Schemata in the Graphic Novel *Persepolis* 
Accommodation, Combination, Integration

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Abstract
It has repeatedly been suggested that the art in the graphic novel *Persepolis* by Iranian French artist Marjane Satrapi contains numerous connections to ancient Persian art forms, to the point of this becoming a ‘truism’, although the claim has not been subjected to in-depth analysis. The present formal analysis employs Gombrichian schema theory to identify visual elements in the graphic novel potentially connected to Persian visual cultures to discern if and how they might relate to their proposed influences and how they integrate with styles and visual conventions in comics. The results indicate that there are indeed connections, although integrated into the art form of comics through combination and accommodation, and that this reinforced the Persian theme of the graphic novel and potentially enriched the art form of comics.

**Keywords:** arabesques, art history, *bande dessinée*, calligraphy, cognitive psychology, comics, Persian miniatures, schema theory

Graphic novels are often created within specific comics cultures, which influence visual aspects such as format, page layout, and style.¹ However, the art in graphic novels can still be highly individual and can conceivably contain influences from any number of visual sources. This possible influx of inspiration may hold the potential of diversifying and enriching the art of a graphic novel, but how does this process work? How can visual elements from other visual cultures or art forms integrate with visual conventions in comics?

1 I am in debt to my PhD supervisors, Jakob Dittmar and Inger Lindstedt, for putting Gombrich on my map, to Martin Lund and the anonymous reviewers for insightful criticism, and not the least to my wife Hanna, for putting up with me writing and rewriting this text innumerable times.
To explore these ideas, I have analysed the graphic novel *Persepolis*:² a visual memoir with a Persian theme,³ told in the comics format by Iranian French artist Marjane Satrapi. *Persepolis* is visually clearly situated within the subculture of the French New Wave in the late 1990s/early 2000s,⁴ but it has regularly been suggested that it contains connections to Persian visual cultures.⁵ The high degree of influence of these connections has become a ‘truisms’, oft-repeated in academic writings about this graphic novel, although unaccompanied by thorough analysis.⁶

The present analysis employs schema theory to identify visual elements in the graphic novel—potentially connected to Persian visual cultures—to discern if and how they could relate to their proposed influences, how they integrate with styles and visual conventions in comics and what this could indicate for the graphic novel and for the art form of comics. A number of different terms have been used to designate comics. Marshall McLuhan labelled comics a medium,⁷ but in academic research, it is often referred to in the form of one specific publishing format, such as comic strips or comic books.⁸ I have chosen to view comics as an art form,⁹ communicated through different media—an art form with its own characteristics and defining traits.

The analysis focuses on potential connections to four Persian art forms suggested in earlier research: arabesques and calligraphy,¹⁰ min-

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¹⁰ Siobhán Shilton, ‘Transcultural Encounters in Contemporary Art: Gender, Genre and History’, in *Comparing Postcolonial Diaspora*, eds Michelle Keown, David Murphy and
iatures,¹¹ and friezes.¹² Other potential influences from Iran have been suggested, such as political cartoons in Iranian newspapers.¹³ Although the latter do share characteristics with Satrapi’s style, they also seem closely aligned with styles of political caricatures in the West,¹⁴ presumably due to Iran’s openness to Western culture up until the Iranian Revolution, and are therefore less interesting in illuminating the search for Persian influences.

Schema Theory

Firstly, I present an outline of relevant ideas within schema theory as well as the Gombrichian version within the science of art, showing why this theory was chosen as a foundation for the analysis in contrast to some of the prevalent strands of schema theory within comics studies.

Schema theory is based on the idea that we as humans sort memory into cognitive structures, patterns that help create an understanding of complex phenomena.¹⁵ A schema is, according to cognitive theory, a collection of information about a certain phenomenon, connected in the consciousness—a categorisation of related information and a matrix of its interconnectivity, guiding our incorporation and structuring of new information.¹⁶ This can relate to everyday events and connects relevant cognitive information about a certain phenomenon into a pattern of general knowledge, informing how we understand a new phenomenon and how we act based on previous experience from similar phenomena.¹⁷

¹² Chute, Graphic Women, 144.
¹⁶ Ibid., 508.
¹⁷ Ibid., 336.
Though disputed for lack of empirical evidence,\textsuperscript{18} schema theory has proven useful for its heuristic possibilities\textsuperscript{19} and has been developed within a number of academic fields and disciplines, evolving into related but different theories, such as image schema, textual schema, story schema, scripts and genre schema,\textsuperscript{20} making it important to be particular about what strand of this theory is being referenced.

\section*{Schema Theory and Comics Studies}

There is indeed also an emerging field of comics studies connected to cognitive science,\textsuperscript{21} indicated by recent anthologies on comics studies as well as a special issue of \textit{Topics in Cognitive Science}.\textsuperscript{22} Two influential monographs in this field referencing schema theory are \textit{The Visual Language of Comics} by Neil Cohn\textsuperscript{23} and \textit{Contemporary Comics Storytelling} by Karin Kukkonen.\textsuperscript{24}

Cohn based his ideas of how the sequential narrative in comics works on cognitive schema theories in combination with linguistics, making his ideas comparable to those of researchers who analyse comics through the use of semiotic theories.\textsuperscript{25} Cohn discusses how ‘visual vocabularies’ can form through the use of ‘graphic schemas’ that are stored in a ‘visual lexicon’, a process and a system that he views as following similar basic rules as language.\textsuperscript{26} Cohn’s theories are often

\begin{itemize}
\item[\textsuperscript{20}] Chandler and Munday, \textit{Dictionary of Media and Communication}, 376.
\item[\textsuperscript{24}] Karin Kukkonen, \textit{Contemporary Comics Storytelling} (Lincoln: University of Nebraska Press, 2013).
\end{itemize}
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referenced but also contested, with his mapping of linguistics onto comics sometimes viewed as too deterministic.

Kukkonen examines comics from a cognitive perspective, although with a narratological and literary agenda, mostly utilising schema theory developed within narrative studies. Kukkonen also discusses the theory of image schema, how preconceptual bodily experiences can be mapped onto our perception of images, and how our perception of movement can be embodied in images and thus readily understood on a basic, cognitive level.

Ultimately, these linguistic and narrative developments of schema theory in relationship to comics were not deemed to be the most useful basis for the analysis. For this purpose, schema theories within the science of art, originating in ideas by Ernst H. Gombrich, were chosen as a starting point, since these process-oriented theories were deemed more apt for the purpose of trying to understand the process of how comics artists acquire and use visual patterns.

Schema Theory and the Creation of Art

Gombrich claimed that works by earlier artists inform how artists think about ways of depicting different phenomena, such as objects, persons, or backgrounds, more so than the perception of the actual phenomena, and that this process is based on visual schemata—patterns artists recognise, copy, transform, and use.

Once acquired, a set of these visual schemata can be developed into an individual style, that is, specific, personal, interrelated visual conventions based on the memory of previous successful artistic solutions, either by the artist or by tradition. These solutions can then become patterns that recur in art that are connected in different ways, forming

29 Kukkonen, *Contemporary Comics Storytelling*, 1.
30 Ibid., 20.
31 Chandler and Munday, *Dictionary of Media and Communication*, 162.
a more or less unified style for a whole group of artists. This is indicated when comparing styles by comics artists in the earlier mentioned French New Wave, where many of the influential artists, including Satrapi, shared a studio in Paris at the turn of the twenty-first century, influencing each other, sharing schemata, and forming a subculture within the French comics culture. The artists of this generation often discarded the use of flat, bright colours in the French album tradition, opting for contrast-rich, black-and-white artwork.

New Concepts

In order to develop schema theory for the purpose of the analysis, new concepts need to be introduced. When Gombrich discusses schemata, it is often from one of two different perspectives: (1) the tactile, hands-on applications of the knowledge of how to create graphic representations; and (2) the mental processes upon which these applications are based and with which they communicate. He is never clear as to the difference between these two ways of using schemata in the creation of art and to make this distinction clearer, the term ‘schema’ in relation to visual arts has been divided into two separate, related concepts: visual building blocks and visual ideas.

Visual Building Blocks

Visual building blocks are based on the practical methods an artist works with, conventions for representations of different phenomena using motor habits, the movement of the hand, and different artistic tools and techniques. Visual building blocks may, as they are based on practical, hands-on methods, be closely linked to specific artistic techniques and materials used. Communications of schemata on this

35 Beaty, Unpopular Culture, 10; Miller, ‘Marjane Satrapi’s Persepolis’, 50.
36 Ibid.; ibid.
37 Gombrich, Art and Illusion, 76.
38 Cf. ibid., 64.
39 These two terms in some ways articulate the same phenomena as Cohn’s Image and Production Scripts (Cohn, ‘Explaining “I Can’t Draw”’, 173), but are viewed as different aspects of one schema.
40 Ibid., 309.
level could, for instance, happen during shop-talks between artists or at lectures in art schools, where practically applicable advice could result in direct exchanges of visual building blocks, conventions for how to create a graphic representation of certain phenomena using specific artistic methods. Manifestations of visual building blocks can be found in image-based instruction manuals for artists, often containing ‘rules’ for how to create graphic representations of different things, not uncommon within comics. In *Persepolis*, a visual building block could, for instance, be the way the representation of young Marji was created, using the artistic methods needed to create the distinct black-and-white style of the graphic novel.

**Visual Ideas**

Schemata can also, on a less concrete level, be visual ideas: thoughts on how we perceive patterns in certain phenomena in art and real life and how these may be the basis for creating graphic representations of said phenomena. This can be manifested as insights and inspiration, internalised and developed in the consciousness of an artist. Since visual ideas are less pragmatically applicable and based on the general characteristics of something, they are probably less likely to be linked to specific artistic techniques and could potentially come from a variety of visual sources. The communication of visual ideas can happen at any time when an artist recognises a schema, a pattern for creating a graphic representation of something. For the example of young Marji in *Persepolis*, the visual idea would be a more general idea of how to represent this character, an idea that could be transported into other media, such as animation, but also the general idea that makes the character recognisable, despite being varied due to the sequential nature of comics.

Using visual building blocks can, despite its being based on general visual ideas, result in the creation of specific and potentially highly

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46 E.g. Abel and Madden, *Drawing Words and Writing Pictures*.
48 Gombrich, *Art and Illusion*, 76.
individual visual elements.\textsuperscript{50} the embodiment in the ‘outer world’ of the mental processes of using visual ideas and visual building blocks. In Persepolis, this would be a specific example of a depiction of young Marji.

Assimilation and Accommodation

The connection between what I have labelled visual building blocks and visual ideas is what Gombrich calls ‘corrections’, namely alterations the artist makes to the schema of ‘oscillating back and forth’ between practical application and mental processing.\textsuperscript{51} The artist moves from acquiring a schema—a visual idea—creating and applying a visual building block based on said schema, assessing the results—the visual elements—potentially making changes to the visual ideas they are built upon, adjusting the visual building blocks accordingly, and trying again. This can be compared with the idea within cognitive psychology of two possibilities for using schemata: (1) assimilation, using an internalised schema more or less without changing it; and (2) accommodation, developing and adapting a schema for your own requirements.\textsuperscript{52} Applying these two concepts to the world of art, assimilation would indicate copying other artists’ visual solutions more or less directly, whereas accommodation would entail producing new, personalised versions through Gombrich’s process of oscillating back and forth. This could concern the artistic development of a specific artist but could also encompass a larger group—for example, the artists involved in the French New Wave—exchanging and developing schemata as a group, thereby developing a new subculture within a comics culture.

Analysis of Potential Connections

Finally, in order to operationalise the theory of schema for the purpose of the analysis, there is a need for a structuring of the search for schemata.

Gombrich never defined exactly what can or cannot be a schema\textsuperscript{53} but suggests it can include influences down to the basis of minute de-

\textsuperscript{50} Wilson and Wilson, ‘Children’s Drawings in Egypt’, 14.
\textsuperscript{51} Gombrich, Art and Illusion, 64.
\textsuperscript{53} Veronika Kopecky, ‘Letters to and from Ernst Gombrich regarding Art and Illusion, Including some Comments on his Notion of “Schema and Correction”, Journal of
tails, such as a line indicating a fingernail. Opinions differ as to where the upper ‘boundaries’ are for what could be the basis of a schema in visual arts, but representations of characters and objects have been referenced. Gombrich also claims that the composition of whole images can be based on schemata: patterns transferred from the work of one artist to another. More complexly constructed visual schemata, namely containing more information, can also include smaller schemata, details that form a larger whole, resonating with cognitive schema theory where a schema can contain other schemata.

This discussion on the boundaries of what can constitute a schema was used as a starting point for the structuring of the analysis, where indications of connections to visual ideas from the aforementioned Persian art forms were sought in visual elements in *Persepolis* on four levels of complexity in the construction of their schemata: (1) lines, (2) details, (3) characters and objects, and (4) compositions.

**Lines: Curvilinear Art and Rhythmical Designs**

One distinguishing feature of the art in *Persepolis* on the level of lines is the use of curvilinear art and rhythmical designs. These could be connected to visual ideas from arabesques and calligraphy, two distinctive, yet interlinked forms of Persian art. Both art forms have been associated with the aniconistic tendencies in Muslim traditions, namely trepidations concerning figurative art, contributing to the flourishing of ornamental, artistic, and often geometrical designs used...
on everything from texts and illuminated manuscripts to buildings in historical Persia, and still a presence in everyday life in Iran today.\textsuperscript{62}

Persian arabesques are vegetally inspired decorations, using graphic representations of leaves and spiralling stems to form rhythmic, linear designs that can be repeated over and over again.\textsuperscript{63} These have become highly formalised and are viewed as an essential part of decorative traditions in Persian visual cultures.\textsuperscript{64} Calligraphy is the art of linear graphics, of giving letters and words sculptural autonomy through a process founded on geometrical and decorative rules.\textsuperscript{65} Calligraphy has been described as one of the highest achievements of Persian art, creating linear art based on the Farsi language.\textsuperscript{66} It has traditionally been designated as representing the holy scriptures of the \textit{Quran} through a balance between beauty and disciplined artistic freedom.\textsuperscript{67} Calligraphy and arabesques are often used together\textsuperscript{68} and are intricately linked with each other.\textsuperscript{69}

One extradiegetic example—that is, outside of the narrative world in the graphic novel—of possible connections to visual ideas from these two art forms can be found on the cover to the English language \textit{The Complete Persepolis} (see Fig. 1).\textsuperscript{70} Curvilinear art and floral designs surround a turquoise area containing an image of the family of the young Marji, the protagonist of the story and Satrapi’s alter ego, seated in and standing around a sofa. The colour turquoise is dominant in decorative, repeatable designs on exteriors and interiors of buildings in Iran, including both arabesques and calligraphy in their designs.\textsuperscript{71}

\textsuperscript{65} Abdelkebir Khatibi and Mohammed Sijelmassi, \textit{The Splendour of Islamic Calligraphy} (New York: Thames and Hudson, 2001), 6–7.
\textsuperscript{66} Ben Wittner, Sascha Thoma, and Nicholas Bourquin, \textit{Arabesque: Graphic Design from the Arab World and Persia} (Berlin: Die Gestalten Verlag, 2008), 4.
\textsuperscript{67} Huda Smitshuijzen AbiFarès, ‘Foreword’, in \textit{Arabesque: Graphic Design from the Arab World and Persia}, eds. Ben Wittner, Sasha Thoma, and Nicolas Bourquin (Berlin: Gestalten Verlag, 2008), 4–7 (4).
\textsuperscript{68} Cf. Anette Hagedorn and Norbert Wolf, \textit{Islamic Art} (Cologne: Tachen, 2009), 9.
Figure 1. Cover of *The Complete Persepolis*. © 2007 Marjane Satrapi, L'Association and Pantheon Books.
The shape and placement of the turquoise area seems to be connected to the visual idea from comics of using thought bubbles: a version of the speech bubble with a cloud-like shape and bubbles forming a ‘tail’, designating the thinking character. Thought bubbles contain words, indicating inner monologues, but images also occur as visual representations of thoughts. Thus, the cover can be interpreted as adult Marji thinking about her life as a young girl. The placement of adult Marji outside of the flower-like, bubbly turquoise shape, with closed eyes, head resting in her hand—suggesting thinking, reminiscing about her past—also indicates a connection to the visual idea of thought bubbles, as do the stylistic flowers in the lower left-hand corner forming what could be interpreted as an equivalent of the bubbly tail, pointing towards the adult Marji.

The visual elements forming the curvilinear art, also turquoise on a black background, do not seem to be connected to specific Farsi letters or traditional Persian rhythmic visual patterns, but design and placement suggests connections on the level of visual ideas with both curvilinear art in Persian calligraphy and floral designs in Persian arabesques. Connections to floral designs in arabesques are also indicated by inclusion of the visual elements creating graphic representations of stylistic flowers, as well as by the symmetrical, flower-like shape of the large turquoise area. The latter, semi-symmetrical shape could, furthermore, be connected to visual ideas from Persian carpets, often including large-format, centrally placed, flower-shaped medallions. These visual elements originated on book covers in the fifteenth century, often combined with both calligraphy and arabesques, and are also used in decorations of buildings (see Fig. 3B).

The visual elements forming the curvilinear art are placed outside of the flower-like, turquoise shape and do not seem to connect directly to the visual idea of thought bubbles. The non-mimetic design of the curvilinear art could be indicative of the ephemeral thinking process, an

72 Abel and Madden, Drawing Words and Writing Pictures, 5; Cohn, The Visual Language of Comics, 36.
73 Eisner, Comics and Sequential Art, 20.
74 Cf. Khatibi and Sijelmassi, The Splendour of Islamic Calligraphy, 182.
77 Sheila R. Canby, Islamic Art in Detail (Cambridge: Harvard University Press, 2005), 83.
interpretation supported by curvilinear art recurring as visual elements throughout the interior of the book to visualise the characters’ inner life. Curvilinear art appears to signal inner turmoil (195), thoughts (34 panel 4, 209), dreams (64 panel 1, see Fig. 2A), memories (84), and prayer (233 panel 4, see Fig. 2B, and 296 panel 9). These visual elements are used sparsely, contrasting with scenes focusing more on action in the diegetic ‘outer world’. This use of curvilinear art could be viewed as a combination with and an accommodation to the visual ideas in comics of using what have been labelled emanata, or typographic signs: lines pointing out from the head of a character to indicate feelings, visual elements that are closely connected to comics.

One departure from established conventions in comics is that the curvilinear art in these examples in Persepolis is more extensive, sometimes filling the space around a character, whereas in comics it often consists of a few lines in close proximity to a character’s head. The use of lines filling the space around a character to indicate a certain feeling does exist within comics, although mostly in Japan, further removed geographically and culturally, making a connection less likely. These lines in Persepolis also form loosely connected geometrical designs, indicating connections to visual ideas in arabesques. Despite the differences, indicating both accommodation and combination, the positioning of these visual elements around the heads of the characters still implies connections to visual ideas of emanata in comics.

On a couple of occasions, curvilinear art is used in ways more closely aligned with the visual ideas from comics: wavy lines emanating from Marji’s head when she is angry (239 panels 2–4) or spirals indicating that Marji is going crazy (247 panel 5). The lines used in these examples are fewer and, in accordance with visual ideas from comics, more directly centred towards the characters’ heads, but through their inclusion of curvilinear art, still seem to carry connections to calligraphy and arabesques.

78 Pages and panels in Persepolis refer to the French language collected edition of Persepolis (Satrapi, Persepolis).
81 Cf. Abel and Madden, Drawing Words and Writing Pictures, 8.
82 Ibid.
83 Cohn, The Visual Language of Comics, 40.
Figure 2A. Curvilinear art in *Persepolis*, used to visualise dreams... Page 64, panel 1.

Figure 2B. ...and prayer. Page 233, panel 4. © 2017 Marjane Satrapi and L’Association.
Visual elements connected to ideas of curvilinear art are furthermore used as graphic representations of material phenomena in the diegesis of the story. This can be seen in a panel where Marji and her friends walk through an alley of trees, where the foliage is indicated with stylised, curved white lines against a black background (65 panel 4, see Fig. 3A).

The design and use of these visual elements are similar to those used to indicate emotions, but when compared to ornamental, decorative Persian designs seem slightly more mimetic and more aligned with visual elements in arabesques. This is potentially because their objective is closer to that of using curvilinear art in arabesques, namely to create graphic representations of leaves and stems (see Fig. 3B).

Figure 3B. Example of an arabesque from a mosque in Teheran. © nyiragongo/Adobe Stock.
Details: Facial Features

The faces of the characters in *Persepolis* are examples of the idea that complexly constructed schemata can consist of combinations of smaller schemata. A few visual elements create the graphic representations of a facial feature: nose and mouth consist of one visual element each, one single line; eyes are two connected curving lines with a dot to indicate the pupil; and finally, marked eyebrows, also consisting of one single line each. These visual elements, though similar to conventions in which representations of faces have been created in comics, also bear a resemblance to the design of facial features in Persian miniatures, one of the most well-known Persian art forms. Persian miniatures consist of images based on black line drawings on paper, coloured with a flat, bright palette, and were mostly complements to texts in books, comparable to the European tradition of illuminated manuscripts in medieval times. The art form seems to have come into its own in the thirteenth century and is still very much part of everyday life in Iran. Probably due to being intended for private and not public use, Persian miniatures, often containing people in large quantities, were less affected by aniconism.

Fewer visual elements create the graphic representations of facial features in *Persepolis*, compared to the slightly more detailed art in many of the styles used over the centuries within Persian miniatures, indicating accommodations to fit the sparse, black-and-white style of the graphic novel. Persian miniatures also contain colour, which differentiates them from the art in *Persepolis*. The use of flat colouring without shading or other representations of volume combined with the

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use of black outlines means that they are still close to the style used in *Persepolis*.

The facial features in *Persepolis* are, furthermore, more varied in design and the expressions they convey than was the custom in Persian miniatures. Specific visual building blocks for how to create facial features seem to have been dominant and used more or less as templates, especially for depicting crowds. Despite this, there are similarities, indicating possible connections between these visual elements in Persian miniatures and in *Persepolis*.

The possible connections are exemplified in Figures 4A and 4B, where the face of Marji’s father is shown next to that of a Persian bowman from a sixteenth-century Persian miniature. There are differences, such as more variations in the thickness of line in the visual elements forming the facial features of the bowman. There are also similarities, such as the general design of the eyes, which with their

95 Grabar, *Mostly Miniatures*, 133.
horizontal, semi-mimetic design, are different from visual conventions within comics featuring similarly ‘cartoony’ art as in Persepolis97 as well as more specific details, such as the angular design of the eyebrows and the drooping moustache shown without indications of the mouth.

Characters and Objects: Persian Soldiers

Moving to the level of schemata connected to characters and objects, the most easily recognisable visual element in Persepolis connected to Persian art forms is the distinctive design of ancient Persian warriors, soldiers with characteristic hairstyles and beards (see Fig. 5B). These have historically been featured on Persian stone friezes, many of which are to be found in museums around the world,98 becoming synonymous with the ancient Persian Empire.99

A number of visual elements in Persepolis are clearly connected to these visual ideas, especially in the first part, where the narrative focus is on the history of Persia. Visual elements creating graphic representations of the soldiers from the friezes are shown in the diegesis as physical objects in a museum (341, panel 4) but also appear as extra-diegetic representations of the Persian Empire in a chapter header (30, panel 1, see Fig. 5A), as well as in illustrations of the history of Persia (32, panels 1–2).

The complexly constructed visual elements representing the soldier carry a visual idea but also contain smaller visual elements that carry separate visual ideas,100 such as the semi-mimetic design of the eyes, similar to those of the characters of the story. The soldiers in the graphic novel show fewer details than their counterparts in the friezes, lacking, for instance, visual elements for nostrils and eyebrows, indicating an accommodation to the black-and-white style of the graphic novel and a move towards representing the visual idea of the soldiers.

97 Naghibi and O’Malley, ‘Estranging the Familiar’, 228; Groensteen, La Bande dessinée, son histoire et ses maîtres, 329.
100 Cf. Gombrich, Art and Illusion, 28.
Compositions: Symmetrical Crowds

On the level of composition, some images in *Persepolis* stand out due to the use of regular, repeatable designs for representing crowds in panels depicting confrontations between the public and the military during the Iranian Revolution. Crowds on both sides are shown as symmetrical, stylised formations, with multiple characters depicted in almost the exact same poses, seen from the side, forming rhythmical designs (22, panels 1–3, see Fig. 6C, and 42, panel 6). Similar compositions can be found when victims of a massacre are shown as symmetrically stacked bodies, forming gruesome, rhythmical designs (44, panel 1).

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These compositions are most likely connected to visual ideas on a compositional level from Persian friezes, which also depict figures, men and beasts seen from the side at a fixed ninety-degree angle, without background and with more or less identical figures arranged in symmetrical rows (see Fig. 6A). There are marked similarities in the way they are arranged in rows, especially when compared to the panel shown in Figure 6B, where the characters are also based on the visual idea of the Persian soldier in the friezes.

The soldiers in Figure 6B are stacked in additional rows, creating a more complex design compared to the friezes where added rows are shown in separate lines arranged on top of each other with all characters on the same plane, with no indication of perspective or depth. This could be due to schemata for indicating perspective not being accessible to the artists creating the friezes, or, as Wölfflin phrased it: ‘not everything is possible in every period’. The added rows in Persepolis and the pattern they create indicates a connection with visual ideas of geometrical, repeatable designs in arabesques, namely a combination

102 Quoted in Gombrich, Art and Illusion, 4.
of visual ideas from different Persian art forms. In other panels, crowds depicted as rhythmic designs recur, and even though these do not connect directly to the visual idea of the Persian soldiers (e.g. Fig. 6C), connections to visual ideas of rhythmical, linear designs in arabesques and rows of characters from the friezes are still evident. Also supporting this interpretation is the fact that in Persepolis, the soldiers in Figure 6B are more or less the same, whereas in the friezes they have variations in their armour and so forth, indicating that the compositions in Persepolis are connected to the way specific visual elements can be repeated over and over again in arabesques.

Accommodation, Combination, Integration

The process of transforming Persian visual ideas into visual elements in Persepolis and the integration this achieved with a new art form indicates that accommodations generally seem to have been made with the objective of adjusting the Persian visual ideas for use in comics, namely that visual building blocks were designed specifically for this art form

104 Wijdan Ali, The Arab Contribution to Islamic Art: From the Seventh to the Fifteenth Century (Cairo: American University of Cairo Press, 1999), 63.
and the tools and techniques used as well as for the general style in the graphic novel. However, there are variations in the accommodation for the different Persian art forms involved and trends in the data concerning the degree of accommodation and integration could be due to: (1) divergences between art forms involved; (2) levels of combinations of schemata from different art forms; and (3) apparent objectives for the use of visual ideas. These factors seem to have influenced the use of schemata from the respective Persian art forms differently, so let us examine them separately.

Persian Miniatures

Visual ideas connected to Persian miniatures seem to have been applied without much accommodation needed for the creation of visual elements integrating with comics, presumably since the Persian miniature is an art form closely related to comics through its tools and techniques. This is indicated by the way that visual elements creating the graphic representations of facial features in Persepolis seemingly carry connections to their counterparts in Persian miniatures but at the same time, are connected potentially to visual conventions for graphic representations of facial features in comics. This suggests a combination of two sets of visual ideas but could also indicate parallel visual developments based on similar art techniques and similarities in the way these visual elements have been used. Persian miniatures were often intended as easily accessible complements to texts, and each panel in a comic is intended to be read as part of a larger whole. Both of these forms of communication create ‘the illusion of life which can do without the illusion of reality’, in other words, a more detailed and mimetic representation, in this case of facial features, risks getting in the way of efficient communication in Persian miniatures as well as in comics.

Similarities between the objectives for using these visual ideas, as well as the comparative closeness between the art forms involved, indicate a parallel development that could explain the high degree of inte-
gration, that is to say, the visual ideas seem to have fitted into the new art form and been more or less seamlessly combined with visual ideas from comics, without this process creating visual elements that contain new visual ideas. It could also indicate that developments of conventions for representations of features in Persian miniatures and in comics are truly parallel and that there are no direct connections. Visual evidence points to the former interpretation but seems less certain than has been stated in previous research.110

Persian Friezes

Visual ideas connected to Persian friezes, an art form displaying a higher divergence from comics, could have been expected to have been accommodated to a higher degree than visual ideas from Persian miniatures, due to the shift in artist’s materials and techniques, from chisel and stone to pen and paper,111 as well as a shift from three to two dimensions.112 Combined, this could raise the need for a process of oscillating back and forth between visual ideas and visual building blocks when creating the visual elements.113 The fact that there seems to be comparatively little accommodation could be due to other similarities between these two art forms, which are both based on representations of characters, with Persian friezes, though partially three-dimensional, even being labelled ‘sculpted pictures’.114 The objectives for the use of the visual idea of the Persian soldier as recognisable artefact within the diegesis also makes their use different from that of other visual elements analysed, as the connection to Persian friezes is specific and can be viewed as less of a pattern used and more of a visual quotation.115 This indicates a process of replication,116 not allowing for much accommodation besides adjusting for the new art form and the general style in the graphic novel.

The resulting visual elements seem to integrate seamlessly with more conventional visual elements from comics and, except for possible

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113 Gombrich, Art and Illusion, 118.
114 Stierlin, Persian Art and Architecture, 137.
115 Cf. Chute, Graphic Women, 144.
connections concerning the eyes of the characters in the graphic novel, do not seem to have been combined with visual ideas from comics.

Arabesques and Calligraphy

In contrast to the specificity of the Persian soldiers, the use of the more adaptable visual ideas of curvilinear art and repeatable designs seems to have opened up for more accommodation, not only to fit the style and integrate with comics but also for combination with other visual ideas. The close links between Persian arabesques and calligraphy sometimes make it difficult to differentiate between them, but their respective divergencies to comics are different. Calligraphy is more closely related to comics through the use of pen, paper, and ink, but arabesques are further removed through the use of other artistic tools and techniques. The connections perceived in visual elements in Persepolis to the rhythmic nature of arabesques do seem straightforward, as they have resulted in distinctive visual elements, but the connections to calligraphy are more elusive and could exist in more aspects of the art in Persepolis than identified. Studies have shown that the use of calligraphy by children in the Middle East can directly affect how they draw, indicating that there might be more connections to be found between calligraphy and the visual elements in Persepolis.

In the panels containing symmetrical crowds (Figs. 6A and 6B), visual ideas of Persian soldiers and compositional ideas of rows of similar characters, both from Persian friezes, seem to have been combined with ideas of rhythmical designs in arabesques (cf. Fig. 3B). This process seems to have involved a higher degree of accommodation, resulting in visual elements containing new visual ideas that, though integrated with the style and the visual narrative flow, still stand out due to their different composition.

The connections to curvilinear art and rhythmical designs in combination with visual conventions from comics—that is, thought bubbles and emanata—seem to have included accommodations resulting in visual elements containing new visual ideas. Most of the formal conventions from comics, such as format, page layout, and speech balloons, seem to have been used with direct assimilation, indicating that these elements, used for the purpose of creating readability in a comic, were not open to much accommodation. The fact that there still were

118 Cf. Cohn, The Visual Language of Comics, 34.
accommodations to these conventions from comics indicates the degree to which Persian visual ideas is present in the art of *Persepolis*.

**Diversifying and Enriching**

All three explanations presented in the secondary analysis seem applicable to the data, though none alone is able to explain the degrees of accommodation that seem to have been involved when applying *visual ideas* from different Persian art forms. However, in combination, they give an indication of the processes going into the integration of these visual elements into a new art form. This leaves the question of what these remediations, that is to say, representations of one medium in another, through the use of schemata from different visual art forms, have meant for the graphic novel and for comics in general. I argue that the connections to Persian *visual ideas* have enriched and diversified *Persepolis* in at least two ways: (1) reinforcing the narrative theme, and (2) expanding the visual possibilities of the art form of comics.

**Narrative Theme**

It might seem self-evident, but the visual elements connected to the Persian art forms analysed add a dimension to the narrative of the graphic novel, as they interact with and enhance the Persian theme. On a basic level, this merely involves the insertion of visual quotations, such as the Persian soldiers. The degree of accommodation and combination involved in the process of turning some of the other Persian visual ideas into visual elements in the graphic novel means that at the same time as they connect to the theme of the story, their presence resonates with the format and visual conventions of comics, making their inclusion more subtle and potentially more pervasive. The combination of *visual ideas* of emanata with the Persian *visual ideas* of curvilinear art, for instance, results in visual elements more or less immediately understandable in a comics context, at the same time as they display properties connecting to Persian visual cultures, making the connections to Persian art forms an integral part not only of the narrative but of the format, of the way the story is communicated. This is not unique for *Persepolis*, as there are numerous examples of artists from Iran, expatriates like Satrapi but also artists living and working in Iran, intentionally or subconsciously using patterns and conventions from

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ancient Persian visual cultures to convey contemporary messages.\textsuperscript{120} That this integration of Persian art forms is at least partially intended in \textit{Persepolis} is indicated not only by the title, referring to a well-known capital of the ancient Persian Empire where many of the referenced Persian friezes were situated,\textsuperscript{121} but also by the fact that in a section of the narrative that takes place in Europe,\textsuperscript{122} the connections to Persian art forms all but disappear in the visual elements, not only in the diegetic representations of environments but in the art in general.

\textbf{Expanding the Art Form}

The connections to Persian visual ideas have also added a diversity to the art in the graphic novel through the inclusion of new visual elements. Jay David Bolter and Richard Grusin, when discussing different functions for remediation, emphasise remediation as reform, namely that the implicit and sometimes explicit goal of remediation is to re-fashion or rehabilitate a new medium,\textsuperscript{123} which is congruent with the idea that the inclusion of schemata from other art forms holds the potential to reinvigorate comics. The fact that the identified schemata in \textit{Persepolis} were remediated from other art forms suggests they added to the visual toolbox of the artist and, in the process, brought the potential of new visual ideas to comics.\textsuperscript{124}

Gombrich discusses the implications of moving from one art form to another and the inherent ‘sacrifice’ involved in moving, for instance, from three-dimensional to two-dimensional art.\textsuperscript{125} In the case of \textit{Persepolis}, it could be argued that the degree of accommodation and combinations has resulted not only in the adaption and integration of these visual ideas into another art form but also in the creation of visual elements that do not suffer from this ‘sacrifice’. The images in \textit{Persepolis} contain fewer details and ‘lack’ the three-dimensionality of Persian friezes and the colour of Persian miniatures, but the contrasting black-and-white art in \textit{Persepolis} is a textbook example not only of Gombrich’s ‘condensation and fusion’, eminently suitable for communicating in a

\begin{itemize}
  \item\textsuperscript{120} Manya Saadi-Nejad, ‘Mythological Themes in Iranian Culture and Art: Traditional and Contemporary Perspectives’, \textit{Iranian Studies} 42, no. 2 (2009), 231–246 (232), https://doi.org/10.1080/00210860902764946.
  \item\textsuperscript{121} Typhaine Leservot, ‘Occidentalism: Rewriting the West in Marjane Satrapi’s \textit{Persepolis}’, \textit{French Forum} 36, no. 1 (2011), 115–130 (127).
  \item\textsuperscript{122} Satrapi, \textit{The Complete Persepolis}, 197–305.
  \item\textsuperscript{123} Bolter and Grusin, ‘Remediation’, 346.
  \item\textsuperscript{124} Cf. Wilson and Wilson, ‘Children’s Drawings in Egypt’, 21.
  \item\textsuperscript{125} Gombrich, \textit{Art and Illusion}, 118.
\end{itemize}
sequential art form where each image is part of a visual narrative rather than a stand-alone piece of art,\textsuperscript{126} but also the way in which communication in comics seems to benefit from using visual elements that display the visual ideas, the meaning of the images, more clearly, thereby using images that create a high degree of immersion and participation from the reader.\textsuperscript{127}

A Visual Legacy

The unique combination and accommodation of visual ideas from comics and Persian art forms in Persepolis do seem to have created new visual elements and the commercial and critical success of Persepolis indicates that visual ideas inherent in them could potentially have influenced the content of other comics,\textsuperscript{128} thus enriching the art form of comics. One example where connections to these new sets of visual ideas seem to be detectable is in the works of Lebanese French comics artist Zeina Abirached, who has won great acclaim the last few years for graphic novels that appear to contain connections to visual ideas from Persepolis, with additional accommodations resulting in more extensive use of symmetrical designs and curvilinear art.\textsuperscript{129}

Another example is Syrian French comics artist Riad Sattouf, who had an exaggerated, heavily caricatured style in earlier, humorous works,\textsuperscript{130} but when he decided to tell an autobiographical story similar to the one in Persepolis—of growing up in the Middle East and in Europe—in the much lauded The Arab of the Future,\textsuperscript{131} the more sedate style carries a number of similarities with sets of schemata established in Persepolis.

These similarities could be based on shared influences due to calligraphy and arabesques also being prevalent in Lebanon and Syria as well as to these artists being part of the ‘alternative’ subculture of French

\textsuperscript{126} Groensteen, The System of Comics, 7.
\textsuperscript{127} McLuhan, Understanding Media, 24.
\textsuperscript{130} E.g. Riad Sattouf, Pascal Brutal: La Nouvelle Virilité (Paris: Fluide glacial, 2006).
comics, which partly grew out of the New Wave.\textsuperscript{132} However, similarities on the level of visual elements as well as in general styles indicate direct connections to \textit{Persepolis}, which could also be due to wanting to reference visually an established style within the genre of comics memoirs in order to reach similar target audiences.

So, Satrapi may have stopped making comics and moved on to a career as film director,\textsuperscript{133} but visual ideas established through \textit{Persepolis} live on. How much of this is based on schemata from Persian art forms is difficult to say. My analysis indicates they are present, although integrated and combined with schemata from comics, but that the connections to the most often-quoted influence, namely from Persian miniatures, seem to be among the more elusive.

On a meta-level, analysing using Gombrichian-inspired schema theory has proved to be elucidating. Compared, for instance, to Cohn’s psycholinguistic version of schema theory,\textsuperscript{134} Gombrichian schema theory invites for a more process-oriented view of the complex way in which images in comics are created and could potentially be utilised to delve deeper into other ‘truisms’ within comics studies.

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\textsuperscript{132} Beaty, \textit{Unpopular Culture}, 9.
\textsuperscript{134} Cohn, \textit{The Visual Language of Comics}. 