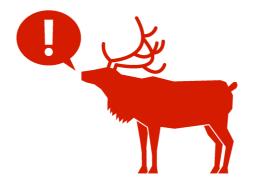
# BEYOND THE VISUAL: THE ROLES OF THE SENSES IN CONTEMPORARY COMICS

By Ian Hague







# Introduction

"Comics," writes Scott McCloud in his seminal work *Understanding Comics*, "is a mono-sensory medium. It relies on only one of the senses to convey a world of experience" (McCloud 1993, 89; emphasis in original). In making this statement, McCloud concisely enunciates an assumption that underpins much of our understanding of the medium of comics, and conditions not only the ways in which we do think about our object, but also the ways in which we are able to think about it. We tend to conceptualise comics as a visual medium or a visual art form, a means by which stories are told using pictures and (sometimes) words. Rather than understanding comics as fully realised physical objects, we view them as very limited, exclusively visual entities. As Roger Sabin points out in an essay on the differences between printed comics and electronic ones: "It's easy to forget that we read – or rather 'use' – comics in a very physical way (we tend to think of them as being two-dimensional, but in fact they exist in three dimensions)" (Sabin 2000, 52). He goes on to discuss some of the properties of printed comics that are overlooked by such a conceptualisation:

They can be bent, rolled-up, roughly opened or whatever. They can be held in different ways: cradled in your hand or gripped at the edges. We know how far into a comic we've read because we can feel how many pages are left. There are also smells: of dust, glue and paper. (Sabin 2000, 52)

What Sabin's comments here emphasise is that the purely visual conception of comics exemplified by McCloud's remarks is not a wholly valid one. Comics are not images without material substance, they are physical objects that we interact with in physical ways. Whether they involve the manipulation of paper in a printed comic, or the use of a mouse to effect changes in images on a computer screen, we are still required to connect with comics in ways that go beyond the visual.

Indeed, it is often the case that the non-visual elements of a comic's composition have the greatest effects upon the reader. In 2002, Mel Gibson conducted a series of interviews with comic readers. She noted:

Patterns emerged in interview [sic] regarding memories of comics [...] readers often wanted to check details, testing memory against outside sources. Further discussion included titles and narratives alongside physical aspects of the texts, including paper quality, feel, scent and size. (Gibson 2008, 151–152; my emphasis)





While it is true that the narrative elements of the comics as expressed by visual components attained a position of primacy here, what Gibson's research makes obvious are the roles played by the other senses in receiving and formulating the identity of the comic in the reader's mind. Though it would clearly be somewhat foolish to suggest that comics are *not* visual in nature, it is fair to assert that they are not *only* visual in nature. The senses other than sight can have powerful effects upon the reader, communicating information and contributing to the formation of memories and emotions around comics in ways that sight cannot. In recent years, it has become clear that comic creators and publishers are growing increasingly aware of these effects, and are working to incorporate or emphasise them where possible. In this article, I would like to consider some of the ways in which this has been taking place by discussing a selection of examples that I will relate to each of the four non-visual senses in turn, beginning with touch. Although this selection is not intended to be comprehensive, it should give an idea of some of the ways in which the various senses have been taken up by comics creators.

# **TOUCH**

After sight, touch is perhaps the most obvious of the senses to play a role in our conscious understandings of comics. As I mentioned earlier, we almost always interact with comics in some tactile way, whether this is through the turning of a page or the clicking of a mouse. Indeed, so embedded in the comics reading experience is touch that it can seem strange when it is absent or different; reading comics in a gallery or even on a website can at times be unsatisfactory because they seem to lack the "reality" of the tangible object. As Jonathan Rée has remarked, "[. . . ] eyesight on its own does not always enable you to distinguish appearances from realities, and when in doubt it is wise to call on the sense of touch to settle the matter" (Rée 1999, 20). At the most basic level, the feel of a comic book in our hands can assure us of its existence, its reality, and perhaps if we are collectors the authenticity of the object in our possession, but there are more complex ways of integrating the sense of touch into our understanding of comics.

In Art Spiegelman and Chip Kidd's *Jack Cole and Plastic Man: Forms Stretched to Their Limits!*, which combines numerous full-page reproductions of Cole's work on Plastic Man with a long biographical essay by Spiegelman that first appeared in *The New Yorker*, designer Kidd masterfully manipulates materiality (Spiegelman and Kidd 2001). "The design approach to me was obvious", he remarks in Gary Spencer Millidge's *Comic Book Design*, "what if Plastic Man had turned himself into a book?" (Millidge 2009, 128). Accordingly, the book features a plastic cover, a huge variety of paper stocks and textures, and rounded corners. The effect of this is to make the reading experience very changeable and inconsistent; the reader is regularly reminded that they are reading a book because their sense of touch is actively drawn into the reading process, and





through this the 'realities' upon which Jonathan Rée remarked are continuously brought back to the reader's attention. We cannot simply look at the comics on the book's pages and see them as visual narratives because we are also repeatedly told by our sense of touch that this is a book, even that this is a page that is very different from those that came before it or will come after it. This changeability is ideally suited to the character of Plastic Man, whose superpower is an inhuman malleability - he is able to stretch and transform himself into outlandish shapes and sizes - a power that is replicated within the book itself and accessed by the reader through their sense of touch just as much, if not more than, through their sense of sight. This emphatic physicality is further strengthened by the selection of materials employed in the book's design. While the interior pages are made of paper (albeit with varying levels of thickness, smoothness and glossiness), the book's covers are plastic; precisely the same material that the protagonist is supposed to resemble. It does not simply represent plastic, it is plastic, and touch here serves to negate the abstraction required of the looking individual by evoking a direct link between the reader and the work that cannot be replicated by any other sense. Plasticity as a concept, and plastic as a material, permeate the entire work and serve to strengthen the expressions of narrative therein without simply restating them. We are presented with a tactile experience that exceeds the visual one without overwhelming it, and in this sense the ostensibly conventional book format transcends the role of a 'support' to the visual images; the visual components support the tangible just as much as the material elements support the visual (Groensteen 1998, 108<sup>1</sup>).

Where Jack Cole and Plastic Man represents a very specific use of material to indicate a particular concept, touch can also serve more generic, though that is not to say less effective, functions as well. As Mel Gibson (2008) has pointed out, the feel of a comic's pages can be important in establishing its identity in the reader's mind, and publishers have taken full advantage of this fact, often issuing multiple editions of works, which have varying levels of cultural and economic cache. One need only look to the rise of the term 'graphic novel' and the presence of comics in bookshops to see the various ways in which physical format can effect changes in how the medium is treated. The process of modifying a comic's physical formatting to achieve particular effects has perhaps reached its zenith in the huge, heavy, slipcased hardcover editions of DC Comics' "Absolute" line, which are printed on a very high quality paper stock, and feature additional paratextual elements that would not be found in less expensive versions of the same title. In producing such items, DC Comics is able to assign to the tactile properties of hardness, heaviness and smoothness a level of economic and cultural prestige that is not afforded to softer,

<sup>&</sup>lt;sup>1</sup> Groensteen (1998, 108) uses the term "support" in his definition of a comic strip, writing: "I would define a comic strip as a visual narrative, a story conveyed by sequences of graphic, fixed images, together on a single support".





lighter, rougher works such as individual comics. Furthermore, it indicates that those works which possess the former set of qualities are deserving of preservation and respect, something that the latter qualities do not necessarily imply. Tactile properties of this kind are therefore able to play a part in reflecting and contributing to the canonisation of the works in the format as "classics" of the medium. Without wishing to appear too cynical, I suspect few would argue that *Superman: For Tomorrow, Green Lantern: Rebirth* or the first seven issues of *Danger Girl* are of historical or narrative significance equal to *Watchmen* or *Sandman*, but their inclusion in the same (very limited) publishing format does afford them a cultural cache through physical substantiality.

Properties such as hardness can serve other functions as well, and if we turn to another work by Art Spiegelman, In the Shadow of No Towers, we can see some of these in use (Spiegelman 2004). In the Shadow of No Towers is Spiegelman's response to the attacks on the World Trade Centre in New York on the 11th of September 2001. It comprises a series of ten double page comic spreads that were originally published in the German newspaper Die Zeit, and an appendix providing a brief history of American newspaper comics along with a plethora of example pages and strips. What is particularly interesting about the work is its publication format: it is a large board book printed on fairly hard cardboard pages rather than soft paper. Producing the work in this fashion makes a powerful statement because the hardness here serves to suggest permanence and significance. Spiegelman presents the events of 9/11 as physical memories that are literally too hard to efface, just as the black on black silhouette of the World Trade Centre that serves as the book's cover suggests the ever-present absence of the twin towers themselves. In making the book physically hard, he gives the memories a permanence, which reflects the permanent changes wrought upon American society, and the American psyche, by the relatively brief but significant events of that day. Laura Marks has pointed out that: "To appreciate the materiality of our media pulls us away from a symbolic understanding and toward a shared physical existence" (Marks 2002, xii), and this is particularly evident in *In the Shadow of No Towers*. By making the work unusually inflexible, and indeed unusually large, Spiegelman forces the reader to remain aware of its (often uncomfortable) presence in their hands or upon the table in front of them at all times. There is no escaping this "black box" of encrusted memories and histories; it is something that must be dealt with and thought about, despite the fact that this will not always be a comfortable process. He makes history literally too hard to crumple up and dispose of as we might otherwise do with the seemingly ephemeral newspaper comic strip, which is usually "[...] consumed, then discarded [with the newspaper]" (Carrier 2000, 63). At the same time, a sense of fragility does inhere in the format due to the subject matter; just as the twin towers themselves appeared to be





solid, stable constructions that were unlikely to disappear, the book itself is far from indestructible.

### **S**MELL

Touch is not the only means that creators have at their disposal to generate strong memories of and connections to comics. As we saw in Roger Sabin's very vivid description of the comic reading experience, which emphasised the presence of the scents of "dust, glue and paper", smell can also have a particularly potent effect upon the reader. 10,000 times more sensitive than the sense of taste, smell is a powerful means of linking comic and reader, and has a number of possibilities open to it, many of which stem from the strong connections between it and the memory centres of the brain (BBC, n.d.). As Walter Benjamin (2003, 335) succinctly put it: "A scent may drown entire years in the remembered odor it evokes". We have already seen evidence for the importance of smell to those readers interviewed by Mel Gibson, who, when given a comic from their past, smelled it to see if their memories of its aroma were accurate. Smell here serves as a connective thread; rarely obvious but constantly present, and it takes only the merest renewal of a particular scent to induce in the reader (or smeller?) a flood of memories, emotions and experiences drawn together by the two instances of a particular smell.

Yet despite the power that smell could have in comics, it has rarely been used with the conscious intention of conveying meaning and/or narrative, and the reasons for this likely stem from the difficulties inherent in its properties. Essentially, when deciding to employ smell, creators are faced with a choice between two things: control and longevity. On the one hand, the creator may wish to develop a sort of semiotics of smell, a codified system by which smells are deployed in the narrative. For example, they might like to have a particular part of a page smell of roses, or use a scratch and sniff card that the reader would use at particular points in the narrative to give them a sense of the aroma of a particular scene. This type of device has been used in other media in the past. John Waters' 1981 film *Polyester* was produced in 'Odorama', which meant it came with a scratch and sniff card that viewers were told to use at certain points in the film. A similar device was used in the 1986 video game *Leather Goddesses of Phobos*. Scratch and sniff technology has also been employed, albeit in a relatively limited fashion, in comics as well. Early printings of the manga series *Antique Bakery* by Digital Manga Publishing (2005–2006), for example, featured scratch and sniff covers. As comic shop owner Christopher Butcher remarked in an article on the series:





Each volume would have a new scratch-and-sniff, strawberries, chocolate, all meant to entice you into the baking world within. No manga publisher had done something that clever, to that point. It was pretty cool, and got people talking. (Butcher 2010)

As Butcher's comments here mark up, however, scratch and sniff technology in comics is still something of a novelty, and is not featured in many. Furthermore, although controlled, manufactured smells of the types employed in scratch and sniff offer a means by which creators can communicate specific ideas to the readership, they do not last a particularly long time. A scratch and sniff card of the type used in *Polyester* does not long retain the odours with which it has been impregnated, and this can be something of a problem if the smell is made a critical aspect of the work. If the reader must smell something to understand its meaning within the narrative, then this meaning will be lost as soon as the smell fades.

An alternative to the codified system of smell is that of a "natural" smell, i.e. a smell that is naturally emitted by the material of which a particular work is composed. It seems probable that these are the types of smells that were appreciated by the individuals in Mel Gibson's study, and they are largely understood to be incidental. In some instances, relevant smells may be present, as is the case in *Jack Cole and Plastic Man*, and even more so in the later work *Plastic Man*: On the *Lam!* (Baker 2004), both of whose covers emit rich plastic aromas, but it is probable that this is more by coincidence than design. It seems somewhat unlikely that DC Comics began with the smells and worked from there. Nevertheless, there is evidence to suggest that creators do in some instances seek to select materials for their works that will have the right odour. The recently launched UK small press anthology *Solipsistic Pop* provides an excellent example of such attention to detail. Writing on the publication's website in November 2009, the book's editor and publisher Tom Humberstone remarked:

On the day *Solipsistic Pop* launched [...] people were walking up to offer their support and feedback for the book. The most popular phrase being:

"You got the smell right!"

This was heartening to hear. Believe it or not, I'd gone to a lot of trouble to make sure the book had that just printed aroma. It was part of the reason the anthology existed. (Humberstone 2009)

For Humberstone, it is not enough to simply produce a comic as a physical object without thinking about why he is doing so. There must be a reason for creating a printed comic rather than, for example, a digital one. In thinking so carefully about the physical characteristics of comics as objects, it is natural that Humberstone came to consider the smell of the printed page





to be a critical element of the work because the smells of "dust, glue and paper" that were noted by Roger Sabin are not currently accessible in the digital environment.

Indeed, it is proving somewhat difficult to develop smell-based technologies that are feasible for the digital era. Haptic technology such as force feedback, touch screens and vibration systems are already in existence and have been used to enable digital comics to have an effect upon the readers' sense of touch. Perhaps the highest profile example of this type of interaction to date can be found in Robot Comics' adaptations of Bryan Lee O'Malley's Scott Pilgrim graphic novels for certain mobile phones under the banner of Scott Pilgrim's Precious Little App (O'Malley 2010). The app employs phones' vibration capabilities, for example when a phone is ringing in the story or when an impact occurs. This provides very different tactile experiences to those I discussed earlier, but it nonetheless represents a conscious and effective means by which digital comics can communicate via touch. Smell, however, has had no such success in the digital arena. Perhaps the most promising piece of technology to have been developed so far is a device called, somewhat dubiously, the iSmell, developed by the company DigiScents at the beginning of the 21st century. The idea was that the iSmell would take digital recipe codes from websites and then use chemicals inside the device to synthesise aromas that would be emitted from a grill on its front. Though an interesting concept, it was ultimately unsuccessful, and in 2006 it was listed by PC World magazine as one of the 25 worst tech products of all time (Tynan 2006). Until technology develops further, it seems that smell will remain an aspect of printed comics that cannot be replicated in digital ones.

The importance of this should not be underestimated. The development of the internet as a means of distribution, both legal and illegal, has affected the ways in which creators think about their field. As the internet provides access to a vast quantity of material at a very low cost to the consumer (or even at no cost at all), creators who depend upon the sales of their comics for their livelihoods are being forced to find ways to compete. This means thinking more carefully about the unique and untranslatable elements of the physical form, and striving to produce objects that are desirable as objects, rather than functional as containers for visual components but of only limited aesthetic merit in and of themselves. Where images can be scanned in and distributed as digital files online, the texture of a book's cover and the smell of its pages cannot be replicated; these elements are therefore becoming increasingly important for creators, and are no longer relegated to secondary positions behind their artwork and writing.<sup>2</sup>

 $<sup>^2</sup>$  I am indebted here to Bryan Talbot, who marked up the significance of this aspect of the internet's influence at Comica in 2009.





# **HEARING**

If there is one area in which digital comics do perhaps have the upper hand, it is in dealing with the sense of hearing. To return briefly to *Scott Pilgrim's Precious Little App*, in addition to the vibration functions already discussed, the app features music and sound effects on the books' title screens and at relevant points within the stories. Conversely, in printed comics the use of sound as a consciously deployed device for expressing meaning is rare. Although the opening and closing of a book and the turning of pages do generate noises, these tend not to be associated with any narrative elements per se, though it is not inconceivable that a sufficiently inventive creator could develop some means by which the physicality of the object itself could produce meaningful sound. More common is the production of sound through some kind of associated object, whether this is an integral component of the comic or not.

1968–2008... N'effacez pas nos traces! by Dominique Grange and Tardi is an album in two senses of the word: firstly it is a bande dessinée album, and secondly it is an album on CD (Grange and Tardi 2008). The CD presents a selection of anti-establishment songs composed by Grange in May 1968. Although the words of the songs are in some cases reproduced more or less directly in the book, the music and the voice are not, and there is thus a fairly significant difference between the two elements. Yet they are physically packaged together and it is not difficult to see that the book is somewhat incomplete without the CD. The publisher's website asserts: "A double reading of this book is essential for the reader who has the task of listening to Dominique Grange's songs with their eyes focused on Tardi's pictures" (Casterman, n.d.). Such an analysis calls to mind Charles Hatfield's (2005, 32) description of comics as an "art of tensions". He asserts that one of the tensions involved in the reading experience is between the sequence and the surface. "The page", he argues, "functions both as sequence and object, to be seen and read in both linear and nonlinear, holistic fashion" (Hatfield 2005, 32). The sequence is comprised of the individual panels understood as single images apprehended in their reading order. The surface is the page in its entirety; it is not what we read, but what we see. Compare this with the following extract from Ferdinand de Saussure's A Course in General Linguistics:

Unlike visual signals [...] which can exploit more than one dimension simultaneously, auditory signals have available to them only the linearity of time. The elements of such signals are presented one after another: they form a chain. (de Saussure 1983, 70)

<sup>&</sup>lt;sup>3</sup> Translation by Hayleigh Nash (2010) from original text: "Une double lecture de cet ouvrage s'impose donc au lecteur qui aura la tâche d'écouter les chansons du CD de Dominique Grange le regard rivé sur les dessins de Tardi!"





In 1968–2008... N'effacez pas nos traces!, Tardi and Grange manipulate a similar tension to the one described by Hatfield, but this time it is between the printed work as the object or surface, which is solid, permanent and stable, and the music as the sequence, which is fleeting and ephemeral. Aurality here expresses in a temporally deployed fashion that which visuality expresses spatially. As was the case with Jack Cole and Plastic Man (see above), the audible experience exceeds the visual one without overwhelming it, and the two elements are able to work in concert to generate a piece that is greater than the sum of its parts.

When the solidity of the surface is entirely absent, however, it becomes questionable whether we are really dealing with comics at all and one comic artist, Ben Katchor, has produced a particularly challenging case. He has created a series, Julius Knipl: Real Estate Photographer 'radio cartoons', audio files distributed via the internet in RealPlayer format (Katchor, n.d.). They have no visual content whatsoever, and accordingly would meet resistance from most definitions of comics, but Katchor himself is a renowned creator of comics and the character of Julius Knipl has appeared in numerous comics and collections. This, of course, makes them no more definitely comics than a lunchbox featuring a picture of Superman is. But more significantly, the fact that he has called these works cartoons gives an indication that Katchor considers them to stand alongside his other Julius Knipl productions, and is an implicit indication that they should be included among that canon. Accepting that implication is not an easy task for most comics readers, who remain wedded to the concept of visuality as a defining characteristic of comics, and Bart Beaty has provided some anecdotal evidence to suggest that most of his students are unwilling to make the leap in this case (Beaty 2009). But whether we accept Katchor's audio output as comics or not, they nevertheless represent an exciting development for the field because they challenge us, in a very explicit way, to acknowledge both the presence and the potential of the other senses in the medium.

# **TASTE**

Of all the senses, taste is probably the one that has been least heavily involved in the production of meaning in comics. The most common means by which tastes are incorporated into comics is as part of the paratext; confectionary items, for example, are regularly featured as free gifts in children's comics. Yet these tastes tend to be fairly generic, and although they may be packaged in such a way as to make them relatively congruent with the narratives of the comic, the level of meaning we are capable of gleaning from them is unlikely to be much greater than that which the film-goer derives from the popcorn they eat at the cinema. Nevertheless, if a comic were to be regularly packaged with the same type of food, it is probable that a more specific type of association would develop, and readers may well come to treat the taste of that food in a similar





fashion to the scent or feel of the paper; something that would help to form the comic's identity in their minds and affect their memories of it in later life.

Attempting to incorporate tastes more concertedly into comics is not necessarily a futile act, but doing so would replicate the problem of longevity that came with smells (though it is unlikely that the problem of control would also be present). One simple way to overcome this problem would be to provide recipes, perhaps for the dishes and foodstuffs the characters consume in the comic, which the reader could then prepare and consume themselves. This is the route taken in Julian Hanshaw's *The Art of Pho*, in which the narrative revolves around a Vietnamese noodle soup called pho (Hanshaw 2010). The book includes numerous recipes in comics form, which demonstrate how pho and other dishes should be prepared and served, and in this way the work provides a means by which the reader is able to go beyond the printed images upon the page and access the smells, textures and tastes that are represented by those images. The reader is thereby immersed far more comprehensively within the narrative environment; they are able to engage with it in a multisensory fashion, and the comic thus gives the reader far more than a purely visual understanding might indicate.

### **CONCLUSIONS**

In closing, it is worth drawing attention to that seemingly innocuous word 'more'. What I have attempted to demonstrate over the course of this article is that comics are far more than just a visual medium, and that creators of comics are continually striving to do more with the works they produce. These works are not simply sequences of images; they are physical objects that affect us in ways that far exceed the limitations of the visual field. The feel of a book in our hands and the physical motions involved in turning a page on a computer affect how we perceive the images with which we are interacting and can lend a comforting (or even disconcerting) solidity to what we are reading. The scent of paper can generate memories that persist long after individual words and images have faded from our recollections, and the sounds and tastes that artists are able to incorporate into their works can serve to generate narratives that immerse us comprehensively in fictional (or not so fictional) worlds. As technologies continue to develop, it seems probable that artistic innovation and experimentation will keep pace. It remains to be seen whether any of the works I have discussed here will become classics of the medium, but what they all demonstrate is an increasing awareness of the importance that physical forms play in the reading experience. Rather than simply seeking to find new ways to present their images to the eye, contemporary comic artists are working to create objects that appeal to a number of the senses, if not all of them. In this way, they are pushing the boundaries of the medium and I would





expect that as digitisation continues and physical forms naturally become more diverse, we will see a continuation, and perhaps an amplification, of this trend.

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### REFERENCES

BBC. n.d. "Nervous System: Smell." Accessed May 10, 2010.

http://www.bbc.co.uk/science/humanbody/body/factfiles/smell/smell\_animation.shtml.

Baker, Kyle. 2004. *Plastic Man: On the Lam!* New York: DC Comics.

Beaty, Bart. 2009. "Comics off the Page: Towards a Theory of Performance in the Comics World." Paper presented at the International Bande Dessinée Society Conference, on the "Artists and Artistic Ability" panel, London, June 19, 2009.

Benjamin, Walter. 2003. "On Some Motifs in Baudelaire." In *Walter Benjamin: Selected Writings Volume 4: 1938-1940*, edited by Howard Eiland and Michael Jennings, 313–355. Cambridge: Harvard University Press.

Butcher, Christopher. 2010. "Manga Milestones 2000–2009: 10 Manga that Changed Comics #7", Accessed May 10, 2010. http://comics212.net/2010/01/11/manga-milestones-2000-2009-10-manga-that-changed-comics-7/.

Carrier, David. 2000. The Aesthetics of Comics. University Park: Penn State University Press.

Casterman. n.d. "1968-2008... N'effacez pas nos traces!" [Catalogue entry.] Accessed May 10, 2010. http://bd.casterman.com/albums\_detail.cfm?id=11764.

de Saussure, Ferdinand. 1983. Course in General Linguistics. Eastbourne: Gerald Duckworth & Co.

Gibson, Mel. 2008. "What You Read and Where You Read It, How You Get It, How You Keep It: Children, Comics and Historical Cultural Practice." *Popular Narrative Media* 1 (2): 151–167.

Grange, Dominique, and Tardi. 2008. 1968-2008... N'effacez pas nos traces! Paris: Casterman.

Groensteen, Thierry. 1998. "Töpffer, the Originator of the Modern Comic Strip." In *Forging a New Medium, The Comic Strip in the 19<sup>th</sup> Century*, edited by Charles Dierick and Pascal Lefèvre, 107–114. Brussels: VUB University Press, Brussels.

Hanshaw, Julian. 2010. The Art of Pho. London: Jonathan Cape.

Hatfield, Charles. 2005. *Alternative Comics: An Emerging Literature*. Jackson: University Press of Mississippi.

Humberstone, Tom. 2009. "Getting the Smell Right." Accessed September 19, 2010. <a href="http://solipsisticpop.com/page/3/">http://solipsisticpop.com/page/3/</a>. Page number changes as new entries are added.





Katchor, Ben. n.d. *Julius Knipl: Real Estate Photographer* (radio cartoons). Accessed September 20, 2010. http://hearingvoices.com/webwork/isay/knipl.html.

Marks, Laura U. 2002. *Touch: Sensuous Theory and Multisensory Media*. Minneapolis: University of Minnesota Press.

McCloud, Scott. 1993. Understanding Comics: The Invisible Art. New York: HarperPerennial.

Millidge, Gary Spencer. 2009. Comic Book Design. Lewes: Ilex.

O'Malley, Bryan Lee. 2010. *Scott Pilgrim's Precious Little App.* Robot Comics. Version 4 downloaded via Android Market, September 22, 2010.

Rée, Jonathan. 1999. I See a Voice: Language, Deafness, and the Senses – A Philosophical History. London: Harper Collins.

Sabin, Roger. 2000. "The Crisis in Modern American and British Comics, and the Possibilities of the Internet as a Solution." In *Comics and Culture: Theoretical Approaches to Reading Comics*, edited by Anne Magnussen and Hans-Christian Christiansen, 43–57. Copenhagen: Museum Tusculanum Press, University of Copenhagen.

Spiegelman, Art. 2004. *In the Shadow of No Towers*. New York: Pantheon Books.

Spiegelman, Art, and Chip Kidd. 2001. *Jack Cole and Plastic Man: Forms Stretched to their Limits!* San Francisco: Chronicle Books.

Tynan, Dan. 2006. "The 25 Worst Tech Products of all time" (Numbers 21 to 25)." Accessed May 10, 2010. <a href="http://www.pcworld.com/article/125772-6/the\_25\_worst\_tech\_products\_of\_all\_time.html">http://www.pcworld.com/article/125772-6/the\_25\_worst\_tech\_products\_of\_all\_time.html</a>.