chains containing visual, verbal, and aural elements exemplify the interaction of different modes in the process of making the narrative coherent. The analysis helped to reveal various types of relations between visual and verbal modes, including exemplification, enhancement, and extension.

All in all, the multimodal analysis of manga has proved useful in outlining the principles of cohesion and meaning-making in this specific type of comics. Given the rapidly growing areas of multimodal research, we believe that the potential of such methods of multimodal analysis is very high—to examine the process of cross-modal meaning-making not only in manga, but also in other types of comics or video games.
References

Sources for illustrations
МУЛЬТИМОДАЛЬНІСТЬ
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Анотація
Манга з її особливим стилем і символізмом користується все більшою популярністю серед читачів у всьому світі. Манга використовує усталений набір символів для передачі різноманітних емоцій. Манга зазвичай є більш експериментальною в оформленні сторінок, ніж західні комікси, та більш фрагментарною, з більшою кількістю панелей, що посилює динамізм оповіді. Нашим завданням було окреслити методологічні підходи до аналізу манги; підсумувати специфічні риси манги як окремого медіуму; проаналізувати, як утворюється мультимодальна когезія; виявити різні види взаємовідношень між візуальними і вербальними модусами. Манга є мультимодальним дискурсом, який поєднує декілька модусів, переважно візуальний і вербальний. Звуковий модус представлений лінгвістичними та візуальними знаками, наприклад, за допомогою нерівних кордонів мовної бульбашки або розміру букв чи жирного шрифта. Ми застосовували методи, які розроблялись для аналізу фільмів, до дослідження манги, зокрема теорію крос-модальної когезії Тсенг (2013), яка базується на відстежуванні крос-модально представленних персонажів, об’єктів, дій та локацій. Цей аналіз передбачав побудову крос-модальних когезивних ланцюжків. Ми стверджуємо, що крос-модальну когезію в манзі можна аналізувати на основі взаємодії візуальних, вербальних і звукових компонентів ідентифікаційних ланцюжків. Крім того, взаємодія між візуальними та вербальними модусами лежить в основі різних типів відношень між текстом та ілюстраціями. У статті ми окреслили специфічні риси,ластиві манзі, особливості розташування тексту та зображення на сторінці, кінематографічні засоби, деякі з яких використовуються для позначення фокалізації.

Ключові слова: манга, мультимодальність, крос-модальна когезія, ідентифікаційний ланцюжок, взаємовідношення між текстом і зображенням.