Pretty Woman Or Erin Brockovich? Unconscious and Conscious Reactions to Commercials and Movies Shaped By Fairy Tale Archetypes – Results From Two Experimental Studies

Andrea Groeppel-Klein, European University Viadrina, Germany
Anja Domke, European University Viadrina, Germany
Benedikt Bartmann, European University Viadrina, Germany

Pretty Woman or Erin Brockovich? Unconscious and conscious reactions To Commercials and Movies shaped by Fairy tale Archetypes – results from TWO experimental studies

Abstract

This paper describes the principles and assumptions of Jung’s archetypal psychology, and analyzes the question of whether the use of archetypes influences the conscious assessment of commercials, brands, movies and unconscious approach reactions. Furthermore, the question is discussed whether different personality types vary in the degree to which they are attracted by advertising and movies using typical archetypes. Two laboratory experiments were conducted to test our hypotheses. In order to gain insight into the unconscious reactions of test persons, we also measured electrodermal reactions to explore arousal evoked by archetypal commercials and movies.

[to cite]:

[url]:
http://www.acrwebsite.org/volumes/12256/volumes/v33/NA-33

[copyright notice]:
This work is copyrighted by The Association for Consumer Research. For permission to copy or use this work in whole or in part, please contact the Copyright Clearance Center at http://www.copyright.com/.
Pretty Woman or Erin Brockovich? Unconscious and Conscious Reactions to Commercials and Movies Shaped by Fairy Tale Archetypes—Results from Two Experimental Studies
Andrea Gröppel-Klein, European University Viadrina
Anja Domke, European University Viadrina
Benedikt Bartmann, European University Viadrina

ABSTRACT
This paper describes the principles and assumptions of Jung’s archetypal psychology, and analyzes the question of whether the use of archetypes influences the conscious assessment of commercials, brands, movies and unconscious approach reactions. Furthermore, the question is discussed as whether different personality types vary in the degree to which they are attracted by advertising and movies which use typical archetypes. Two experimental papers were conducted to test our hypotheses. In order to gain insight into the unconscious reactions of test persons and to assess activating function of archetypes, we also measured electrodermal reactions to explore arousal evoked by archetypal commercials and movies.

INTRODUCTION AND GENERAL QUESTION
Are books like “Lord of the Rings”, “Harry Potter”, or “Ancestors of Avalon” and movies presenting Arnold Schwarzenegger as the “Terminator” or internet games like “Everquest” so successful, because all these products use archetypes that activate more or less unconscious, but innate human desires? Are advertising campaigns shaped by archetypal myths also appealing to consumers (Walle 1986)? A content analysis of advertisements in magazines and newspapers reveals that many brands (even credit institutes or sophisticated newspapers) use archetypal images like brave heroes, innocent maidens like the “Sleeping Beauty”, or pictures associated with such fairy tales as “Cinderella”, “The Frog Prince”, or animal archetypes like the “faithful horse” or the “lion”.

In the consumer behavior literature, there are several articles inquiring into archetypes from a qualitative research perspective (e.g., Hirschman 2000; Veen 1994; Walle 1986). However, there appear to be no empirical studies investigating the effect of archetypes on approach behavior and on affective responses. In this paper, we analyze the topic from a positivistic research perspective: 1) whether archetypes influence, on the one hand, the conscious assessment of commercials, brands, and movies and, on the other hand, unconscious approach reactions and 2) whether all people behave similarly to the same exposure or whether different personality types vary in the degree to which they are attracted by archetypal topics. To acquire insights into the unconscious reactions of test persons and to assess the biological, activating function of archetypes, we also measured arousal evoked by archetypal commercials and movies.

An Introduction to Jung’s Archetypes
Because Carl G. Jung (1875-1961) was influenced by his mentor Sigmund Freud, he was called Freud’s “crown prince of psychoanalysis”. However, “Jung had never been entirely sold on Freud’s theory” (Boeree 1997). Briefly, Freud’s (1933) therapy objective was to render the personal unconscious conscious. According to Freud, repressed personal experiences are fueled by primitive, pleasure-seeking and destructive emotions that must be controlled (Enns 1994). Furthermore, Freud was convinced that one day, his theory about the relevance of unconscious instincts would be confirmed by modern neurological techniques of brain imaging (Behrens and Neumaier 2004).

Jung’s theory (1954/1959a, b) can be divided into three parts. Part one is the conscious mind termed the “ego”. Closely related to the ego is the personal unconscious that includes anything not presently conscious. The personal unconscious includes both memories that can easily be brought to mind and those that have been suppressed for some reason. Jung’s third part of the psyche is called the “collective unconscious”, and this element makes his theory stand out from others (Boeree 1997, 2). The collective unconscious can be characterized as a “psychic inheritance” or the kind of knowledge with which all human beings are born. The individual is never directly aware of this collective reservoir of experience, but it can indirectly influence personal feelings and behavior. Effects that illustrate the functioning of the collective unconscious are experiences of first love, of déjà vu and the immediate recognition and understanding of certain myths. In contrast to Freud (1933), Jung (1961) viewed the unconscious as a meaningful source of renewal.

The content of the collective unconscious is characterized by so-called “archetypes” that represent inborn and universal ways of perceiving and comprehending the world and provide individuals with “wisdom” about the past and predispose people to experience the world as their ancestors did. Thus, archetypes have an instinctive or biological function (Veen 1994, 332) and act as regulators and stimulators. In other words, “archetypes activate behavior” (=”systems of readiness for action” (Stevens 1982, 62)). As inherent experiences of the human species, they are stable across time and societies, but can be culturally coded in typical iconic representations.

The variety of archetypal images is substantial. In general, archetypes are mythological or primordial images and are regarded as useful in the analysis of myths, fairy tales and general literature. Jung (1954/1959a, b) devoted special attention to those archetypes he considered as highly important in shaping behavior. It would go beyond the scope of this article to discuss them all, but three types are of major relevance for this article and are presented in more detail: the anima in men and the animus in woman, the hero, and the maiden (Jung 1982, 165).

Bolen (1984) argued that although archetypes are universal, people reveal a wide diversity of personality styles that influence the decision to allow the psyche to bring the collective unconscious into the conscious. Furthermore, personality factors like self-esteem and clarity of self-concept (Campbell et al. 1996) may also influence individual (unconscious) preferences for romantic archetypes (Boeree 1997; Holbrook and Olney 1995).

Archetypes and Consumer Behavior
Some authors (e.g., Walle 1986) suggest the general use of heroes or archetypes in advertising campaigns. Walle (1986, 22) describes archetypes as “constitute valuable tools for practitioners such as strategic planners of promotional campaigns”, because archetypal advertising originates from innate human universals and focuses on innate needs. Veen (1984) argues that archetypes like the hero in particular, are helpful in explaining buying behavior (e.g. of cars) and that myths in general give products a ritualistic image. Ritualistic consumption satisfies the search for spiritual satisfac-
and self-actualization (Belk 1988; Belk, Wallendorf, and
Sherry 1989; Rook and Levy 1983; Solomon 1983). According to
Hirschman (2000), movies portraying particularly meaningful ar-
chetypal figures create living icons that are used by consumers as
important personal anchors. This could be the reason for the
popularity of many archetype-oriented movies.

**Feminism and the Innocent Maiden Archetype**

In converse, the feminist movement opposes the reduction of
archetypes to stereotypes like Cinderella or Sleeping Beauty.
Feminists complain about a misinterpretation of Jung’s theory (e.g.,
Enns 1994, 73; Lauter and Rupprecht 1985). They point out that his
notion that an unconscious man exists within the woman (anima)
and that an unconscious woman exists within the man (anima)
implies that masculine and feminine characteristics can be united in
a balanced relationship and that mentally healthy people have both
a well-developed anima and animus. However, Jung (1954/1959b,
82) also wrote that femininity is associated with “feelings of
inferiority”. Since his work has predominantly been interpreted by
men who are mostly against abolishing patriarchal structures, these
concepts have helped men enhance patriarchal myths and under-
value the merits of women as well as their experience and power
(Enns 1994). Furthermore, archetypes (though principally stable
over time) are nevertheless embedded in socialization processes.
On the one hand, feminists (e.g., Lauter and Rupprecht 1985)
believe that the more fairy tales that prevail about heroic men and
needy women, the more difficult it will be for women to change
such stereotyped role expectations as “Men are brave and clever,
they hunt and solve problems, whereas women stay home, look
after children, create a pleasant home life—and obey.” On the other
hand, currently, more and more students are female; they often
achieve better examination results than their male colleagues and
more and more women gain high career positions. Thus, a maiden
archetype like Cinderella is called into question or even eroded. The
book “The Cinderella Complex” (Dowling 1981) questions the
abdications of women’s power to males and asks why, in the old fairy
tales, we never hear what happens to the young Cinderella after she
marries the prince. Will she really be happy and satisfied with a
spouse role or will there be a tendency to break out of the repressive
castle existence? To summarize, we could question whether a
modern young woman still believes that she needs to do no more
with her life than find a gallant prince who will look after her. In
other words, do typical maiden archetypes like “Cinderella” or
“Sleeping Beauty” really reflect women’s ideals and can they
therefore be used successfully in advertising strategies?

However, we can analyze this topic from a male perspective as
well. Women’s emancipation might also have changed men’s
expectations and philosophies of life. Analogously, we could
question whether men are still attracted by the hero-scheme. Does
a man always feel capable of mastering all obstacles and is he really
keen to assume responsibility for his wife and family or does the
hero-claim rather lead to a feeling of being burdened?

In our study, we wish to investigate whether archetypal stories
like Cinderella or Sleeping Beauty cause positive unconscious and/
or conscious responses. This general research question will be
specified in the following sections.

**Self-Concept, Personality and Archetypes**

According to Jung (1954/1959a, b), archetypes refer to deep
structures of the human mind and act as “organizing principles”.
This would suggest that a message which is compatible with innate
desires or desired behavior will be more effective (with regard to
approach behavior towards this special message) than one that is
less focused on these innate drives (Celsi and Olson 1988; MacInnis,
Moorman, and Jaworski 1991). Thus, we can assume that advert-
ising messages shaped by desirable archetypes will evoke positive

### TABLE 1

<table>
<thead>
<tr>
<th>(1) Anima and Animus</th>
<th>(2) Hero</th>
<th>(3) Innocent Maiden</th>
</tr>
</thead>
<tbody>
<tr>
<td>The “anima” depicts the unconscious female side of the male psyche, and the “animus” expresses the unconscious masculine side of the female. The anima may be personified as a young girl, a fairy godmother or the earth mother. The animus may be personified as a wise old man, or a rational male character. According to Jung, both anima and animus are present within one character. However, due to societal rules, women are still expected to be less aggressive and more understanding than men, whereas the latter are expected to be stronger and to ignore the emotional side of life more than females.</td>
<td>The “hero” can be characterized as the man of “self-generated-submission” who will eradicate the difficulties of the world. The hero is the defeated of the dragon (Aziz 1990, 29) who “undertakes the battle and ultimately, because of his sincerity, is given the strength to overcome the dragon” (Veen 1994, 332). In other words, the hero can master all challenges in life. Moreover, the typical male hero is able to rescue an unhappy or threatened woman and sweep her into an idyllic existence.</td>
<td>In fairy tales, the female role is often that of the innocent maiden like Cinderella or Sleeping Beauty (Boeree 1997). The young and beautiful woman, who lives in distress or misery or is maltreated by her stepmother or the evil fairy is rescued by a gallant prince who protects her forever and promises her a wonderful life free of worry and care. The story of the 350 year-old fairy tale “Cinderella” has survived, because it has given the “underdogs of society a source of hope”, because the tale has “flourished as a paradigm of happily-ever-after, wish-fulfilling romantic fantasy” (Waters 2003). Women are assumed to like this fairy tale, because it offers an optimistic or sentimental escape from a complicated and difficult reality, whereas men are supposed to identify with the heroic prince.</td>
</tr>
</tbody>
</table>
responses. Furthermore, as mentioned before, a relationship between personality variables and preferred archetypes can be assumed. Holbrook and Olhey (1995) found that people vary in the degree to which they are attracted either by romanticism (measured by items like: “I think that life is an awesome mystery” or “it is okay to daydream a lot”) or by classicism (measured by items like “I have a scientific outlook on most problems”) and that women in general are more attracted by romanticism. These findings could lead to assumptions that on the one hand, females are more attracted by romantic archetypes than male persons and, on the other hand, that individual levels of romanticism or classicism, or in a broader sense personality factors, also influence the perceived appeal of different archetypes.

In this context, self-concept clarity and self-esteem may also play an important role. Self-concept clarity can be defined as the “extent to which self-beliefs are clearly and confidently defined, internally consistent, and stable” (Campbell et al. 1996, 141). Self-concept clarity demonstrates whether or not an individual has a clear “conception of his or her life”. Self-esteem characterizes the extent to which individuals have well-articulated positive or negative beliefs about themselves. People with either high or low self-esteem differ in their appreciation of their own individual achievements in life (Campbell et al. 1996). We propose that self-concept clarity and self-esteem also impact on the evaluation of typical archetypes and we assume that individuals who have not yet dealt with questions like “who or what am I?” or “how do I feel about myself?” and thus have unclear self-concepts, will be more attracted by maiden archetypal figures, because these fairy tales give a source of hope, or an anchor as to how life could improve, either as the hero (male perspective) or the rescued maiden (female perspective). In contrast to self-concept clarity, the relevance of self-esteem is not that clear. We hypothesize that, on the one hand, females with high self-esteem will be less attracted by Cinderella or Sleeping Beauty stereotypes and more attracted by powerful female heroes, because self-confident women regard themselves as successful. Thus, there is no need to wait for gallant princes who will rescue them and master all problems (this is a more feminist argument, as mentioned above). On the other hand, females who are fascinated by Cinderella-stories presumably also have at least a minimum level of self-esteem, because they would otherwise never believe they could attract a prince one day. Consequently, without self-esteem, identification with a maiden archetype would go beyond their wildest dreams. Men also need a minimum of self-esteem, because they would otherwise not be able to identify with the hero. To summarize, we hypothesize that, in general, all individuals are attracted by archetypes, but that different degrees of attraction are associated with different personality types.

Psychophysiological Perspective and the Relevance of Arousal in Advertising

From a psychophysiological perspective, arousal is a fundamental feature of behavior. It can be defined as the basic neurophysiological process underlying all processes in the human organism. Thus, arousal is the basis of emotions, motivation, information processing, and behavioral reactions (Bagus, Gopinath, and Nyer 1999; Öhman et al. 1993). Arousal can vary from deep sleep through moderate increases to panic. Basically, a distinction can be made between tonic and phasic arousal. Tonic arousal refers to a relatively long-term state of consciousness that changes slowly due to long-lasting or extremely intense stimuli. Phasic arousal arises in response to specific stimuli, resulting in short-term variations in the arousal level. It indicates a ready state of the body for reaction and is closely related to attention, that is, enhanced sensitivity of the organism to relevant stimuli and stimuli processing, while irrelevant stimuli are filtered and not processed. Both internal (thought/metabolic processes) and external stimuli can cause arousal (Boucsein 1997).

Empirical studies emphasize the relevance of phasic arousal in marketing communication. Kroebner-Riel (1979) investigated the impact of weak, medium, and high arousal potential of advertisements on recall and attitudes towards the ad and brand. He found support for the hypothesis that highly arousing stimuli exert a positive impact on advertising efficiency. Empirical studies at the point-of-sale established that perceived arousal leads to more shopping enjoyment, more time spent for browsing and exploring, as well as to a higher probability of returning to the store and/or to the tendency to spend more money (Donovan and Rossiter 1982; Groeppel-Klein 1997; Groeppel-Klein and Baun 2001; Tai and Fung 1997; Van Kenhove and Desruemaux 1997). Thus, arousal is an important factor in predicting approach behavior. Furthermore, since consumers cannot willingly influence their arousal reactions,
it is either a valid indicator of unconscious reactions or a detection mechanism for social desirability articulation biases (Behrens and Neumaier 2004).

**Hypotheses.** To summarize, we investigate the following hypotheses in our studies:

**H1:** If a TV-commercial uses a typical fairy tale archetype, it will evoke higher phasic arousal reactions than commercials without this archetype.

**H2a:** Movies presenting typical maiden archetypes as characters will, in general, evoke higher phasic arousal and be evaluated more positively than films presenting brave, aggressive (in the sense of not merely accepting one’s fate passively) and selfish female characters.

**H2b:** However, females with high ratings on self-clarity and low ratings on romanticism will be less attracted by maiden archetypes than females with the converse personality traits.

**Measurement of Arousal**

Various verbal methods have been used to measure perceived arousal. However, the results derived from these scales are controversial and the discriminant validity has been criticized (Van Kenhove and Desrumaux 1997; Vitouch 1997). Basically, there are three reasons for these criticisms: (1) selection of inappropriate items to represent perceived arousal, (2) verbal reports require some form of cognitive evaluation of perceived arousal by the individual, who might (in a non-measurement condition) not even be aware of the arousal (thus, verbal scales can only measure conscious reactions), (3) the fact that verbal measures are made some time later than the actual experience of the situation (Groeppeleklein and Baun 2001). In contrast to these methods, psychophysiological measures such as heart rate, electroencephalogram (EEG) and Electrodermal Activity (EDA) are the most valid indicators, since deliberately influencing the test results obtained from these methods is almost impossible. In addition, EDA is generally regarded as a sensitive and valid indicator for the lower arousal range (Boucsein 1992, 263). Electrodermal Reaction1 (EDR shows phasic arousal) is recommended as an indicator for measuring arousal that is manifest in the third system of the 3-dimensional arousal model of Boucsein (1997). This so-called “preparatory activation” system basically encompasses motivational aspects of arousal. Expectations are transformed into a ready state for reaction. This part of the system interacts especially with motor and pre-motor activation of behavior, and with positive emotions (Groeppeleklein and Baun 2001). It is assumed to be responsible for (conscious and unconscious) approach behavior (Boucsein 1997).2 Contrary to the heart rate, EDR indicates even the very smallest psychological change (Boucsein 1992). It is thus considered the most sensitive indicator of arousal that could be relevant to behavior and can be recorded simultaneously with the perception of a stimulus. Due to these advantages, we employed EDR as indicator.3 Two EDR parameters are of particular relevance: 1) The amplitude describes the strength of each phasic arousal reaction (Boucsein 1992; Cacioppo, Marshall-Goedell, and Gormezano 1983).4 According to Steiger (1988), the intensity of perceived arousal over a certain period of time can be received by summing all single amplitudes so as to obtain the total amplitude which is the most important phasic arousal parameter in experiments. 2) The second important parameter is the so-called “frequency” of responses, which sums all individual reactions. Each skin-conductance response demonstrates the particular attention of the individual towards an object in its environment (Steiger 1988).

**EXPERIMENTAL DESIGN**

**Study 1**

The first study was conducted in October and November 2004 in a lecture room at our university. First, students were chosen randomly and asked if they were interested in participating in an advertising experiment. Then, the participants (arranged in groups of two to four) completed a general questionnaire about their personal attitudes towards career, family and typical male/female stereotypes. Furthermore, items of the Romanticism-Classicism Index (Holbrook and Olney 1995) and statements measuring self-concept clarity and self-esteem (Campbell et al. 1996) were valued on 5-point-rating scales. Before presenting six different TV-commercials and the movies, one member of the group was attached to the EDR-electrodes and asked to relax and to watch the film just as in a cinema or at home. In contrast to all other commercials, only the third used an archetypal myth- the story takes place in a typical enchanted “fairy tale castle”. The prince wants to rescue and wake up Sleeping Beauty, but all kissing attempts fail. Only the flavor of a cookie (“Prinzenrolle”) works, so that Sleeping Beauty is finally enraptured by her rescuer. During EDR registration, markers were set on the registered data whenever a new commercial started and another when the scene from the movie began. Thus, the arousal reaction of each commercial and of the movie could be registered. After presenting the TV-commercials, half the sample (randomly chosen) was presented with the last scene of “Pretty Woman” whereas the other half watched a sequence from “Gone With The Wind”. Students were told that we wanted to arrange a typical advertising situation, in which films are normally interrupted by TV-commercials. Actually, we chose these two films, because the Cinderella-“archetype has shaped movies such as Pretty Woman” (Waters 2003), and Scarlett O’Hara (as we established through an internet search) is characterized as a “woman, who fought with her sweat and blood to keep her family’s plantation, a woman who overcame every war and obstacle” (unknown reviewer, www.target.com) and “her incredible tenacity makes her a contender” (Isaacs 2004, 4). Thus, viewing the movie was also

---

1Former expression: Galvanic skin response
2Phasic electrodermal amplitude, as measured here, can serve as an indicator of the third dimension. The second dimension, the “affect-arousal”-system, comprises primarily emotional components of arousal. The physiological outcome results in phasic cardiovascular (heart rate) and / or tonic electrodermal variations. When it comes to behavior and perception, processes within this second dimension lead to defense and negative emotions (Boucsein 1997, Groeppeleklein and Baun 2001).
3For registration purposes, we chose an exosomatic approach applying DC (0.4 V) and measuring skin conductance. The technical equipment runs with a 12-bit analog-to-digital (A / D) converter. We used two Ag / AgCl electrodes filled with a 0.5% NaCl electrode cream. Electrodes were attached to the left palm of right-handers and vice versa.
4In order to calculate amplitudes, for all studies, we chose a minimum amplitude criterion of 0.01µS, so as to exclude recording artifacts from the signal-to-voice ratio (Boucsein 1992; Venables and Christie 1980). While registering EDR, overlapping amplitudes may occur, that is, a second amplitude follows a first one, although the original baseline has not yet been reached. For our data analysis, overlapping amplitudes were evaluated, each by means of its own baseline, regardless of the recovery time of the preceding amplitude (Boucsein 1992).
part of the experiment, although participants were not aware of it and were already attached to electrodes. Afterwards, EDR-test persons were detached from the electrodes, and together with the rest of the group, completed the second part of the questionnaire, including items measuring attitude towards the ad, the brand, and the movie (reduced version of the statement-list of Edell and Burke 1987) as well as socio-demographic variables. Since attitude measurement relating to all commercials would have taken too much time and we were interested mainly in assessments of the third commercial that used a typical fairy tale archetype, we decided only to measure the ratings for this particular spot. To conceal our special interest, we arranged a kind of lottery and told the participants that by drawing lots, we wanted to randomly select which commercial had to be evaluated. However, we manipulated the lottery in such a way that the lot always drew our archetypal commercial. 59 male and 126 female test persons participated in our experiment.

Study 2

The second study was conducted in February 2005, with an improved experimental design and questionnaire similar to those of Study 1, in order to control additional influences (famous brand name, product category, actress popularity, order effects). This time, however, only female students were interviewed.3 In contrast to our first study, half the sample (randomly chosen) was exposed to the archetypal TV-commercial “Sleeping Beauty” (“Prinzessin”, see Study 1), whereas the other half was exposed to a more informational TV-commercial of “Prinzessin”, that shows a group of cooks (called the “cookie-experts”) with white coats and long chef’s hats preparing hot chocolate sauce for their delicious cookies. This experimental design was chosen in order to find out whether the archetypal TV-commercial of “Prinzessin” was really more effective than a more informational spot for the same brand. Furthermore, the water softer commercial (see Table 2) was replaced by a spot also advertising cookies (with the brand name “Hanuta”). This clip shows a female fencer fighting with one of the famous Three Musketeers. She wins and gets the “Hanuta”. This commercial was chosen for two reasons, firstly to present a female profile and secondly to show additional “sweet”-spot to examine whether arousal reactions were evoked only by this special product category. As in the first study, during EDR registration, a “marker” was set on the registered data again whenever a new commercial started and when the movie scene began. After presenting the TV-commercials, half the sample (randomly chosen) was presented with the last scene of “Pretty Woman”, whereas the other half watched a (typical) sequence from “Erin Brockovich”. In our first study, we chose the movie “Gone With the Wind”, because Scarlett O’Hara is probably one of the most prominent examples of a fearless female character. However, “Gone With The Wind” was shot before World War II and is set in the American Civil War, whereas “Pretty Woman” was produced in 1990 and features a modern “zeitgeist”. Furthermore, Julia Roberts is one of the most popular actresses in Hollywood and the arousal reaction to “Pretty Woman” might simply be due to her still-fresh charisma. Therefore, in the second study, we wanted to control a potential “Julia Roberts-artifact”, and compared “Pretty Woman” to another movie starring Julia Roberts, this time not in a “Cinderella”-role, but as “Erin Brockovich” who is characterized as “an inspirational reminder of the power of the human spirit. Her passion, tenacity and steadfast desire to fight for the rights of the underdog defied the odds” (www.erinbrockovich.com). In addition to Study 1, we used statements from the sympathy/empathy scale of Escalas and Stern (2003) to establish whether the movies evoke weaker or stronger reactions due to test persons’ different levels of identification with the characters.

After excluding the artifacts (e.g., pressure on the electrodes for details, see Boucsein 1992), we obtained 92 valid EDR data sets and 91 additional questionnaires for Study 1 and 62 valid EDR data sets and questionnaires for Study 2. There are no significant differences between the “Pretty Woman” and “Gone With The Wind” or “Erin Brockovich” samples with regard to socio-demographic variables (age, personal disposable income, study programs). However, it should be emphasized that we only presented a nine-minute key-scene from each movie in both studies. Therefore, we also controlled whether arousal reactions differ between participants who had already seen the movies and those who did not know them. There were no significant differences, neither in the experimental nor in the control groups, between the numbers of participants who had already seen the entire film (Study 1: Gone With The Wind: n=16, Pretty Woman: n=37, Study 2: Erin Brockovich: n=17, Pretty Woman: n=28) and those who only watched the sequence for the first time. The TV-commercials were all familiar to the audience.

**EMPIRICAL RESULTS**

In both studies, we first applied exploratory factor analyses to the statements measuring attitudes towards career, family, romanticism, self-concept clarity and self-esteem, as well as to the items measuring attitude towards the ad, brand, and movie. The statements load clearly on the postulated dimensions.

**Results for Hypothesis 1**

Hypothesis 1 analyzes whether a TV-commercial using a typical fairytale archetype evokes higher phasic arousal reactions than commercials without such an archetype. Therefore, in both studies, six commercials were presented to the respondents, with the intention of simulating a typical commercial-break. The first commercial served solely as an “ice-breaking-spot” to ensure that test persons had become used to and familiar with the EDR-electrodes, and was therefore excluded from further analysis. As mentioned before, only the third spot used a typical archetype (“Sleeping Beauty”, see Table 2).

**Study 1.** To investigate Hypothesis 1, we conducted a non-parametric Friedman-test (due to the small sample sizes) comparing frequency and total amplitude evoked by each of the five TV-commercials. Table 3 shows the highest ranks for the archetypal spot with regard to both frequency and total amplitude. Furthermore, we used a non-parametric Wilcoxon-test for connected samples.
to establish whether there is a significant difference between the archetypal and second ranked commercial. Again, we found a significant difference between the two spots with respect to frequency \((p=.011)\). The difference between the total amplitudes of the two best ranked spots was not significant \((p=.081)\) at a .05 level, only at a .10 level. However, our results point in the postulated direction, and we found support for Hypothesis 1, at least for the frequency.

The results of our first study confirm the high arousal potential of the archetypal spot. To emphasize the relevance of arousal, we first standardized and then recoded our metric variable “total amplitude evoked by the archetypal commercial” in a nominal-scaled variable to ensure highly-aroused \((HA=above average)\) and minimally-aroused \((LA=low level of arousal, below average)\) test persons. Consumers who were highly aroused by the archetypal commercial were significantly \((p<.05)\) more attracted by the spot than those who had a low level of arousal with respect to attitude towards the ad: entertaining spot \((M_{HA}=+.527, M_{LA}=-.287)\), attitude towards the ad: valuable spot \((M_{HA}=+.475, M_{LA}=-.133)\), intention to buy the product \((M_{HA}=+.643, M_{LA}=-.381)\), and intention to recommend the product \((M_{HA}=+.413, M_{LA}=-.312)\).

**Study 2.** In our second study, we controlled whether the brand name or the product category might be responsible for the arousal reactions. Table 4 (results of the “robust” Welch-test used because of non-homogeneous variances) shows that the archetypal spot of “Prinzenrolle” evokes a significantly higher total amplitude than the informational spot of the same brand. Furthermore, the archetypal cookie spot leads to higher arousal reaction than the competitive “Hanuta” cookie spot, at least for the comparison of total amplitudes (Table 5).

**Results for Hypothesis 2a**

Hypothesis 2a assumes different arousal responses and attitudes towards the movies “Pretty Woman”, showing typical Cinderella archetypes as characters and “Gone With The Wind” or “Erin Brockovich”, which present brave, aggressive and selfish female characters. ANOVA supports our hypothesis, at least for the comparison of total amplitudes (Table 6).

We used ANOVA to compare attitudes towards the movie. The results (Table 7) support Hypothesis 2a with respect to the question of whether the movie has touched personal desires. In Study 2, we used the sympathy/empathy scale of Escalas and Stern (2003) in order to control whether “Pretty Woman” or “Erin Brockovich” evoke high arousal because test persons identify more or less with the character. There were no significant differences between the two movies, neither for sympathy nor for empathy. Thus, the results indicate that “Pretty Woman” seems to touch on innate (unconscious?) desires.

**Results for Hypothesis 2b**

Hypothesis 2b investigates the relationship between personality types and responses towards the movie and proposes that female test persons with high ratings on self-clarity and low ratings on romanticism will be less attracted by maiden archetypes than females with the converse personality traits. This hypothesis will be investigated mainly for Study 1. In order to identify different female

---

**TABLE 2**  
CONTENT OF THE INVESTIGATED TV-COMMERCIALS IN BOTH STUDIES

<table>
<thead>
<tr>
<th>Study 1</th>
<th>Study 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 &quot;ice-breaking&quot;-spot</td>
<td>Jever (beer)</td>
</tr>
</tbody>
</table>
| 2 Calgon (water softener)  
Story: A woman has problems with her washing machine because of calcification. The technician explains and recommends a certain water softener. | Prinzenrolle (cookie): Archetypal spot  
Archetypal spot: Sleeping Beauty (50 %)  
Story: see Study 1  
Informational spot: Cookie experts (50 %)  
Story: Some cooks (called "cookie experts") with white coats and chef’s hats are preparing hot chocolate sauce for delicious cookies. |
| 3 Prinzenrolle (cookie): Archetypal spot  
Story: A prince tries to wake up Sleeping Beauty, all kissing attempts fail, only the aroma of a cookie works. Sleeping Beauty is rescued and enraptured by the gallant prince. | Prinzenrolle (cookie): Tough, fighting woman  
Hanuta (cookie): Tough, fighting woman  
Story: A female fencer fights one of the Three Musketeers. She wins and gets the cookie. |
| 4 Lycos (internet search engine)  
Story: Some dogs, dressed up as members of a jury at an ice skating competition, make fun of different web pages. | |
| 5 Jever (beer)  
Story: A man stands alone at the coastline, enjoys the landscape and sky and thinks about drinking a beer. | |
| 6 D2 (mobile phone)  
Story: In an office, two women spread a rumour and wait to see how long it takes before this message is published as 'official information' via mail and phone. | |
### TABLE 3
AROUSAL DIFFERENCES BETWEEN COMMERCIALS–STUDY 1

<table>
<thead>
<tr>
<th>EDR Parameters</th>
<th>Commercial: Brand name / product category</th>
<th>n</th>
<th>Mean (for illustration)c</th>
<th>Friedman-test</th>
<th>Wilcoxon-test (Commercial B and E)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mean Rank</td>
<td>Statistics</td>
</tr>
<tr>
<td>Frequency</td>
<td>A: Calgon / water softener</td>
<td>92</td>
<td>27.93</td>
<td></td>
<td>2.78</td>
</tr>
<tr>
<td></td>
<td>B: Prinzenrolle / cookies a</td>
<td>92</td>
<td>45.72</td>
<td></td>
<td>3.65</td>
</tr>
<tr>
<td></td>
<td>C: Lycos / search engine</td>
<td>92</td>
<td>34.20</td>
<td></td>
<td>3.13</td>
</tr>
<tr>
<td></td>
<td>D: Jever / beer</td>
<td>92</td>
<td>21.54</td>
<td></td>
<td>2.17</td>
</tr>
<tr>
<td></td>
<td>E: D2 / mobile phone</td>
<td>92</td>
<td>36.35</td>
<td></td>
<td>3.27</td>
</tr>
<tr>
<td>Total Amplitude (in η-Siemens)</td>
<td>A: Calgon / water softener</td>
<td>92</td>
<td>1397.97</td>
<td></td>
<td>2.85</td>
</tr>
<tr>
<td></td>
<td>B: Prinzenrolle / cookies a</td>
<td>92</td>
<td>2092.27</td>
<td></td>
<td>3.72</td>
</tr>
<tr>
<td></td>
<td>C: Lycos / search engine</td>
<td>92</td>
<td>1769.12</td>
<td></td>
<td>2.96</td>
</tr>
<tr>
<td></td>
<td>D: Jever / beer</td>
<td>92</td>
<td>1126.94</td>
<td></td>
<td>2.22</td>
</tr>
<tr>
<td></td>
<td>E: D2 / mobile phone</td>
<td>92</td>
<td>2060.91</td>
<td></td>
<td>3.26</td>
</tr>
</tbody>
</table>

a Commercial B was the archetypal one;  
b based on positive ranks  
c Since Friedman-Test is based on mean ranks, the means are used only to depict the distribution of answers.

### TABLE 4
AROUSAL DIFFERENCES: ARCHETYPAL VS. INFORMATIONAL SPOT–STUDY 2

<table>
<thead>
<tr>
<th>EDR Parameters</th>
<th>Pairs of TV-commercials</th>
<th>n</th>
<th>Mean</th>
<th>Homogeneity of Variances</th>
<th>ANOVA</th>
<th>Welch-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Levene-Statistic</td>
<td>F</td>
<td>Asympt. F</td>
</tr>
<tr>
<td>Frequency</td>
<td>Sleeping Beauty: archetypal</td>
<td>32</td>
<td>38.44</td>
<td>11.852</td>
<td>.001</td>
<td>3.651</td>
</tr>
<tr>
<td></td>
<td>Cookie-experts: informational</td>
<td>30</td>
<td>21.23</td>
<td></td>
<td></td>
<td>3.816</td>
</tr>
<tr>
<td>Total Amplitude (in η-Siemens)</td>
<td>Sleeping Beauty: archetypal</td>
<td>32</td>
<td>1921.94</td>
<td>10.247</td>
<td>.002</td>
<td>4.527</td>
</tr>
<tr>
<td></td>
<td>Cookie-experts: informational</td>
<td>30</td>
<td>987.40</td>
<td></td>
<td></td>
<td>4.757</td>
</tr>
</tbody>
</table>

### TABLE 5
AROUSAL DIFFERENCES: RESCUED VS. BRAVE WOMAN–STUDY 2

<table>
<thead>
<tr>
<th>EDR Parameters</th>
<th>Pairs of TV-commercials</th>
<th>n</th>
<th>Mean (for illustration)</th>
<th>Friedman-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mean Rank</td>
<td>Chi-Square</td>
</tr>
<tr>
<td>Frequency</td>
<td>Prinzenrolle: “Sleeping Beauty”</td>
<td>32</td>
<td>38.44</td>
<td>1.64</td>
</tr>
<tr>
<td></td>
<td>Hanuta: “Brave Woman”</td>
<td>32</td>
<td>31.44</td>
<td>1.36</td>
</tr>
<tr>
<td>Total Amplitude (in η-Siemens)</td>
<td>Prinzenrolle: “Sleeping Beauty”</td>
<td>32</td>
<td>1921.94</td>
<td>1.72</td>
</tr>
<tr>
<td></td>
<td>Hanuta: “Brave Woman”</td>
<td>32</td>
<td>1585.31</td>
<td>1.28</td>
</tr>
</tbody>
</table>
personality types (and derive our independent variable), a two-stage clustering-approach was conducted. The Elbow-Criterion (Timm 2002) of a prior Ward’s hierarchical cluster method with squared Euclidean distances indicates a three cluster-solution. The final cluster solution was conducted with Quick Cluster. The final cluster centroids are shown in Table 8.

According to the results of our cluster analysis, female test participants can be segmented into three groups. Women in the first segment are characterized by romanticism (they enjoy daydreaming and believe in love at first sight). They want to be protected by their future husband and yearn for a life without worries. Although they are quite self-confident, they still have an unclear self-concept. This segment will be referred to as “optimistic daydreamers”. The second group considers it important to believe in facts rather than dreams, and always to keep a cool head. They have a clear self-concept and high self-esteem. Thus, they will be described as “cool...
self-made women”. The third cluster has an extreme negative score on “high self-esteem”. These women perceive themselves as failures and have no self-confidence at all. They are neither energetic nor career-oriented, nor do they have any optimistic daydreams as to how they could change their lives. However, they too, want to be protected in life. This cluster will be called “students with low self-confidence”. With respect to Hypothesis 2b, we are mainly interested in comparing the first and second clusters, because they can be differentiated by opposing values on self-clarity and romanticism.

Due to the small sample sizes (< 30) within the subgroups, we used a nonparametric Kruskal-Wallis-test. With respect to the archetypal commercial both, total amplitude and frequency differ significantly between the groups (Table 9). However, the results of the arousal responses with respect to “Pretty Woman” yielded no significant differences between the three clusters. Unfortunately, there were too few test persons to compare the arousal effects of “Gone With The Wind” between the three clusters.

Thus, we found only partial support for Hypothesis 2b that female characters with high ratings on self-clarity and low ratings...
TABLE 10
DIFFERENCES IN A_{AD} AND A_{BR} BETWEEN PERSONALITY TYPES

<table>
<thead>
<tr>
<th>Factors</th>
<th>Personality types</th>
<th>n</th>
<th>Mean (z-standardized)</th>
<th>F-value</th>
<th>Sign. (all groups)</th>
<th>Sign. 1-2</th>
<th>Sign. 1-3</th>
<th>Sign. 2-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude towards the archetypal ad: Relevance</td>
<td>1) optimistic daydreamers 38</td>
<td>.483</td>
<td>3.394</td>
<td>.037</td>
<td>.028</td>
<td>.025</td>
<td>.895</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2) cool self-made-women 41</td>
<td>-.052</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3) students with low self-confidence 35</td>
<td>-.084</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude towards the brand: Relevance</td>
<td>1) optimistic daydreamer 37</td>
<td>.333</td>
<td>3.139</td>
<td>.047</td>
<td>.027</td>
<td>.037</td>
<td>.992</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2) cool self-made-women 43</td>
<td>-.122</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3) students with low self-confidence 35</td>
<td>-.120</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TABLE 11
DIFFERENCES IN A_{MOVIE} BETWEEN PERSONALITY GROUPS

<table>
<thead>
<tr>
<th>Factors</th>
<th>Personality types</th>
<th>n</th>
<th>Mean (for illustration)</th>
<th>Kruskal-Wallis-H-tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude towards the movie (archetypal, Pretty Woman)</td>
<td>1) optimistic daydreamer 21</td>
<td>.757</td>
<td>9.241</td>
<td>.010</td>
</tr>
<tr>
<td></td>
<td>2) cool self-made women 24</td>
<td>.209</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3) students with low self-confidence 16</td>
<td>-.109</td>
<td>3.086</td>
<td>.214</td>
</tr>
<tr>
<td>Attitude towards the movie (non-archetypal, GWTW)</td>
<td>1) optimistic daydreamer 19</td>
<td>-.188</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2) cool self-made women 21</td>
<td>.103</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3) students with low self-confidence 19</td>
<td>-.622</td>
<td>3.086</td>
<td>.214</td>
</tr>
</tbody>
</table>

on romanticism (self-made women) are less activated by maiden archetypes than females with opposite personality traits (daydreamers). Does this mean that even “cool-headed women” cannot avoid being unconsciously affected by the “Pretty Woman” story? Or do these students have both a well-developed anima and animus?

We also measured “conscious” responses to test Hypothesis 2b. ANOVA revealed significant differences between the groups with respect to assessing the commercial’s perceived relevance and the relevance of the brand. Post-hoc-tests revealed that these results are caused mainly by differences between the optimistic daydreamers and the cool self-made women. No significant differences could be found for other attitude dimensions. Thus, we again found partial support for Hypothesis 2b with respect to the archetypal commercial (Table 10).

To test the influence of cluster membership on the attitude towards the movie, we used a nonparametric Kruskal-Wallis-test. The results (see Table 11) show that optimistic daydreamers have a significantly more positive attitude towards the movie than members of the other two groups ($p=.010$). Here, we also found support for Hypothesis 2b. Among those subjects who watched the “Gone With The Wind” sequence (which, in contrast to the Cinderella archetype, shows an independent woman), the cool self-made women sympathized more with the movie than members of the other two groups. However, this difference is not significant ($p=.214$).

Due to the small sample size for Study 2, we did not conduct a segmentation analysis. However, we found a moderate, but still significant positive correlation (Pearson coefficient) between high ratings on romanticism and a positive evaluation of the archetypal commercial of “Prinzentröle” ($p=.038$, $r=.362$, $n=32$). Furthermore, we found a positive correlation between self-esteem and liking “Pretty Woman” ($p=.008$, $r=.461$, $n=32$).
Consistency of the Results

To investigate the consistency of our results, we analyzed the correlation (Pearson coefficient) between frequency and total amplitude of the archetypal commercial and the arousal parameters of the archetypal movie “Pretty Woman”. Due to the small sample size of Study 2, this is only relevant for Study 1. The correlations are high and significant ($p<.000$, $n=35$, $r_{\text{frequency}}=.761$, $r_{\text{total amplitude}}=.735$). Furthermore, the average figures for total amplitude and frequency evoked by the movie “Pretty Woman” are nearly identical in both studies, which further indicates the validity of the used measurement procedure. Reliability was tested by controlling a possible influence of the date and the different interviewers. There was no significant influence on the dependent variables (arousal, attitudes).

SUMMARY AND DISCUSSION

Summarizing the essence of our empirical studies, it is evident that fairy tale archetypes, as investigated here, have a positive impact on consumer arousal reactions and conscious evaluations of commercials and movies. EDR-measurement cannot be influenced deliberately. Study 2 shows that the archetypal commercial (“Sleeping Beauty”) produced a higher total amplitude than the informational spot of the same brand. Furthermore, the commercial that presents a story about a tough and successful female fighter evoked lower arousal reactions than the “Sleeping Beauty” commercial. Thus, arousal is not only evoked simply by a strong brand name or an appealing product category. The results also show that even cool-headed, emancipated women (Study 1) or female test persons with high-self esteem (Study 2) could be attracted by romance and cannot avoid the appeal of Cinderella-stories like “Pretty Woman”. However, mainly women with high scores on romanticism and low scores on self-clarity are fascinated by archetypes in TV-commercials.

In Study 1, we found no gender differences with respect to the effects of the commercials and the movies. This might indicate that men can identify with the hero, and women with the rescued maiden. However, since our sample was quite small, more research is needed on this topic.

Some limitations should be mentioned here with reference to our empirical results. Firstly, our findings are based on relatively small sample sizes. This is due mainly to the intricate EDA measurement process. Each recorded curve needs to be screened manually for measurement artifacts. Furthermore, our study was conducted only with students. Thus, it should be replicated with men and women from all age and income groups. Furthermore, we did not measure familiarity with the brand. Instead, we can assume that brand familiarity is stronger for German students than for participants from other countries who also participated in the study. Since there are no significant differences between German and foreign students with regard to the arousal parameters and attitude towards the ad, we can assume that brand familiarity does not influence arousal and attitude towards the ad. Unfortunately, in these studies we were not able to control for a “Richard Gere” artifact in our “Pretty Woman” sample. It might be that some of our female students were attracted to the movie because of the male actor.

A further interesting and significant question for further studies could be to compare an archetypal commercial with an emotional, but not archetypal one for the same brand to measure differences in arousal. Last but not least, it would also be useful to investigate our archetypes from a qualitative research perspective and to combine and compare the qualitative and quantitative results.

REFERENCES


Cited websites:
www.erbrockovich.com
www.target.com