Superstars as emotion-eliciting objects. An examination of the effect of the emotion mix of movie stars

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Abstract

This article examines how superstars can influence moviegoers' decision process via eliciting emotions. The paper builds upon prior research in the role of emotions in consumption. The data of a survey study are used to capture the emotional profile of superstars. Results from a correspondence analysis indicate that superstars can be classified according to the basic emotions they elicit. The resulting "constellations" of superstars influence spectators' decisions. A nested logit model gives evidence that supports the importance of taking into account the difference among emotions of the same valence. Moreover, the emotional interdependence between superstars seems to influence spectators' willingness to attend a movie.

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1. Introduction

The study of factors influencing box office performance is important, both from a managerial and scholarship perspective. The interest in this field is not only explained by the astronomic cost of films but also by the fact that the motion-picture industry is a classic example of a winner take all phenomenon (Walls 2010). As a result, the difference between millions of dollars of profits or losses for a studio in a given year can be due to a single movie (Simonoff and Sparrow 2000) and the industry is avid of tools for reducing this uncertainty.

Since the beginning of the modern film industry stars have been one of the most important resources for differentiating films (Canterbery and Marvasti 2001). However, market data do not always support a blind trust in stars. Doubts have been manifested in this respect both in the industry and in the literature. Hollywood's "dirty little secret" —the studios high level of commitment to the star system in which they do not have any faith — has long been an open secret (Bart 1998). At the same time, existing evidence in the literature on power of superstars is mixed and the doubts about the extent to which stars affect film revenues have been manifested since the seminal studies of Litman (1983).

At the moment the question of whether stars positively influence film results has only one possible answer: sometimes. This raises the concern about how this possible favourable effect is exerted. The involvement of stars can affect the different components of the cinema value chain. I focus my attention on the influence of superstars in the pre-consumption stage of motion pictures by movie-going audiences. Superstars are powerful Hollywood brands due to their ability to engage in emotional relationships with worldwide movie viewers (Luo et al. 2010).

In this research I investigate how an emotionally arousing superstar acts as an impulse that influences the decision of watching a generic movie. I examine how the emotional profile of a superstar influences spectators' responses. Specifically, star power is explained by means of a choice model wherein emotions elicited by superstars are used as explanatory variables of the intention of watching films with a specific star cast member. The study draws attention to the existence of differences between the degrees of similarity of the emotional profile of superstars. The synergistic effect of a multiple star cast is not taken into account but this approach permits dealing with the studios' decisions to choose one specific star over another, allowing investigating how the evoked emotions of stars, within a similar set of stars, affect the intention of watching a film.

2. Prior research into the role of emotions

Academic research on the role of affect in individual preferences dates back to at least the 1980s (Zajonc 1980, Abelson et al. 1982). Decision making is arguably not a cold cognitive process (Zeelenberg and Pieters 1999). Thus, emotions are an important part of human experience and their influence on consumer behaviour has been widely recognised for many years now (Westbrook 1987; Oliver 1989). The theoretical section of this paper is structured in three parts which present different streams of research in studying the role of emotions in consumption.

2.1 The valence-based approach

One of the most accepted conceptualizations for studying the role of emotions in consumption is the valence-based approach which classifies emotions in positives and negatives. Functional theories of emotion conceive emotions as the motorways of individual response because emotions allow a quick answer to threats or opportunities that arise in the environment (Keltner and Gross 1999). This function is the base of the distinction between a positive and negative affect. The broaden-and-build model (Fredrickson 1998) holds that positive emotions positively broaden and build an individual's repertoire for further actions. Similarly, a direct relationship between some positive emotions and the activation of specific action tendencies has been detected (Williams and DeSteno 2009).

The valence-based approach to emotions has also been generally adopted in the field of consumer behaviour. It has been shown that positive and negative emotions have different effects on satisfaction (Oliver 1980; Nyer 1997; Szymanski and Henard 2001). As a consequence, they produce different behavioural responses in terms of complaining, switching or repurchasing, engaging word-of-mouth or third-party complaining. Then, it is the balance between positive and negative emotions that determines the net valence of the affective experience that fully drives the subsequent behaviours (Zeelenberg and Pieters 2004).

The main disadvantage of the valence approach to emotions is that it sacrifices specificity in the service of parsimony (Lerner and Keltner 2000). Valence is a ubiquitous and universal characteristic of emotions that can, however, be based on a sometimes rather artificial positive-negative dichotomy (Zeelenberg et al. 1998). The common assumption that positive emotions lead to positive consequences cannot always be supported. For instance, anecdotal evidence suggests that emotions of the same valence exert different influence on judgments and choice (Lerner and Keltner 2000). This difference is explained by the idiosyncratic experiential content of different emotions (Bougie et al. 2003). They also have different antecedents and distinctive implications for decision making (Zeelenberg et al. 2000). Thus, the fear experienced during a visit to the health service versus a

leisure activity (like roller coaster rides or bungee jumping, for example[1]) has completely different behavioural orientations. While the first is related with avoiding negative outcomes, the second is associated with risk taking and achieving positive outcomes. There can also be mix feelings, for example, the combination of pain and self-confidence associated with situations like wearing high heels (Phelan 2002). Moreover, there are high levels of ambiguity in the assignment of emotions to valence. For example, anger is theoretically a negative emotion. However, an angry client complaining about customer service can positively experience the arousal associated with being angry (Shuman et al. 2013).

2.2 The specific emotions approach

An alternative to the crude positive-negative dichotomy is the specific emotions approach that takes into account that emotions of the same valence can be qualitatively very different. Thus, emphasizing the role of specific emotions increases insight into behavioural decision-making. The accompanying thoughts and feelings, the appraisal, psychological activities, expression, action tendencies and behavioural actions differentiate emotions (Roseman et al. 1994). Taking into account these differences, the valence-based approach can be counterproductive in order to understand and predict behaviour (Martínez et al. 2011). Several researches

[1] The author would like to thank an anonymous reviewer for suggesting these examples.

stressed the need to look at specific emotions and analysed how a variety of anticipated emotions shape consumers' behavioural choices. These include negative emotions such as anxiety and sadness (Raghunathan and Pham 1999), anger and dissatisfaction (Bougie et al. 2003) or regret and disappointment (Zeelenberg and Pieters 2004), among others. The effect of a positive emotion like pride can also be contingent on consumers' self-regulatory goals and it does not depend on consumer satisfaction (Louro et al. 2005). Distinctive behavioural consequences between two types of the same emotion have also been reported. For instance, an emotion such as envy can be of two different types, benign envy or malicious envy. Each type of envy is characterised by distinctive feelings, thoughts, motivational goals and behavioural implications (Van de Ven et al. 2012).

2.3 The hierarchical approach

The dimensional view of emotions, with the valence-based approach as a special case, and the category view, from which the specific emotions approach emerged, are two ways of modelling the role of emotions (Zeelenberg and Pieters 2004). Each way focuses on a different level of the emotion process (Frijda 1986). Laros and Steenkamp (2005) proposed a hierarchical model of consumer emotions that integrates both research streams. According to this model emotions can be defined in three levels of generality. The superordinate level includes the positive and negative affect. The intermediate level is formed by eight basic emotions, four of a

positive nature (contentment, happiness, love and pride) and four negative (sadness, fear, anger and shame). The term "basic" emotion refers to their biological basis, evolved origins and universality (Ekman 1993). Laros and Steenkamp (2005) developed the eight basic consumer emotions after a detailed revision of the psychological literature and taking into account its application to a consumption setting. At the subordinate level the hierarchical model distinguishes between 42 specific emotions from the Consumption Emotion Set proposed by Richins (Richins 1997). Thus, recognizing different levels of generality in the analysis of emotions (superordinate-intermediate-subordinate) the hierarchical model allows appreciating relevant nuances in consumers' feelings about different products. With a non-hierarchical structure based on a classical distinction between positive and negative valence, those nuances would be lost (Laros and Steenkamp 2005).

Based on this integrative approach the following section proposes to explore comparisons between judgments focusing on an affective appraisal of superstars as emotional objects, and behavioural responses to these objects.

3. Modelling framework

This section presents a modelling framework for explaining the intention of attending films whose casts include very well-known stars. Before developing the model, two particularities of superstars as emotion elicited objects are commented.

3.1 Overall approach

The hierarchical model of consumer emotions (Laros and Steenkamp 2005) was originally tested to explain the emotions experienced for four different types of food. In doing so, empirical data consisted in asking respondents about the degree in which they associated 33 specific emotions with the consumption of one randomly assigned type of food. Those 33 specific emotion words were used to measure the basic emotions or intermediate level of the hierarchical model. In this paper, emotions elicited by superstars are considered starting directly from the eight basic emotions of the hierarchical model. The subordinate level has not been used because questionnaire length could damage response accuracy as could be proved by a pretest.

Two issues immediately come into play when trying to develop a model to analyse spectators' behaviour instead of the consumption of certain food products: (1) the relevance of the different basic emotions; (2) the interdependence between superstars.

Regarding the basic emotions, Laros and Steenkamp (2005) omitted two basic emotions to empirically analyse consumers' feelings concerning food products, love and pride. Love was omitted because it was not expected to be associated with food products. Pride was not considered due to its interpersonal character. In

understanding spectators' feelings concerning superstars it seems advisable to validate the whole set of basic emotions.

With respect to superstars' independence, it should be considered that spectators' choices of films fit within a discrete choice framework. The easiest and most widely used discrete choice model is the multinomial logit model. One of its main characteristics is the independence from irrelevant alternatives. This property implies proportional substitution across alternatives (Train 2009). In spite of the convenience of this assumption, it can be very inappropriate in many situations as the one analysed in this paper. For instance, a spectator that particularly likes a superstar because of his/her ability to evoke pleasant feelings might have a similar affection for another star with the same ability. If this is the case, the unobserved factors affecting both superstars are not independent, as the multinomial logit model would assume, but correlated. Thus, when analysing the emotions elicited by superstars, different levels of perceived similarity/dissimilarity in the emotional profile of superstars could be expected. The most appropriate discrete choice model for dealing with the possibility that the set of superstars faced by a spectator can be partitioned is the nested logit model. Each of the subsets of superstars with a particular emotional profile forms a "nest". Section 3.2 describes the main properties of this model while in Section 5.1 a procedure to determine different subsets of superstars will be presented.

3.2 Spectators' utility model

It can be assumed that the spectators make choices between different superstars to maximize their utility which depends on their affective experience with superstars. The utility of superstar *k* for spectator *t* is given by:

$$U_{tk} = \propto_k + \beta_1 anger_{tk} + \beta_2 fear_{tk} + \beta_3 sad_{tk} + \beta_4 sham_{tk} + \beta_5 cont_{tk} + \beta_6 happ_{tk} + \beta_7 lov_{tk} + \beta_8 prid_{tk} + \epsilon_{tk}$$

Where: $Anger_{tk}$ is the anger elicited by superstar k in spectator t; $Fear_{tk}$ is the fear elicited by superstar k in spectator t; Sad_{tk} is the sadness elicited by superstar k in spectator t; $Sham_{tk}$ is the shame elicited by superstar k in spectator t; $Cont_{tk}$ is the contentment elicited by superstar k in spectator t; $Happ_{tk}$ is the happiness elicited by superstar k in spectator t; Lov_{tk} is the love elicited by superstar k in spectator t; $Pride_{tk}$ is the pride elicited by superstar k in spectator t; α_k is the superstar-specific constant.

If it is assumed that the sources of utility associated with the stars are not fully accommodated in the representative component of the utility ($V_{tk} = \alpha_k + \beta' x_{tk}$) then, the variances of the random component $\mathcal{E}_{tk}$ could differ across groups of superstars (Hensher and Greene 2002). Thus, the probability of spectator *t* choosing a film starring superstar *k* that pertains to group *j* is given by (Ben-Akiva and Lerman 1985):

$$P_{tk} = P_{\frac{k}{j}} \times P_j$$

Where: $P_{\frac{tk}{j}} = \frac{e^{\frac{V_{tk}}{\mu_j}}}{\sum_{k \in K_j} e^{\frac{V'_{tk}}{\mu_j}}}$, $P_{tj} = \frac{e^{\mu_j \tau_j}}{\sum_{j'=1}^{J} e^{\frac{\mu'_j}{\tau'_j}}}$ and $\tau_j = ln \sum_{k' \in K_j} e^{\frac{V_{tk'}}{\mu_j}}$

τ_j is the logsum variable and μ_j represents the parameter of the logsum.

Stated in words, if superstar k were removed, the probabilities of choosing the films starred by the other superstars would increase. However, the probability of choosing each of the films would not increase in the same proportion. Particularly, the probabilities for superstars within one group j would rise by the same proportion whenever one of the other superstars pertaining to any other group is removed. However, when one superstar that pertains to group j is removed the probability of the films starred by superstars in the same group j rises proportionately more than the probability of films starred by superstars pertaining to the remaining groups. This implies that there is not a homogeneous substitution pattern across alternatives. As will be seen later, this property has relevant implications.

An empirical study was carried out to ascertain the groups of superstars as well as the relevance of the basic emotions to explain spectators' choice.

4. Data

A survey was used to collect the data. Previous studies show that the main segment of cinema audience is made up of young people with a high level of education (Collins et al. 2002; Terry et al. 2009; Ministry of Culture 2011) and there are no differences in cinema attendance between men and women (AIMC 2011). Taking into account this profile, respondents were randomly selected across young people (24-34 years of age) with university studies in a European country. The young segment is crucial for many cinema producers (Lincoln and Allen 2004) which increases the relevance of analyzing how this segment reacts to stars' emotions. The superstars were selected due to their top positions in the two most important rankings of superstars: the Ulmer Scale (www.ulmerscale.com) and STARmeter (www.imdb.com). Seventeen stars occupied the first ten positions according to those sources in 2010: Brad Pitt, Christian Bale, George Clooney, Gerard Butler, Johnny Depp, Kristen Stewart, Leonardo DiCaprio, Megan Fox, Nicholas Cage, Reese Witherspoon, Robert Downey Jr., Robert Pattinson, Russell Crowe, Tom Hanks, Will Ferrell, Will Smith and Zoe Saldana.

In total, 5,440 responses were obtained from 320 surveyed spectators, with each spectator providing responses about each of the seventeen superstars considered.

Respondents were asked to indicate to what extent they experience the eight basic emotions of the hierarchy of consumer emotions for each of the seventeen stars. Emotions were rated on a five-point Likert scale ranging from "I don't feel this emotion at all" (1) to "I feel this emotion very strongly" (5). It should be noticed

that each superstar is rated on the degree to which he/she evokes each of the eight basic emotions. The underlying mechanism behind spectators' evaluations of superstars can be based on many different sources (previous career, personal aspects or media coverage, among many others).

The intention of watching a film was also measured on a five-point Likert scale ranging from "The presence of this star in the cast of the film will not encourage me to watch the film at all" (1) to "The presence of this star in the cast of the film will be a very important stimulus for me to watch the film" (5). In these items "the film" is a generic film and not a particular film.

The questionnaire included other variables related with cinema attendance and the demographic profile of the sample analyzed.

5. Results

5.1 Relationship superstars-emotions

Before estimating the nested logit model, it is necessary to establish whether it is possible to classify the superstars according to their emotional profile. As there is

not a priori expectation of the relationship between the different superstars[2], a correspondence analysis was used.

The correspondence analysis consists of a data matrix of eight rows and seventeen columns. The rows represent the eight basic emotions and the columns include the superstars. The matrix contains the correspondence between each of the emotions and each of the superstars. The analysis was executed by means of SPSS v. 19. Two dimensions were extracted explaining 80.0% of the total inertia (Dimension 1: eigenvalue =0.19, proportion of the inertia=0.66; Dimension 2: eigenvalue=0.08, proportion of the inertia=0.14).

[2] Following an anonymous reviewer's suggestion it has been analyzed whether the influence of stars as emotion elicited objects were mediated by their gender. The results do not support this possible gender effect. The resulting nested logit model —with two nests, one formed by male superstars and another by female superstars— has inclusive values above one.

	Contributions			
	Of the points to the overall inertia (absolute contribution)		Of the dimension to the inertia of each point (relative contribution)	
	1	2	1	2
Anger	.14	.00	.76	.00
Fear	.09	.10	.15	.80
Sadness	.20	.03	.73	.02
Shame	.22	.00	.87	.00
Contentment	.16	.02	.84	.02
Happiness	.13	.01	.85	.01
Love	.02	.66	.11	.81
Pride	.02	.15	.07	.92

Table 1. Results of correspondence analysis (emotions).

As can be seen in Table 1, the emotions with the highest contribution to dimension 1 are sadness, shame, contentment, anger and happiness. The variables with the highest absolute contribution to dimension two are love, pride and fear, also with high relative contributions. Absolute contributions quantify the importance of each basic emotion in determining the direction of the principal axes. They can be interpreted as the percentage of variance explained by each basic emotion in relation to each dimension (Hoffman and Franke 1986). Meanwhile, relative contributions are indicators of the quality of the representation.

	Contribution			
	Of the points to the overall inertia (absolute contribution)		Of the dimension to the inertia of each point (relative contribution)	
	1	2	1	2
Pitt	.15	.08	.83	.10
Bale	.00	.12	.00	.61
Clooney	.12	.01	.91	.02
Butler	.01	.05	.45	.35
Depp	.01	.11	.37	.52
Stewart	.21	.07	.90	.07
DiCaprio	.00	.13	.03	.83
Fox	.00	.01	.01	.18
Cage	.07	.12	.74	.24
Witherspoon	.00	.03	.00	.19
Downey	.00	.07	.14	.59
Pattinson	.12	.06	.87	.09
Crowe	.03	.00	.34	.01
Hanks	.01	.00	.20	.00
Ferrell	.04	.06	.52	.15
Smith	.17	.00	.84	.00
Zoe	.01	.00	.65	.08

Table 2. Results of correspondence analysis (superstars).

In the case of the superstars (Table 2), Brad Pitt, George Clooney, Kristen Stewart, Robert Pattinson and Will Smith are the stars that most contribute to dimension one. The stars with the highest absolute contributions to dimension two are Christian Bale, Johnny Depp, Leonardo DiCaprio and Nicholas Cage.

The correspondence analysis provides a graphical display (Figure 1) which allows detecting structural relationships between the different variables analysed. The eight basic emotions are the row dots while the seventeen stars are the column dots. Figure 1 shows the sign of the contributions of the different row and column dots. Thus, the emotions with a positive contribution to dimension one are sadness, shame and anger. On the contrary, contentment and happiness are on the negative side of this first dimension. In the same way, love and pride are on the positive side of dimension two, while fear is on the negative side. The sign of the contributions of the different emotions is coherent with their expected valence. In both dimensions positive emotions are on opposite sides to the negative emotions. So, in dimension one, sadness, shame and anger are on the opposite side to contentment and happiness. In dimension two, love and pride are on the opposite side to fear. In the case of the superstars, and in relation to dimension one, Kristen Stewart and Robert Pattinson are on the positive side while Brad Pitt, George Clooney and Will Smith are on the negative side. In dimension two, Christian Bale, Johnny Depp and Nicholas Cage are on the negative side while Leonardo DiCaprio is on the positive side.

A detailed explanation about the theory behind correspondence analysis can be seen in Hoffman and Franke (1986). In Figure 1, a particular superstar will tend to occupy a position corresponding to the emotions prominent to his/her emotional profile in accordance with spectators' perceptions. Similarly, given the display of superstar profiles, a particular emotion will tend along axis 1 and 2 in the direction of the stars that are relatively substantial in that emotion. For example, love is on the positive side of dimension 2 and Leonardo DiCaprio, who is relatively highly evaluated in love, is on the positive side of dimension 2. To understand how positive and negative values derive from the analysis it must be taken into account that stars and emotions that appear together on Figure 1 indicate that emotions have values greater than predicted under independence for those superstars. The analysis estimates a matrix of residuals from the independence model for a table of crossed frequencies where the rows are the different emotions and the columns are the different stars. Combinations of emotions and stars with large positive deviations from expected values are near each other on the figure (for example: Sadness-Pattinson). In contrast, combinations of emotions and stars with large negative deviation from expected values are in opposite quadrants of the figure (for example, Happiness-Brad Pitt).

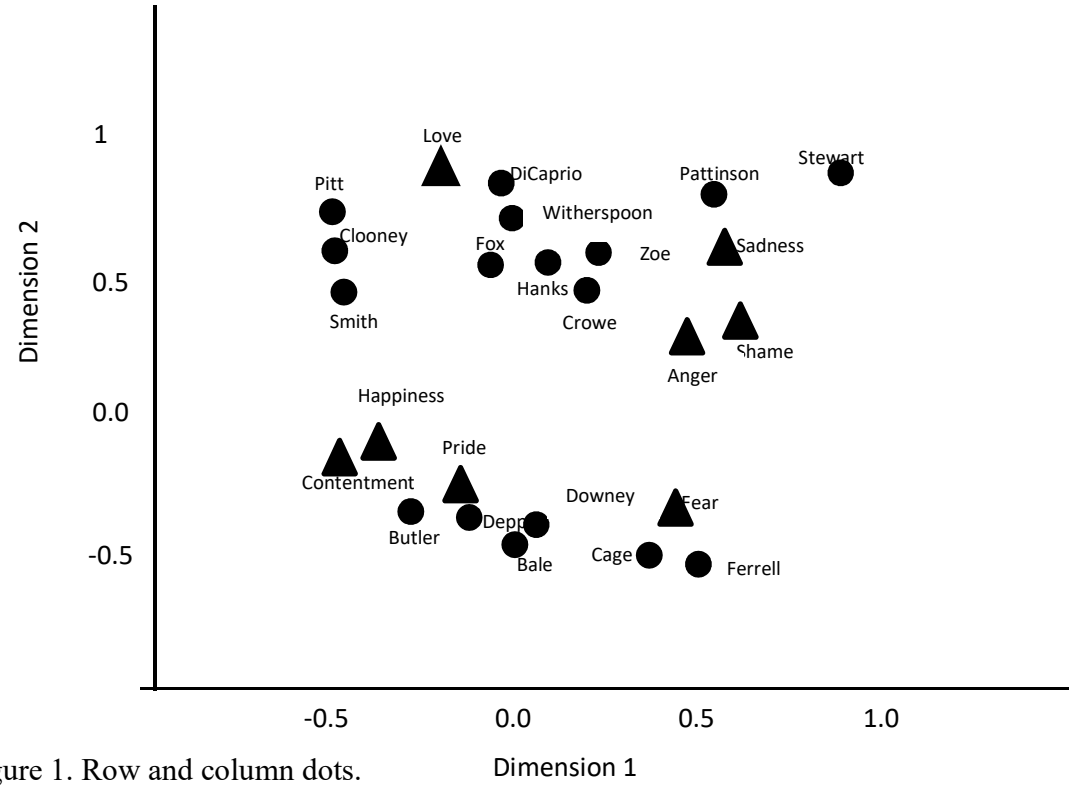

Figure 1. Row and column dots.

Taking this information into account, it is possible to classify the superstars in three groups. There is a first group of superstars related with emotions of negative valence. This group is formed by Kristen Stewart and Robert Pattinson, both positively related with dimension one which on its positive side is defined by the variables anger, shame and sadness. This first group of superstars is completed with Christian Bale, Johnny Depp and Nicholas Cage, all of whom are negatively related with dimension two, which on its negative side is defined by fear.

There is a second group of superstars formed by stars related with positive emotions. Brad Pitt, George Clooney and Will Smith are in this second group due

to their relationship with emotions such as contentment and happiness, both closely related with dimension one. Leonardo DiCaprio completes this second group of superstars due to his positive relation with dimension two which is positively related with love and pride.

The eight stars included in the first and second group have a clear emotional profile for the spectators. The rest of the superstars analysed occupied a central position in the cloud of dots of the graphical display of the correspondence analysis. This last result suggests that these stars do not have any special relationship with any of the emotions considered.

5.2 The choice model of spectators

The following table provides the estimates for the sample analysed. The program NLOGIT of LIMDEP was used for estimation. The parameters of the logsum are statistically significant (sig.=0.00) and all of them have values between zero and one. This circumstance allows confirming that the classification of superstars according to their emotional profile helps to explain the choice process of spectators. All the basic emotions analysed significantly influence this choice process (sig.<0.05) except fear (sig.=0.14). Furthermore, according to the sign of the corresponding coefficients, the positive emotions (contentment, happiness, love

and pride) positively influence the spectators' choice. However, in the case of negative emotions, while anger and shame negatively influence the spectators' choice, the sign of the estimated coefficient of sadness is positive. This result is coherent with previous works of Liljander and Strandvik (1997) who found that, when watching a film, negative emotions like fear could lead to satisfaction. In this paper there is no significant influence of fear, even when its coefficient is positive, but there is a positive and significant influence of sadness.

Variable	Coefficient	Sig.	Variable	Coefficient	Sig.
Anger	-.02	.00	Contentment	.05	.00
Fear	.01	.14	Happiness	.06	.00
Sadness	.02	.03	Love	.02	.00
Shame	-.02	.02	Pride	.05	.00

Alternative Specific Constants											
ZS	.46	.31	RC	.84	.06	NC	.44	0.00	JD	.18	.00
WS	.56	.22	RP	.11	.04	MF	.23	0.00	GB	.45	.00
WF	.61	.18	RD	.04	.06	LD	.35	0.00	JD	.49	.00
TH	.93	.04	RW	.15	.03	KS	.13	0.02	GC	.06	.30

Log sum				
Negative emotions	.83	.00	Log-likelihood	-41,442.70
Positive emotions	.75	.00	X^2 2522.0	Sig.=.00
No emotions	.96	.00		

Table 3. Results of the nested logit model.

The alternative specific constants were estimated for all the stars except Brad Pitt who was the alternative base. These alternative specific constants are the net average effect of omitted variables, in relation to the base star. They are significant and positive for all the stars considered except for Zoe Saldana, Will Smith, Will Ferrell, Russell Crowe, Richard Downey and Christian Bale. The positive sign is very interesting taking into account that the base star is Brad Pitt. Brad Pitt was chosen as a base because he was the star with the best position in the rankings considered, the Ulmer Scale and STARmeter. However, this result suggests that as in the model we have only considered the influence of emotions on spectators' choice, if variables of a non-emotional nature are taken into account, the majority of the superstars have a better value than Brad Pitt. This result suggests that variables of an emotional nature are behind the most important rankings of the sector. This is not a surprise taking into account that the Ulmer Scale is based on the opinion of members of the cinema industry and STARmeter is based on spectator's searches through the Internet portal IMDb. The value of the superstars according to both opinions of members of the industry and opinions of spectators seems to be related to the emotional profile of the superstars. The abstraction of variables of an emotional nature alters the value of the superstars. Superstars with a worse value according to the industry and audience can surpass the value of the best superstars according to both sources.

5.3 Marginal effects

Marginal effects have been computed to estimate the consequences of a change in each of the eight basic emotions in the utility function of each superstar. Figure 2 shows the total marginal effects. Differences between emotions and between superstars can be perceived. If there is an increase in the shame or anger elicited by a superstar the probability of choosing a film starring this actor/actress diminishes. Conversely, an increase in the happiness, contentment or pride evoked by a superstar favors the probability of watching a film with this star in its cast. This latter reaction also occurs as a response to an increase in love, sadness and fear but to a lesser extent. The emotions fear and sadness deserve special attention because, in spite of their negative valence, and as was observed in the analysis of the estimated coefficients of these variables, they induce positive responses in the spectators. It is also noteworthy the fact that the sensitivity to positive emotions is higher than to negative emotions. This is true both in relation to the negative emotions with positive consequences (sadness and fear) and in relation to the negative emotions that negatively affect spectators' responses (shame and anger).

With respect to the different superstars, three of them are particularly dependent on their emotional capital: Will Smith, Johnny Depp and Brad Pitt. They are the stars with the highest marginal effects of positive and negative emotions. Will Smith and

Brad Pitt are among the stars with a positive emotional profile. However, Johnny Depp is in the group of stars with a negative emotional profile. This apparent paradox can be explained if the filmography of Johnny Depp is taken into account. He is associated with characters with a particular mix of humor and fear, the most representative of which is captain Jack Sparrow of the franchise Pirates of the Caribbean.

As could be expected, the superstars less affected by changes in the emotions they elicit are in turn among the superstars without a particular emotional profile. However, there are two exceptions in the cases of Kristen Stewart and Robert Pattinson. Both are among the stars with a negative emotional profile, yet they are the stars with the lowest marginal effects of changes in positive or negative emotions. This result could be related with the fact that one of the most common claims of the detractors of these stars is their inability to emote. The following comments about them, published in www.thetoptens.com, exemplify this fact: "…Only one facial expression…", "…She doesn't know how to act. She puts the same face in all scenes…You never know whether she is laughing or crying", "…His acting is terrible. He is always blank …", "…He is the most plain out there…", "A brick wall can show more emotion …".

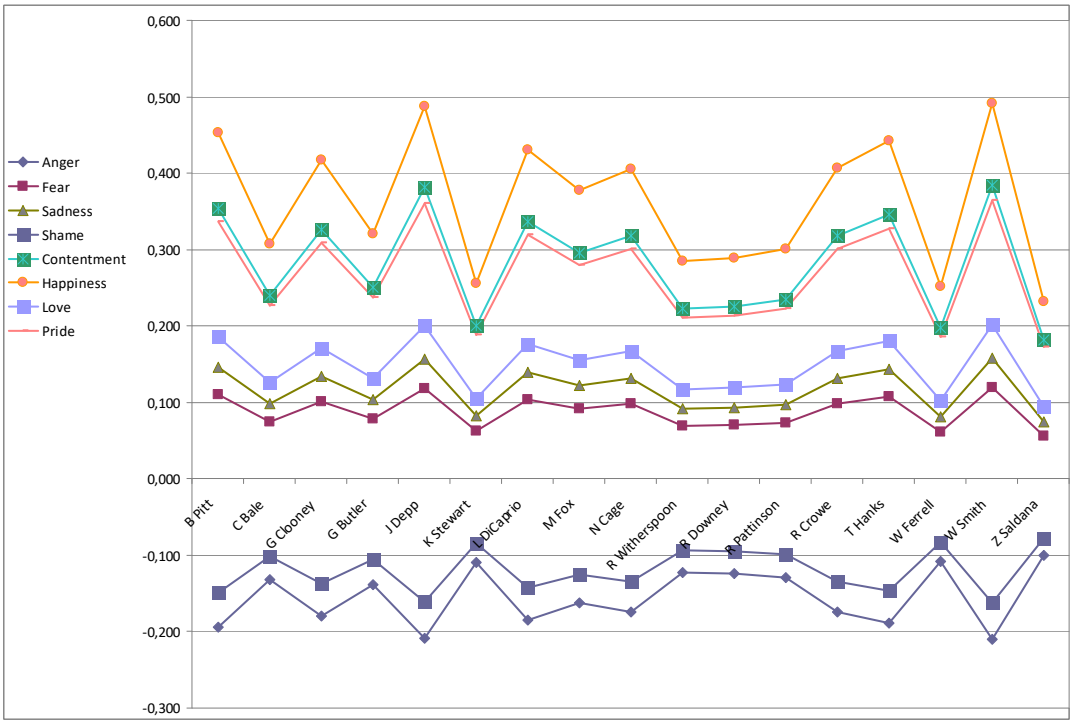

Figure 2. Marginal effects.

6. Discussion and implications

Collective movie attendance decisions that explain the financial performance of motion pictures are backed by thousands of individual emotions. The goal of this research is to examine cinema stars as emotional eliciting stimulus. It shows that the most influential emotion in the spectators' responses is happiness. Thus, the basic emotion mix of a superstar for positively influencing audiences includes happiness, contentment, pride, sadness, absence of anger and absence of shame.

This notion of an emotion mix can be useful to both stars and movie studios. The results suggest that the probability of success of a superstar as an attraction is greater when the superstar fits their expected emotional profile. It could be argued that the emotion mix is integrated by variables outside the control of the industry or the stars themselves. However, both movie appearances and media coverage can be important sources of information in drawing up the superstars' emotional profile. The career filmography and public image of the stars are to a great extent managed by the studios and the superstars themselves.

Apart from the idiosyncratic experiential content of the emotions elicited by superstars, this paper demonstrates the emotional interdependence between superstars. Spectators distinguish between three types of superstars: those associated with emotions with a positive valence, those related with emotions with a negative valence and a third group that includes the stars without a clear emotional profile. The fact that superstars differ in their emotional profile influences spectators' decisions. It has been demonstrated that spectators' responses to a cast of well-known stars depends on the emotional profile of these superstars. The interdependence of stars within each group is superior to the interdependence between stars of different groups. This implies that a superstar like George Clooney would be more affected by changes in the emotional profile of Brad Pitt, Will Smith or Leonardo DiCaprio, all of them in his same group, than for a change in the emotional profile of Robert Pattinson, for instance. The implication of this result is

that the effect of a superstar does not depend only on him or her. So the characteristics of the particular star and of the rest of the superstars of the moment should be taken into account when hiring an expensive superstar as an attraction for a movie audience. In terms of the emotional profile, there are differences in the interdependence between superstars that affect their degree of substitutability. This can have important implications for an executive faced with a decision to green-light a new superstar movie, especially when replacing established stars of a film franchise. Previous research based on aggregated analyses of the market concludes the existence of a synergistic effect of multiple stars (for example, Elberse 2007; Nelson and Glotfely 2012). In this paper the emotional profile is revealed as a facet of stardom that should be taken into account to value the complementarity among star cast members.

This study contributes to several research literature streams. First, it adds to the research on the valence of emotions (Shuman et al. 2013) by showing that the valence-based approach should be partially reinterpreted when analysing the power of superstars. Thus, in contrast with the predictions of this approach, the emotion sadness has a positive influence on the net valence of the affective experience that drives spectators' behaviour. Important nuances would be lost if sadness were placed with other negative emotions. This makes superstar power an interesting field for analysing the valence aspect of emotions and, particularly, for examining the enjoyment-of-tragedy paradox. One of the plausible explanations why people

enjoy tragedy is the power of sadness to enhance reality perception (Ahn et al. 2012). This explanation could be behind the positive influence of sadness in the context of emotions elicited by superstars. Moreover, previous literature considers the existence of a negativity bias (Cacioppo and Gardner 1999). This paper shows that sensitivity is higher to positive emotions than to negative, indicating that in the case of emotions elicited by superstars there is no such negativity bias. Another contribution of this line of research is to offer an explanation of an emotional nature for some findings of previous star power literature. Elberse (2007) found evidence that a stronger cast increases the box-office success of a movie but left open the question of why this effect occurs. Different from prior studies that focus on aggregated analysis of the market, I examined multiple behaviours from multiple moviegoers. The generated results offer explanations of an emotional nature that are impossible to study departing from indicators of the financial performance of motion pictures. Futhermore, extant studies have proved that the probability of success of a superstar is higher when he or she remains loyal to "his/her genre" (Wyatt 1994; Liu et al. 2013). This paper explains this loyalty to the genre effect in terms of consistency of the emotional profile of the superstar. At the same time, this result implies that, when choosing a star for a film project, the match between the genre or script and the emotional profile of the star should be taken into account (for instance, an actor with a special ability to evoke sadness could properly head

the cast of a war movie)[3]. On the other hand, this paper complements previous literature on celebrity power. Inasmuch as it is the overall popularity of a star, more than the isolated promotional efforts prior to a release, that touches audiences (Treme 2010), this paper shows that to best manage stars' careers for success it would be necessary to create an emotional footprint of the superstar in terms of happiness, contentment, pride, sadness and lack of anger or shame.

These results are not exempt from limitations. First of all the empirical study is centred on the young segment. It would be very interesting to know to what extent the findings can be extrapolated to a far more heterogeneous audience of moviegoers. Spectators' responses are measured through their willingness to attend a movie. However, many variables can mediate the relationship intention-final attendance. It is the final attendance and not the intention which directly determines box office results. Although this study tries to isolate the effect of emotions elicited by superstars on movie attendance, movies are very complex products. Many other variables apart from emotions can determine the willingness to attend a movie. The nested logit model assumes that a change in the emotional profile of one star changes the probabilities of the stars in the same group proportionally. It could be very interesting to discover the effect of more flexible substitution patterns. The model estimated represents the spectators` taste variation with the emotions elicited

[3] The author would like to thank a reviewer for suggesting this implication.

by a mutually exclusive set of stars. A final future research direction is related with the measure of the emotions of tandems of stars.

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