Humanizing a Superhero: An Empirical Test in the Comic Books Industry

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Abstract

One of the most firmly-established and widespread marketing policies in the comic book industry is the humanization of superheroes as a strategy to achieve success, especially for characters populating the Marvel Universe. However, there is no clear evidence of how exactly artists actually and operatively create human superheroes, and whether those variables truly affect sales of comic books. To address those two issues we run a quali-quantitative study by interviewing experts, and regressing sales on a broad range of variables of comic books gathered through content analysis and secondary data sources. Our findings show that humanization is not as powerful as expected in driving sales of comic books.

Keywords: comic books, content analysis, human superheroes, regression analysis, success

1. Introduction

Comic books are one of the most popular entertainment forms in the world. The comic-publishing industry has a long tradition, albeit only in few countries like Japan, France, Italy, the USA and Mexico (Mayfield, Mayfield, & Genestre, 2001). But today in many other places as well the comics market is a considerable size, given the huge flow of exports that add up to smaller local productions, providing millions of consumers around the globe with a relatively inexpensive and easy-access form of entertainment.

The popularity of comics is mostly due to their convenience and versatility (Mayfield et al., 2001; Taylor & Greve, 2006). Compared to other forms of entertainment (for example movies, performing arts, live music, pay TV), comic books are quite inexpensive; they can be purchased in a variety of outlets that are quite easy to access (most often in newsstands); consumption requires no technological infrastructure or literacy and it can occur wherever readers prefer, without many constraints. Furthermore, the specific artistic format (an original combination of texts and drawings) makes comics very easy to comprehend and appreciate by diverse audiences in both national and international markets, cutting across age, gender, race, education, income and lifestyles segments (Belk, 1987; Spiggle, 1996). The versatility of comics is mostly due to the variety of genres characterizing the industry (Western, crime, mystery, adult, horror, fantasy and superhero being among the most popular) and the variety of individual characters within the same genre, each one with its loyal readers and fan base (Jones & Jacobs, 1997).

The creativity of the comic-publishing industry and the popularity of comic book characters make comics a rich provider of content for other entertainment industries as well, like feature films, television programs, videogames, toys and theme parks (Elberse, 2011). To corroborate this, in 1979 toy makers indicated that toys based on cartoon characters sold about 10-20% better than others (Johnson, 1979). What is more, in 1998 Marvel's revenues came from toy sales (77%), from licensing Marvel characters (4%), and only 19% from comics (Raviv, 2002).

Despite the importance of the industry, scholarly marketing research on comic books is extremely limited compared to other entertainment industries. The few studies on comics investigate their contribution to the diffusion of social values across different mass audiences (Belk, 1987; Spiggle, 1996). To our knowledge there is no study aiming at exploring the concept of the success of comic books and its determinants. By focusing on comic books based on superheroes, our research investigates the meaning of success and the antecedents that

affect it, regardless of whether they refer to creative or marketing choices. Specifically, among the whole range of possible antecedents, we aim to better understand the humanization of superheroes.

During the '60s this process began as a creative intuition of Stan Lee and Jack Kirby of Marvel Comic Groups, but soon humanization became not only a main point of difference of the brand, but also a canon of the whole genre (Sassiene, 1994; Taylor & Greeve, 2006). Since then, Marvel superheroes have human flaws, real problems, and they act in real cities, totally different from the previous godlike superheroes (Collins, 2009). In the recent years, Marvel Comics has diversified its range of superheroes, by introducing Hispanic, African, and Korean superheroes, and also female and black ones (Dockterman, 2016).

For writers, balancing the human daily experiences and superhero extraordinary ones is how they best express their creativity (Sassiene, 1994; Harvey, 1996; Jones & Jacobs, 1997), which identifies the "revisionary superhero narrative" (Klock, 2002). The power of identification with superheroes has always been regarded as a powerful driver both for children and adults (Frank, 1944; Rapp, Ogilvie, & Bachrach, 2015), especially for its support in entering into new markets (Pomerantz, 2013; Sakoui & Palmeri, 2016).

Although the humanization of superheroes is considered to be at the root of the success of Marvel, and generally of the whole genre, there is a lack of knowledge with regard to the features of comic books that make superheroes more closely resemble human beings, and their effects on success in this industry. Our research addresses both of these questions.

We opted for the superhero genre for two main reasons. First, superhero comics are truly a global entertainment product generating huge volumes and wide appeal (Mayfield et al., 2001). Second, superheroes represent the most relevant source of creative content for other industries (Taylor & Greve, 2006; Elberse, 2011), which means their influence is expanding beyond the traditional industry and providing an interesting field to investigate typical marketing policies based on contamination.

Given the scarcity of prior studies on the topic, we adopted a quali-quantitative research design. In the first step we interviewed five experts in the field in order to get a deeper insight into the drivers of success in the comics industry, with particular regard to the level of humanization of superheroes. The interviews show that monthly sales depend on many variables, as with any other entertainment industry. Examples are the artist's skills and abilities, which build reader loyalty, and initiatives aiming at generating curiosity in the general audience, that is films, reboots, specials, and events. At the same time, sales are also expected to depend to a great extent on the level of humanization of superheroes, which is determined by their physical appearance, abilities, social condition, and the narrative contest of the story. We have developed four main hypotheses. Our results show that writers' creativity is mostly devoted to balancing human and superhuman features of characters within the single story, and that is what affects sales performances.

Then, the second step was to design a quantitative model in which the link between these antecedents and sales are tested. We built a database with all the issues of the Ultimate Spider-Man series, a leading comic book in the market. For each issue we ran a content analysis of the story to code its level of humanization by recording whether it applies specific creative choices able to make humanization concrete. Then we included the results of the content analysis together with objective data regarding marketing decisions in a predictive model of sales.

Our findings show that many of the control variables have significant effects on sales, as expected, indicating that monthly issue sales are influenced by the overall market and previous issue sales, as well as by some marketing tools such as the quality of the issue and the price. Other variables are not significant. More interesting, higher levels of humanization of superheroes, conveyed by their physical appearance and the use of their superpowers, do not affect sales. On the contrary, sales are only partially driven by the superheroes' social condition and the narrative context, both playing a less powerful role than expected. Thus, a composite framework of humanization effects on sales emerges, giving rise to new questions to ask in the future.

The remainder of the paper is organized as follows. First, we provide an overview of the distinguishing characteristics of the superhero comic book market. Second, we present the qualitative empirical analysis and the development of our hypotheses. The third section describes the quantitative analysis run to test our hypotheses. Finally, after discussing the results of our analysis, we point out the contributions of our study to extant knowledge and we provide guidelines for future research.

2. The US Superhero Comic Book Industry

Superheroes are the most representative genre of the US comic-publishing industry (Jones & Jacobs, 1997; Mayfield et al., 2001; Taylor & Greve, 2006). Indeed, between 1992 and the first half of 2016 the best seller in the US comic book market has always been a superhero, with only a few exceptions (like the fantasy comic Dark

Tower in March 2008 and the horror comic Walking Dead in July 2012, October 2013, January 2016) (www.comichron.com).

Superheroes are an integral part of US culture (Spiggle, 1996; Jones & Jacobs, 1997; Gabilliet, 2005). The birth of the superhero comic-publishing industry is traced back to the late '30s. In 1938, the original version of Superman (which is generally regarded as the first superhero comic book) was published in Action Comics #1, and many others superheroes such as Batman, Captain America, Flash, Alan Scott of Green Lantern, and Aquaman made their debut soon after. The industry experienced a period of steady growth in the '40s, followed by a steady decline in the '50s when publishers introduced into the market successful new competing genres like romance, teen and crime titles, better suited to meet the changing tastes of readers who were now influenced by a strong new competitor, i.e. the television (Gabilliet, 2005).

In the '50s, growing concerns regarding the impact of comics on juvenile delinquency led the comic industry to institute a Comic Code Authority (CCA) with a role of self-censorship, to avoid federal regulation. This censorship brought about a decline in sales of superheroes until Marvel broke the rule at the end of '60s, introducing new characters, quickly imitated by its main competitors.

The innovation introduced by Marvel was a strong emphasis on the human traits of superheroes (Sassiene, 1994; Gabilliet, 2005). For example, Spider-Man and Iron Man were more flawed and self-doubting than their predecessors: the former with the common teenagers' angst and the latter constantly dealing with his own mortality. This innovation opened the doors to what is considered the modern age of superheroes.

Today Marvel and DC Comics are still dominating the industry; together they earn a 75% market share. They both have a similar business model, that is, building a sizable library of characters as properties to be licensed to other industries, typically feature films, videogames, toys and theme parks (Wyatt, 2006; Elberse, 2011).

Superhero comic books are serials, the monthly issue being the industry standard. Their life cycles last for years, and for most successful characters even decades (Superman, Spider-Man and The Fantastic Four to mention a few). Being serials, comics pose both opportunities and constraints on creators, who have to strike a balance between innovation and consolidation (e.g. Taylor & Greeve, 2006). In fact, the beginning of the series represents the major innovation, when a new character is introduced into the market, with his or her specific personal traits, powers and the main setting. Then, throughout the series, the artistic combination of the story and the drawings renders every single issue a new product, providing artists with further opportunities to deploy their creativity. At the same time, comics represent a context rich of opportunities to affect individuals' future attitudes and behaviors (Berkowitz & Packer, 2001).

3. Empirical Analyses

3.1 Step 1: Qualitative Research

3.1.1 Method

To understand the success of superhero comic books and the drivers of this success, we carried out in-depth interviews with comic books experts. We interviewed five professionals at leading American comics' producers such as Marvel Comics and IDW, working as pencillers, writers, cartoonists or colorists. What's more, three of them also teach at an International School of Comics based in a major European country. We opted to interview only experts about the artistic features of comic books excluding those who manage this industry. Our aim was to focus on the concrete product features that determine the degree of humanization of characters and their stories. Indeed, although the humanization of superheroes is a well-established trend in the market approach of the major players, the concrete artistic development of this trend throughout the comic books has never been explored empirically.

Each face-to-face interview was tape-recorded, and lasted typically from one and a half to two hours. As usual, a standard format generally was followed for the semi-structured interview. After a brief description of the research project and its purpose, each interviewee was asked about three main issues:

a) What are the drivers for success in this industry? What factors foster success?

b) The major players have been investing in creating more human superheroes. How do they do so?

c) How do you think such policies affect the success of comic books?

Thanks to these interviews, we were able to identify the critical success factors for comic books that we then included in the subsequent quantitative analysis. Indeed, even if our main topic of interest is the humanization of superheroes we cannot avoid including other common variables that are also known to affect success. In our study, these serve as control variables, while our hypotheses focus on variables referring to humanization of superheroes.

3.1.2 Results and Development of Hypotheses

The main findings of the first step of our research refer to two main areas of investigation:

    a)   The general and common antecedents of success;

    b)   The humanization of superheroes.

a)   *The General and Common Antecedents of Success*

Several antecedents of comics' success were identified during our interviews.

First, experts identify the role of the artist as one of the main drivers of market performance of comic books. Artists and illustrators as well as the writers are the ones who build a relationship with audience. According to our experts' view, artists are the main driver of readers' loyalty, which depends more on the dialogue with them than on the product itself. In the words of one expert:

> *"The successful comic penciller is strongly carried by his audience. He has been able to build a strong dialogue with readers, and they follow him in any single project he is involved in. This is the readers' loyalty, which is so critical in this industry."*

Further, the artist's skills and abilities need a good editor, who is the one who makes sure the artistic team works well together. At the same time he or she is the link between the publisher, the marketing department, and the market.

Indeed, as expected (Beaty, 2016), marketing policies are a key factor in this industry. With no exception, the experts we interviewed interpret comic books as entertaining products that should be able to overcome readers' boredom, and that's the goal of marketing. In their opinion, the players of the industry pay special attention to events, reboots and all the cross-over policies that increase the level of novelty of comics, and reignite the interest of the general audience. In particular, films, reboots, specials and events are stimuli adopted to arouse the curiosity of readers and consumers of other products, and leverage on the artistic quality of the products. At the same time, such initiatives also contribute to creating a perception of the publishers' image that is clearer, consistent, unvarying, and homogeneous, which affects the readers' choices. With regard to film, the main marketing tool, during the interview one expert said:

> *"If the film is successful it pushes the re-launch of the related comic book, because its restyling is appealing even to those readers who have been loving that specific comic book for a long time. Thus, when the movie is on the theaters, the comics industry benefits tremendously."*

b)   *The Humanization of Superheroes*

Finally, our experts strongly believe that the main driver of success for a comic book is the level of engagement with the readers, which depends on how much the general audience is in tune with the characters and the stories. Thus, readers' participation in the comics' experiences and ultimately the comics' success hinge upon the process of identification. To have a positive readership experience, the main driver of customer loyalty in this industry, readers should perceive the character as someone very close, someone similar to them, someone who belongs to the same world.

Such a relationship is consistent with the transportation theory that states that individuals might react both cognitively and emotionally to narratives they experience, resulting in a strong engagement leading to more favorable responses (Green & Brock, 2000). Toward this end, narratives of good quality and a high level of realistic events and settings are better able to trigger a similar psychological mechanism (Argo, Zhu, & Dahl, 2008). Since this is the ultimate source of engagement and a memorable experience, it should go a long way to explain the recent trend toward the humanization of superheroes. Our experts provided us with relevant knowledge about this topic that for our purposes is of the highest interest, but also the least known. In this regard, the interviews identified four main areas that render the humanization of superheroes concrete, and their proxies, as presented in Table 1 and described as follows.

Table 1. Coding definitions for content categories (Total cases: 163)

Content categories	Dummy Variable	Coding definitions	Number of cases (%)
Superhero's physical appearance	- Costume	0: if Spider-Man does not wear his traditional costume	50 (30.7%)
		1: if Spider-Man wears his traditional costume	113 (69.3%)
Superhero's abilities	- Superpowers	0: if Spider-Man does not use his superpower	94 (57.7%)
		1: if Spider-Man uses his superpower	69 (42.3%)
	- Family	0: if Spider-Man is an orphan	13 (8%)
		1: if Spider-Man experiences a familiar context with reference adults	150 (92%)
Superhero's social condition	- Stable romantic relationship	0: if Spider-Man's romantic relationship is unstable	77 (47.2%)
		1: if Spider-Man's romantic relationship is stable	86 (52.8%)
	- Social support	0: if Spider-Man is not supported by 2 characters at least	98 (60.1%)
		1: if Spider-Man is supported by 2 characters at least	65 (39.9%)
	- Realistic setting	0: if the main setting is unrealistic	21 (12.9%)
		1: if the main setting is realistic	142 (87.1%)
	- Presence of other superheroes	0: if no other superheroes star in the narrative	22 (13.5%)
		1: if other superheroes star in the narrative	141 (86.5%)
Narrative context of the comic book	- Action	0: if the narrative is not action genre	78 (47.9%)
		1: if the narrative is action genre	85 (52.1%)
	- Death	0: if no main character dies in the narrative	154 (94.5%)
		1: if one of the main characters dies in the narrative	9 (5.5%)

1) Superheroes' physical appearance

The general audience appreciates characters that resemble them in terms of physical aspects. Thus, elements such as gender, age, religion or even the color of skin appear to be important drivers of perceived similarity. Clearly, those elements are beyond the knowledge and control of the artists so that they cannot really pay attention to the fit between readers and characters, unless the series has a very focused target. As a consequence, the efforts of artists in making superheroes more human, targeting a broad, general audience, is limited to the use of typical costumes.

> **H1:**   *Human physical appearance of superheroes directly and positively affects sales.*

2) Superheroes' abilities

Superheroes without special abilities lack one of the main ingredients of their recipe for success. These span a wide range of extraordinary cognitive or physical skills, which are derived from technology as in the case of Batman, or coming from an accident for The Fantastic Four, or having an alien origin as with Superman, and so on. In any case, these superpowers traditionally mark the differences between normal people and superheroes. Thus, we developed our second formal hypothesis:

> **H2:**   *The use of superheroes' superpowers directly and negatively affects sales.*

3) Superheroes' social condition

The third category of variables related to the human essence of superheroes refers to their social condition. Indeed, our experts believe that superheroes' appeal to the general audience also depends on their social situation, which is framed by three different variables. First, the family situation of the main character seems to be relevant, so that superheroes can interact intensely with their traditional family and parental figures, more common in Western society, or they could star without any familial reference point. Second, the level of stability of personal romantic relationships; in other words, human superheroes should be engaged in emotionally stable romantic relationships according to the common habits of Western societies. Third, our experts indicated that human superheroes are the ones who find support from others to deal with their problems. These results lead to our third hypothesis:

> **H3:**   *The human social condition of superheroes directly and positively affects sales.*

4) The narrative context of the story

The last category of variables is the broadest one, since it includes four elements easily manipulated by the artists. The perceived realism of the setting has been cited as a very relevant factor. Indeed, the audience should favor comics with highly realistic stories. Thus, our interviewees spend much time searching for realistic, new and engaging locations so that the overall perceived realism is increased. At the same time, writers and editors

attempt to leverage on the whole range of superheroes by emphasizing the fact that they all belong to the same universe. Even if characters with special superpowers populate the latter, it is still a social group, managed by social rules. Such high social boundaries among superheroes mirror the traditional common social life familiar to any reader.

Finally, artists also define with great care the events, which superheroes have to deal with in order to make them as realistic as possible. This means the stories should be very realistic as well to best express the human nature of superheroes. Perfection of superheroes could lead to a perceived distance between them and the general public that would result in lower sales. They are not knights in shining armor but characters with special abilities and complex personalities, full of weaknesses and doubts like any other human being. For instance, many comics adopt teenager characters so that every reader can perceive the familiarity with a present or past situation: everyone has experienced some of the problems of adolescence.

Generally, the closer the situation is to real life, the more the readers can understand the superheroes' feelings and fears. The empathy that the readers experience towards the superhero is strongest, we would assume, when the latter is frightened. Consequently, a story rich with action and dangers should represent a more suitable context for building a strong relationship with readers so that they experience empathy, sympathy, and compassion. They identify with superheroes. Thus, the character's death is by definition the most interesting event to create a compelling story for readers to experience strong feelings. The emerging surprise and confusion, especially after a strong, long-standing attachment, as well as rage and curiosity should lead to buying behavior.

> **H4:**   *The use of a realistic narrative context for stories directly and positively affects sales.*

To test the aforementioned hypotheses, we ran a quantitative study that relied on two different sources: (1) a systematic content analysis of each issue of a series of comic book, and (2) a secondary source that provides a large real-world database suitable for cross-sectional analysis across comic issues.

3.2 Step 2: Quantitative Research

3.2.1 Sample

We chose to include in our dataset the issues published as The Ultimate Spider-Man series. By focusing on a single title we control for the intrinsic quality of the comics. Among the full range of possible alternatives, we chose this title for several reasons:

a) It refers to an iconic superhero, someone who shaped the popular culture of America and the world, in other words a very prominent superhero.

b) The main character presents a complex human personality, and deals with human events. His humanization process started long ago so that he is now perceived as a very human superhero with a tremendously stressful life.

c) The main character dominates across many media so that his fame is widespread and the marketing policies have widely explored his success.

d) The Ultimate series has been developed to re-launch the members of the Marvel universe to appeal to younger tastes, in an additional attempt to adapt the products to an appealing market; thus, these comic books are original and not new reprints of old material.

e) Further, from on empirical point of view, monthly sales data are widely and easily accessible, thanks to the fact that there is a single distributor. Apart from the minor publishers and the online market, the Diamond Comics Distributor has held the monopoly in this industry since 1995. Thus, the public availability of a large quantity of secondary data on market sales is a key ingredient for our study.

f) Finally, in 2012 Miles Morales became the substitute for Peter Parker, the main character who died in the series "The Death of Spider-Man".

We started collecting data on the issues in our sample starting with the first one published in September 2000 up to December 2011. In total our dataset is made up of 163 issues published over a 10-year period.

3.2.2 Variables

Dependent variable – Sales. Data on the estimated sales of the comic book issues in North American comics' shops on a monthly basis represent the raw dependent variable. These data are easily accessible on Comics Chronicles (www.comichron.com), the free data resource for academic research in this industry, which compiles data as reported by Diamond Comic Distributors. The Diamond Comics Distributor provides a comprehensive public website with data on many other interesting variables about the comic books included in our sample, as described below.

We decided to regress monthly sales on the range of independent variables describing each issue distributed by specialty stores (Jones & Jacobs, 1997; Mayfield et al., 2001; Elberse, 2011). The latter offer consumers a broad and deep assortment as well as the opportunity to browse through the comics before buying them. This makes comic books less an experience product and closer to a search one. Specifically, monthly sales data related to any issue of the series in question are complete, with no missing data. Values are expressed in number of copies sold by publishers, so that no problems related to inflation and the consequent adjustment of data have to be addressed (mean = 76 443.17; SD = 22 023.06). With skewness and kurtosis values equal respectively .032 (SD = .190) and -.015 (SD = .378) we can compute the $z_{skewness}$ (.168) and the $z_{kurtosis}$ (.040) and conclude that distribution is normal both with regard to symmetry and pointiness (Tabachnick & Fidell, 1989).

Control variables. Table 2 presents descriptive statistics for the non-dummy variables included in the predictor set.

Table 2. Descriptive statistics for the non-dummy control variables

NON-DUMMY CONTROL VARIABLES					
Variable	N	Mean	*SD*	Minimum	Maximum
Market trend					
Market monthly sales	163	6.26	.70	4.40	7.96
Previous issue sales	162	76 596.77	22 003.58	33 481.00	159 355.00
Sequential issue number	163	64.42	37.41	1	135
Quality					
Pencillers' evaluation	163	3.52	.93	1	4
Marketing Policies					
Price	163	2.21	.45	2	5

To capture the many possible effects of known variables, we included in our analysis those related to three dimensions.

*(1) Control variables – Market Trends***.** Several variables related to the market, along with trends and periodicity of correlated products such as comic book series, represent possible sources of bias that should be controlled for. Hence, the first group of control variables includes any traditional key aspect of market and product trends, as follows.

Market monthly sales. To control for the overall trend of the comic books industry, we also included the market monthly sales into the analysis. Data, expressed in millions of copies, were gathered from the same source used for the sales of single issues, i.e. Comics Chronicles.

Previous issue sales. To estimate the impact of the lagged effect of the success of the previous issue on the following one, we incorporated the sales of the issue published in the previous month into the set of the control variables. Thus, for each issue this variable equals the dependent variable of the previous figure so that the serial effect is controlled for. Obviously, this data is missing for the first issue.

Sequential issue number. This variable captures the number of the month in which the issue was published, starting from the first issue, which, as the starting point for the series is coded as number 1. At the other extreme, the last issue in our sample published in November 2011 is coded 135, since it appeared in the 135st month after the launch of the first issue of the series. The total number of months is globally less than the total number of issues because some issues were published in the same month.

(2) Control variables – Quality. Further, as is generally indicated by previous studies on hedonic consumption, the artistic quality of the product might be a relevant antecedent of comic books success. In this specific industry, our experts suggested during the in-depth interviews that quality depends to a great extent on the abilities of the writers and pencillers. However, since the same person, Brian Michael Bendis, writes all issues of the Ultimate Spider-Man in the sample we limited the measurement of the quality of the artists to the penciller. Further, the quality of comic books could also be measured by means of the perceptions of an ordinary audience, as is common practice for other industries. However, the only available public source for these data is the Comic Book Database, www.comicbookdb.com, which offers its website users the opportunity to rate the quality of each comic book on a 10-point scale. However, those ratings are based on a very limited set of votes, thus affecting the validity of this measurement instrument. Consequently, we decided to exclude it from our dataset, and assess quality only through the following:

Pencillers' quality evaluation. For each issue we gathered data on the evaluation of the pencillers' abilities and appeal to the general public provided by Marvel and published on its website. Marvel adopts a rating system that classifies pencillers according to letters of the alphabet, assigning category "A" to the best pencillers, up to

category "Z" for the least talented ones. In our sample, the range of the ratings goes from A to D. In an attempt to simplify the analysis we recoded these data by assigning 1 to those rated D up to 4 for those rated A.

(3) Control variables – Marketing policies. Finally, we included in our analysis some relevant variables aiming at controlling for the additional effects of marketing tools that are generally adopted in this industry.

Price. Since price represents a typical marketing variable to define the approach to the market, we gathered data on the price of every issue.

Reboot. To measure investments in comic books we gathered data on the publisher's policy on rebooting the series, with a consequential change in the numbering of the issues. If a reboot took place, the dummy variable was coded 1; if not, 0.

Film. As indicated by our experts, the success of comic books relies heavily on cross-category contamination. Indeed, publishers started long ago to leverage on the film industry to increase the superheroes' image and their sales performances. Thus this variable captures the presence of films starring Spider-Man, not only with regard to the months that films are showing in US theatres, but also starting with the beginning of the production up to one month after the theater run. In this way, we also control for the 'buzz' and the awareness related to Spider-Man deriving from other entertaining industries, during the entire life cycle of the film. A dummy variable is coded 1 for issues published in this period (from the production up to one month after leaving the theatres); 0 otherwise.

Specials & Events. This variable captures whether the main character of the series also stars in other issues of the publisher, regardless whether or not the depicted events are related to those happening in the main series. A dummy variable is coded 0 if no other comic book appears in the market apart from the main one, and 1 otherwise.

Independent variables. As reflected in the aforementioned hypotheses, the present study focuses on the level of humanity in superheroes, categorized into the four dimensions identified by experts as described earlier. To measure these dimensions we ran a content analysis on the 163 issues, so that we could transform the visual and verbal qualitative aspects of comic books into quantitative data to test our main hypotheses. The narrative has been decomposed in its elementary modules, according to the insights provided in the qualitative step of our research project, as follows.

(1) Superhero's physical appearance

Costume. By leveraging on interviews with our experts, this dummy variable is coded 1 if Spider-Man wears his traditional red-and-blue costume, and 0 otherwise. This refers to visual data.

(2) Superhero's abilities

Superpower. Another dummy variable captures whether in the issue Spider-Man uses his superpower (coded 1), or not (coded 0). This coding is assigned through a content analysis of the narrative.

(3) Superhero's social condition. Three dummy variables were used to capture the social condition of the superhero; all of them are derived from a content analysis of the narrative of each issue.

Family. If coded 1, this dummy signifies that Spider-Man experiences a typical familial context with reference adults in the issue; if on the contrary the issue does not refer to any familial context for Spider-Man, this variable is coded 0.

Stable romantic relationship. If Spider-Man is engaged in a stable romantic relationship this variable equals 1; if the romantic relationship is for most of the issue characterized by instability then this variable is coded 0.

Social support. If at least two characters starring in the issue help Spider-Man, regardless of whether they are friends or relatives, this dummy variable is coded 1. Instead, if in the narrative presented in the issue Spider-Man is alone in dealing with the events this variable is coded 0.

(4) Narrative context of the comic book. The last set of independent variables refers to the stories depicted in the issue. All of them are derived from a content analysis, which we ran both on the visual and the verbal features of all issues included in the sample.

Realistic setting. If the main setting of the narrative is realistic, a dummy variable is coded 1; if the setting is depicted as a fantasy world, then the variable is coded 0.

Presence of other superheroes. Since the presence of other superheroes belonging to the Marvel Universe implies that they all share the same location and they interact with Spider-Man, if the narrative of the issue proposes such an element, this variable is coded 1; if not, 0.

Action. If the narrative presents a sequence of events rich in action as opposed to more intimate, deep dialogues and introspective reflections, this variable is coded 1; 0 otherwise.

Death. Finally, if a relevant character for the narrative depicted in the issue dies, regardless whether he or she acts as a main character or a supporting one, and Spider-Man has to deal with this event, this variable is coded 1; 0 otherwise.

3.2.3 Analysis

Our four hypotheses were examined by means of ordinary least squares (OLS) regression. Specifically, sales were regressed on the full set of control variables and independent variables described above.

4. Results

4.1 Overview

Regressing monthly sales of the issues on the whole set of control variables and independent variables produced a strong degree of explained variance (R^2 = .791, F(17, 144) = 32.055, $p < .001$). The relevant standardized beta coefficients, t-values, p-values, and VIFs appear in Table 3.

Table 3. OLS regression of issue sales on the control and independent variables (standardized beta coefficients, *t*-values, *p*-values, and *VIF*s)

Independent variables	Standardized Beta Coefficients	*t*-values	*p*-values	*VIF*s
Control Variables – Market trend				
Market monthly sales	.101	2.034	.044	1.715
Previous issue sales	.558	8.547	.000	2.941
Month of the issue from the beginning	-.365	-4.761	.000	4.057
Control Variables – Quality				
Pencillers' quality evaluation	.224	2.522	.013	5.415
Control Variables – Marketing policies				
Price	.280	3.782	.000	3.781
Reboot	-.053	-.755	*NS*	3.387
Film	-.009	-.189	*NS*	1.494
Specials & Events	-.022	-.494	*NS*	1.367
Independent Variables – Superhero's physical appearance				
Costume	-.007	-.147	*NS*	1.626
Independent Variables – Superhero's abilities				
Superpower	-.038	-.872	*NS*	1.323
Independent Variables – Superhero's social condition				
Family	.208	3.885	.000	1.974
Stable romantic relationship	.076	1.844	.067	1.159
Social support	-.004	-.083	*NS*	1.314
Narrative context				
Realistic setting	-.076	-1.829	.070	1.186
Presence of other superheroes	-.009	-.212	*NS*	1.332
Action	-.039	-.909	*NS*	1.287
Death	.106	2.556	.012	1.174
F	*F* (17, 144) = 32.055		.000	
R-squared	.791			

Note: NS = non-significant.

4.2 Control Variables

As shown in Table 3, comic books sales are affected by many of the expected control variables. Specifically, the sales trend of the overall market is obviously a driver of the series in question ($\beta_{\text{Market monthly sales}}$ = .101, t = 2.034, p = .04), which also is positively affected by the sales of the previous monthly issue ($\beta_{\text{Previous issue sales}}$ = .558, t = 8.547, $p < .001$), as a carry-over effect. The last antecedent related to market trend, the month of the issue from the beginning the sequential issue number, is also a strong negative predictor of the dependent variable ($\beta_{\text{Month of the issue from the beginning}}$ = -.365, t = -4.761, $p < .001$), capturing the typical life cycle effect.

As expected, the market also rewards the issues that are penciled by more highly skilled artists, thus recognizing the quality rating attributed by producers ($\beta_{\text{Pencillers' quality evaluation}}$ = .224, t = 2.522, p = .013).

However, among the possible and expected control variables related to marketing policies, only one out four is significant. In fact, price positively affects sales (β_{Price} = .280, t = 3.782, $p < .001$). Such a finding indicates that higher pricing policies lead to higher market performance. But none of the other three marketing policies

commonly adopted in the industry to boost market sales (namely, reboots, films, and specials & events) is a significant predictor of commercial success (β_{Reboot} = -.053, t = -.755, NS; β_{Film} = -.009, t = -.189, NS; $\beta_{Special\&Event}$ = -.022, t = -.494, NS).

4.3 Hypotheses Tests

Among the more interesting variables operationalizing the level of humanization of the superheroes and their comic books, some of them unexpectedly appear not to play any role in driving commercial success. Whether or not the superhero wears his traditional red-and-blue costume is completely non-significant, as indicated by our findings ($\beta_{Costume}$ = -.007, t = -.147, NS). The positive effect on market success of humanizing superheroes by carefully designing their physical appearance is thereby disconfirmed, at least with regard to the costume (H1).

Also H2 is disconfirmed with a non-significant effect of the use of superpowers by Spider-Man within the narratives analyzed in our study ($\beta_{Superpower}$ = -.038, t = -.872, NS), with readers appearing unaffected by superheroes' abilities.

On the contrary H3 and H4, referring to superheroes' social condition and the narrative's context, both emerge as partially confirmed. With regard to the social condition of the superhero, one variable (namely, the experience of a family situation) appears to be a strong positive driver (β_{Family} = .208, t = 3.885, p < .001); the stability of the romantic relationship is slightly significant, leading to the conclusion that it plays a limited role ($\beta_{Stable\ romantic\ relationship}$ =.076, t = 1.844, p = .067); while the social support is totally non-significant ($\beta_{Social\ support}$ = -.004, t = -.083, NS).

Similar findings refer to the variables operationalizing the narrative contexts of the comic books, with two (namely, death and a realistic setting) out of four variables acting as significant or slightly significant drivers of commercial success (β_{Death} =.106, t = 2.556, p = .012; $\beta_{Realistic\ setting}$ = -.076, t = -1.829, p = .070). However the sign of the link between a realistic setting and commercial success are the opposite of what we expected, and two (namely, presence of other superheroes and action) are both non-significant ($\beta_{Presence\ of\ other\ superheroes}$ = -.009, t = -.212, p = -; β_{Action} = -.039, t = -.909, p = NS).

5. Discussion and Conclusion

Our findings show that variables related to humanization of superheroes play a limited role in driving monthly issue sales, while marketing variables confirm their role. Indeed, with regard to the four dimensions of humanization, our results indicate that such a trend is not as successful as expected, since only 4 out of 9 variables significantly or slightly significantly affect sales. In detail, to achieve success, Spider-Man should deal with his family and with a death event, and be engaged in stable romantic relationships, thus leading to very human and familiar situations. At the same time, many of the potential drivers of humanization emerge as not significant, while another one seems to affect sales in the opposite direction compared to the one we expected: Superheroes should not star in realistic environments.

Such a composite framework might result from the dual appeal of these entertainment products, which refer to identification and escapism. Both of them constitute the main motivational drivers of readers (Benton, 1989; Sassiene, 1994; Mayfield et al., 2001). Identification is mostly enacted by the human characteristics of the comic heroes, who have real lives, troubles and emotions like any other person (Sassiene, 1994), so that this process is activated by many similarities and congruencies between comic books and self. Instead, escapism in comics for consumers is related to daydreaming, imagery and feeling relief from the duties and boredom of daily life (Holbrook & Hirschman, 1982). These are enacted by the adventures and the actions the characters experience and the setting they interact with (Benton, 1989).

The complexity of the general framework might also derive from the use of an inappropriate dependent variable, i.e. sales. Indeed, both transportation and identification theories commonly adopt consumers' ratings as the key dependent variable, so that different results might be possible. Indeed, as the outcome of a creative, expressive, artistic process, comic books should not differ from any other entertainment product. At the same time, comics are commercial products for sale. In this regard, the quality level of innovative comics might represent another important dimension of success along with popularity and commercial returns. However, comics differ from other industries because of the limited number and valence of indicators and measures of both commercial and artistic success.

Further, the non-significant effects of humanization drivers on sales might also depend on the fact that humanization is already a well-accepted policy by consumers. Since it started more than 50 years ago, readers might already be acquainted with this concept so that they take it for granted.

Besides that, the main role in driving sales is played by some traditional key marketing tools, such as the quality

of the pencillers, the stage in the life cycle of the series, and the carry-over effect played by the sales of the previous issue. These emerge as the relevant drivers, which producers should be investing in, starting from the first issue, which through subsequent issues still plays a role in driving sales of the last issue. If so, we might not need another hero, just more marketing tools.

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