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Celebrity worship, addiction and criminality

LORRAINE SHERIDAN, ADRIAN NORTH, JOHN MALTBY, & RAPHAEL GILLETT

University of Leicester, Leicester, UK

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Abstract
Two studies assessed the relationship between celebrity worship and (i) addiction ($n = 1359$) and (ii) criminality ($n = 2158$). Overall Celebrity Attitude Scale (CAS) scores correlated positively with Eysenck Personality Questionnaire – Revised (EPQ-R) Addiction and Criminality sub-scale scores. In further support of the absorption–addiction model of celebrity worship (McCutcheon, Lange, & Houran, 2002, Conceptualization and measurement of celebrity worship. *British Journal of Psychology*, *93*, 67–87), addiction correlated positively with one component of celebrity worship, and criminality correlated positively with all four components produced by the current work. Different types of celebrity worship were associated with preferences for celebrities from particular domains. For instance, those scoring highly on the "Deleterious Imitation" component favoured music celebrities, as opposed to political figures. It was concluded that pathological celebrity worshippers are seeking a personal identity and are drawn to particular celebrities. Imitating these celebrities can have negative consequences for the worshipper.

Keywords: *Celebrity, addiction, criminality*

Introduction

The concept of celebrity worship is not only a topic of media interest, but is now a focus of psychological investigation. The current work provides two studies which seek to add to the small but growing literature on celebrity worship by examining first the relationship between celebrity worship and addiction, and second the relationship between celebrity worship and criminality.

The "absorption–addiction" model of celebrity worship was proposed by McCutcheon, Lange, and Houran (2002), based on responses to the Celebrity Attitude Scale (CAS). The model comprises three levels of celebrity worship, with distinct sets of attitudes and behaviours associated with each. Low levels of celebrity worship are said to have "Entertainment–Social" value and consist of attitudes and behaviours such as "My friends and I like to discuss what my favourite celebrity has done", reflecting social aspects of celebrity worship. Intermediate levels of celebrity worship are said to reflect "Intense–Personal" feelings, defined by items such as "I have frequent thoughts about my favourite celebrity, even when I don't want to". Finally, extreme levels of celebrity

Correspondence: Lorraine Sheridan, Forensic Psychology, University of Leicester, 106 New Walk, Leicester LE1 7EA, UK. E-mail: Lorraine.Sheridan@le.ac.uk

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worship—"Borderline-Pathological" levels—are said to be characterized by items including "If I were lucky enough to meet my favourite celebrity, and s/he asked me to do something illegal as a favour I would probably do it." Note also that a study by North and Hargreaves (2006), identified the existence of a fourth factor within the CAS, namely "Deleterious Imitation" in which participants express willingness to copy the licentious actions of their favourite celebrity.

McCutcheon et al. (2002) speculated that an introverted nature and lack of meaningful relationships among celebrity worshippers "facilitate psychological absorption in an attempt to establish an identity and a sense of fulfilment. We further propose that the dynamics of the motivational forces driving this absorption resemble those of addiction." (p. 81). Absorption is conceptualized as an effortless focusing of total attention, in this case focused on a favourite celebrity. This leads to a heightened sense of reality, which in turn is said to feed erroneous beliefs that the celebrity worshipper and the focus of his or her attention have a special connection. The worshipper may then engage in more and more extreme behaviours in order to increase his or her knowledge of and feelings of proximity to the favoured celebrity. The most extreme form of celebrity worship, as proposed by McCutcheon et al., encompasses obsessive–compulsive and even delusional aspects. For instance, the worshipper may believe that they are involved in a reciprocal, extant relationship with their favourite celebrity. The addictive element proposed by McCutcheon et al. involves increases in the thresholds of need and capacity for psychological absorption. That is, thoughts or behaviours that initially satisfied an individual's need for absorption do so no longer, prompting him or her to engage in more powerful dissociative behaviours in order to maintain a feeling of intimacy with the celebrity.

Celebrity worship is said to exist along a continuum. Maltby, Houran, and McCutcheon (2003), again employing the CAS as a measure of celebrity worship, concluded that the three "stages" of celebrity worship are related to Eysenck's three fundamental dimensions of personality (extraversion, neuroticism and psychoticism), and that these dimensions of personality may aid or impede an individual's progression along the celebrity worship continuum. More specifically, positive relationships were found between celebrity worship for Entertainment–Social reasons and extraversion, celebrity worship for Intense–Personal reasons and neuroticism, and finally celebrity worship fuelled by pathological thoughts and behaviours and psychoticism. Despite support for the absorption–addiction model of celebrity worship, to date no investigations have examined whether celebrity worship actually does contain an addictive element. Although it is unlikely that an "addictive personality" is wholly responsible for any form of addiction, the idea that personality plays at least a role in addiction remains part of several general theories of addiction (e.g. Blaszczynski, Buhrich, & McConaghy, 1985; Gossop & Eysenck, 1980).

In a telephone survey of 833 Chinese teenagers, Cheung and Yue (2003) found that "idol worship" (idols being chiefly pop music and athletics celebrities) predicted lower work or study performance, lower self-esteem and lower identity achievement in the sample. Further, teenagers who had greater exposure to the voices and images of their idols via television and radio demonstrated the lowest levels of identity achievement. This finding would appear to support the tenets of the absorption–addiction model of celebrity worship, which suggested that celebrity worshippers are attempting to establish a personal identity. Furthermore, Cheung and Yue found that teenagers who "worshipped" key family members, teachers, and other non-stars tended to demonstrate higher levels of self-esteem and educational achievement. Thus, admiration of those who could provide tangible benefits and inputs to the adolescents' lives seemed to provide greater positive impacts.

A Canadian telephone study of 75 undergraduates found that 58.7% believed their favourite celebrity had influenced their attitudes and beliefs, or had inspired them to pursue a particular activity (Boon & Lomore, 2001). These researchers were not, however, able to conclude whether these influences were largely positive or negative in nature.

Several studies indicate a relationship between celebrity worship and other indices of psychological problems. Maltby and colleagues concluded that celebrity worshippers have lower psychological well-being than non-worshippers (Maltby, McCutcheon, Ashe, & Houran, 2001; Maltby et al., 2004). In the first of these studies, data from 307 UK adults identified that scores on the Entertainment–Social subscale of the CAS accounted for unique variance in social dysfunction and depressive symptoms, while scores on the Intense–Personal subscale accounted for unique variance in depression and anxiety scores. The authors concluded that overall, celebrity worship is a behavioural representation of poor psychological well-being, resulting from failed attempts to enhance, escape or simply cope with the pressures of everyday life. Celebrity worship also appears to have a relationship with dependent and "game playing" love styles (McCutcheon, 2002), and a weak relationship with shyness and loneliness (Ashe & McCutcheon, 2001).

It is worth noting that Phillips (1974) for example found that following the suicide of Marilyn Monroe, the USA and UK together saw 363 more suicides than would be expected statistically in the month following her death (equivalent to a 12.04% rise in the USA and a 9.83% rise in the UK); and Rustad, Small, Jobes, Safer, and Peterson (2003) note that many other (although not all) studies have shown a link between suicide rates and the prevalence of suicide-related newspaper stories, television reports and fictional depictions. Recently, North and Hargreaves (2006) found that CAS scores concerning participants' favourite musicians were associated positively with whether the participant had considered self-harming. Furthermore, participants who named a rap or rock musician as their favourite had higher CAS scores, and it is interesting that numerous other studies have indicated that these same people produce more negative scores than others on various indices of delinquency and psychological well-being (see review by Christenson & Roberts, 1998). No literature exists concerning a possible link between celebrity worship and delinquency or criminality, although negative factors that have been associated with high levels of celebrity worship have also been linked with criminal behaviour. For instance, among repeat offenders, new offences can often be associated with strong negative feelings about themselves and their lives (Zamble & Quinsey, 1997). Experimental work has demonstrated that temporarily induced reductions in self-esteem are associated with higher levels of social norm violation (e.g. Aronson & Mettee, 1968). Most significant within the current context, a number of investigations have linked poor self-identity (identity diffusion) with criminal behaviour (e.g. Garrett, 1995; Leichsenring, Kunst, & Hoyer, 2003). Individuals with these psychological vulnerabilities may be drawn towards particular celebrities when attempting to establish a personal identity. In doing so, these same individuals may be prone to copying their idols with negative, even dangerous, consequences.

Two studies were carried out to investigate the relationship between celebrity worship and addiction, and the relationship between celebrity worship and criminality. The first investigated whether scores on the subscales of the CAS were related to Addiction Scale scores from the Eysenck Personality Questionnaire – Revised (EPQ-R), and the second investigated the relationship between CAS subscale scores and scores on the Criminality Scale (also derived from the EPQ-R). On the basis of the (scant) previous literature, it was predicted that higher levels of celebrity worship would be positively related to higher scores

on the addiction scale, and that higher levels of celebrity worship would be positively related to criminality scores. A secondary issue investigated by the present research concerned whether celebrities who derive their fame from different domains (e.g. acting, music, politics, etc.) are subject to different types of celebrity worship. One possibility, for example, is that celebrities from popular culture are subject more to Entertainment–Social celebrity worship, whereas admiration of scientists, religious leaders, and individuals from other arguably more cerebral fields are subject more to Intense–Personal celebrity worship.

Method

Participants

Respondents to Study 1 (Addiction) numbered 1359, and data from 1152 were included in the analyses. Most of the 207 excluded cases were removed on the basis of suspiciously long runs of the same response, particularly "strongly agree" responses. Also, some respondents chose unsuitable celebrities (e.g. those who died before the respondent was born) or were unable to choose a single favourite public figure. Of the final sample of 1152, 43.3% were male and 63.6% were single. Two-thirds (63.1%) described their ethnic origin as white European, whilst 13% chose "white other", 8.1% described themselves as Indian, 5.7% as Chinese/South East Asian, and 3.1% as black. More than half (57.1%) were students or were at school, and 21.2% were in professional occupations. Mean age was 24.6 years (SD = 9.8, range 12–76 years). The largest proportion (60.2%) resided in the UK, followed by 22.3% who lived in the USA, 3.6% who lived in Canada and 2.3% who resided in Australia.

Study 2 (Criminality) saw 2158 respondents, with 313 cases excluded (for the same reasons as stated above in the "Addiction" sample), leaving a final sample of 1845. Of these, 58.9% were male and 54.3% were single. Three-quarters (73.2%) selected white European as their ethnic origin, 14.7% chose "white other", 5.3% described themselves as Chinese/South East Asian, 2.5% as black and 2.1% as Indian. Half (52.3%) were students or attended school, and 30% were in professional occupations. Mean age was 26.1 years (SD = 9.7, range 12–76 years). Again, the largest proportion (61.2%) lived in the UK, followed by the USA (22.4%), Canada (4.7%) and Australia (2.5%).

Data were collected via two separate internet questionnaires. In both cases the questionnaires were publicized via the host University's web site and supplemented by two press releases, each targeted at European and North American mass media. The press releases were published approximately 4 weeks apart, and did not state the details of the research being conducted. Rather, participants were invited to offer their opinions concerning celebrities. The web server used to administer the questionnaires recorded each participant's IP address to ensure that those who had completed the Addiction questionnaire could not also complete the Criminality questionnaire.

Measures

Questionnaires were constructed specifically for the two studies, each comprising an introduction and three main sections. The first section informed respondents that the research was "researching celebrities and your attitudes towards them". Respondents were invited to answer honestly, and were assured that all answers would remain anonymous. The questionnaire also stated there were no right or wrong answers. Responses could not be submitted until participants had answered all questions. An e-mail address for one of the

researchers was provided to allow participants to obtain further information if they so desired.

Section 1 asked for each respondent's age, gender, marital status, ethnicity and occupation. No pre-set choices were provided. The next question asked participants who their favourite celebrity was. For the purposes of the research, the term "celebrity" was defined as a famous living person, or one who died during the respondent's lifetime. Participants were asked to circle one or more of the following choices, relating to the celebrity's field of expertise: Acting, Author, Artist, Medicine, Modelling, Music, News, Politics, Religion, Royalty, Radio/TV presenter, Science, Sports, Other (please describe).

Section 2 consisted of the Celebrity Attitude Scale (CAS) (McCutcheon et al., 2002). The CAS is a 34-item Likert scale where respondents are asked to indicate their attitude towards their favourite celebrity. Possible responses to all items range from 1 ("Strongly Disagree") to 5 ("Strongly Agree"). Analyses by Maltby et al. (2002) have revealed three sub-scales from 23 of the 34 items. These are: Entertainment–Social; Intense–Personal, and Borderline-Pathological (see above).

Section 3 consisted of *either* the EPQ-R Addiction Scale *or* the EPQ-R Criminality Scale. Both scales were derived from items on the Eysenck Personality Questionnaire (see Gossop & Eysenck, 1980). The 32-item Addiction Scale has been employed in a variety of contexts, and has been found to produce reliable results, including: higher scores for Icelandic juvenile offenders classed as drug or frequent alcohol users as compared to other juvenile offenders (Sigurdsson & Gudjonsson, 1996); high scores for bulimic patients who scored as highly as drug addicts (Feldman & Eysenck, 1986), higher scores for pathological gamblers than controls, with the gamblers showing a similar profile to heroin addicts (Blaszczynski et al., 1985). The 34-item Eysenck Criminality Scale (see Eysenck, 1964, 1996; Eysenck & Eysenck, 1971) measures tendency toward criminal behaviour. For instance, Mihinova (2000) found that delinquent adolescents produced higher scores on the Scale when compared with the normal population. See also recent investigations by Alexio and Norris (2000) and Levine and Jackson (2004).

Results

Favourite celebrity

Across both samples, actor Orlando Bloom was the most frequently favoured celebrity (2.5% of all responses), followed by footballer David Beckham (2.3%). In terms of celebrity type, musicians and singers were most frequently chosen (33.6%), followed by actors and actresses (31.7%) and sportspersons (9.1%). Religious leaders and news commentators were least frequently selected (0.9% and 0.1%, respectively). This breakdown closely mirrored that identified by Boon and Lomore (2001), where 33.9% of respondents chose singers or musicians and 32.3% favoured actors or actresses.

Study 1: Addiction

Overall scores on the CAS and EPQ-R Addiction Scale scores correlated positively ($r(1152) = 0.15$, $p < 0.001$). Responses to the 34 items of the CAS were subject to a principal components factor analysis. The solution, presented in Table I, revealed the presence of four components, and these explained 23.8%, 18.3%, 11.2% and 5.9% of the variance, respectively. All four components displayed strong loadings, with variables loading substantially on a sole component. Table I highlights all loadings over 0.5. The

Table I. Factor analysis of Study 1 CAS scores. All loadings over 0.5 are given in bold.

		Factor			
		1	2	3	4
1.	If I were to meet my favourite celebrity in person, he/she would already somehow know that I am his/her biggest fan, IP	**0.677**	0.260		
2.	I share with my favourite celebrity a special bond that cannot be described in words, IP	**0.689**	0.340	0.192	
3.	When something good happens to my favourite celebrity I feel like it happened to me, IP	**0.638**	0.435	0.202	0.117
4.	I would gladly die in order to save the life of my favourite celebrity	**0.542**	0.175	0.222	0.298
5.	My favourite celebrity and I have our own code so we can communicate with each other secretly (such as over the TV or special words on the radio)	**0.680**		0.129	0.174
6.	The successes of my favourite celebrity are my successes also, IP	**0.683**	0.270	0.245	0.162
7.	I consider my favourite celebrity to be my soulmate, IP	**0.657**	0.191	0.438	
8.	I have frequent thoughts about my favourite celebrity, even when I don't want to, IP	**0.541**	0.305	0.499	0.152
9.	When my favourite celebrity dies (or died) I will feel (or I felt) like dying too, IP	**0.590**	0.297	0.369	0.284
10.	When something bad happens to my favourite celebrity I feel like it happened to me, ES*	**0.670**	0.321	0.240	0.263
11.	My favourite celebrity would immediately come to my rescue if I needed help	**0.641**	0.169	0.214	0.209
12.	When my favourite celebrity fails or loses at something I feel like a failure myself, ES*	**0.641**	0.267	0.267	0.272
13.	If I walked through the door of my favourite celebrity's home without an invitation she or he would be happy to see me	**0.696**		0.243	0.152
14.	If my favourite celebrity saw me in a restaurant he/she would ask me to sit down and talk	**0.714**	0.179	0.207	0.148
15.	If my favourite celebrity found me sitting in his/her car he or she would be upset	**−0.550**			0.339
16.	If someone gave me several thousand pounds to do with as I please, I would consider spending it on a personal possession (like a napkin or paper plate) once used by my favourite celebrity, BP	**0.530**	0.189	0.489	0.141
17.	My friends and I like to discus what my favourite celebrity has done, ES	0.240	**0.674**	0.133	
18.	One of the main reasons I maintain an interest in my favourite celebrity is that doing so gives me a temporary escape from life's problems, ES	0.347	**0.529**	0.238	
19.	I enjoy watching, reading, or listening to my favourite celebrity because it means a good time, ES		**0.680**	0.178	0.195
20.	I love to talk with others who admire my favourite celebrity, ES	0.172	**0.828**		0.103
21.	Learning the life story of my favourite celebrity is a lot of fun, ES	0.194	**0.731**	0.148	
22.	It is enjoyable just to be with others who like my favourite celebrity, ES	0.264	**0.747**		
23.	I like watching and hearing about my favourite celebrity when I am in a large group of people, ES	0.121	**0.695**	0.228	
24.	Keeping up with news about my favourite celebrity is an entertaining pastime, ES	0.123	**0.698**	0.363	
25.	News about my favourite celebrity is a pleasant break from a harsh world	0.160	**0.619**	0.424	
26.	My favourite celebrity is practically perfect in every way	0.322	0.220	**0.634**	0.113
27.	To know my favourite celebrity is to love him/her	0.361	0.365	**0.623**	

Table I (*Continued*)

	Factor			
	1	2	3	4
28. It would be great if my favourite celebrity and I were locked in a room for a few days	0.175	0.223	**0.713**	
29. If my favourite celebrity endorsed a legal but possibly unsafe drug designed to make someone feel good, I would try it	0.252			**0.777**
30. If I were lucky enough to meet my favourite celebrity, and he/she asked me to do something illegal as a favour, I would probably do it, BP	0.263	0.195	0.195	**0.745**
31. I have pictures and/or souvenirs of my favourite celebrity which I always keep in exactly the same place, IP	0.479	0.407	0.404	
32. I often feel compelled to learn the personal habits of my favourite celebrity, BP	0.486	0.444	0.369	0.181
33. If my favourite celebrity was accused of committing a crime that accusation would have to be false	0.399	0.235	0.439	0.213
34. I am obsessed by details of my favourite celebrity's life, IP	0.461	0.471	0.406	
Eigenvalue	8.1	6.2	3.8	2.0
% of variance	23.8	18.3	11.2	5.9

IP, Intense–Personal; ES, Entertainment–Social; BP, Borderline-Pathological. These notations indicate which of Maltby et al.'s (2004) three components a particular item was included in.
*Labelled ES in Maltby et al. (2004), relabelled IP here.

interpretation of the first two components was consistent with the absorption–addiction model, that is, celebrity worship for Intense–Personal and Entertainment–Social reasons. The extreme left-hand column of Table I indicates the constituents of Maltby et al.'s (2004) three components. Two items labelled "Entertainment–Social" in the Maltby et al.'s work would seem to be better placed in the Intense–Personal component, where they both appear in the present study. Both are indicated by asterisks in the extreme left-hand column of Table I. Maltby et al.'s (2004) three components confirmed earlier results produced via the CAS (Maltby et al., 2002, 2003). The current work however, did not identify a Borderline-Pathological component. Rather, consistent with other research on the CAS cited earlier, a different component labelled "Deleterious Imitation' was identified. An additional, fourth factor also arose in the present data. This has been labelled "Infatuation", as its three constituent items reflect an infatuation with a favoured celebrity. In terms of scale reliability, Cronbach's alpha was 0.96 for the CAS as a whole and 0.66 for the Addiction Scale. Cronbach's alpha for the Intense–Personal component of the CAS was 0.93, and the corresponding figures for the Entertainment–Social, Infatuation, and Deleterious Imitation components were 0.92, 0.87, and 0.74, respectively. The percentage of variance explained by components, at 59.2%, is higher that Maltby et al.'s (2004) 50.03%. The Maltby et al. work was the largest non-student sample to report use of the CAS (although the "sample" section does not report the occupations of the respondents, except to say that 210 of the 372 were employed).

There was a significant positive correlation between CAS and Addiction scores ($r(1146) = 0.15$, $p < 0.001$). After the application of Bonferroni adjustments to the alpha level, Addiction Scale scores correlated significantly with just one factor: Deleterious Imitation ($r(1146) = 0.24$, $p < 0.01$).

Table II. Factor analysis of Study 2 CAS scores. All loadings over 0.5 are given in bold.

	Factor			
	1	2	3	4
1. If I were to meet my favourite celebrity in person, he/she would already somehow know that I am his/her biggest fan, IP	**0.639**	0.267	0.222	−0.129
2. I share with my favourite celebrity a special bond that cannot be described in words, IP	**0.602**	0.409	0.270	−0.028
3. When something good happens to my favourite celebrity I feel like it happened to me, IP	**0.540**	0.419	0.416	0.006
4. My favourite celebrity and I have our own code so we can communicate with each other secretly (such as over the TV or special words on the radio)	**0.706**	0.212	0.079	0.142
5. The successes of my favourite celebrity are my successes also, IP	**0.628**	0.336	0.283	0.157
6. I consider my favourite celebrity to be my soulmate, IP	**0.571**	**0.531**	0.188	0.155
7. When my favourite celebrity dies (or died) I will feel (or I felt) like dying too, IP	**0.549**	**0.506**	0.275	0.168
8. When something bad happens to my favourite celebrity I feel like it happened to me, ES*	**0.607**	0.458	0.342	0.093
9. When my favourite celebrity fails or loses at something I feel like a failure myself, ES*	**0.625**	0.378	0.281	0.207
10. If I walked through the door of my favourite celebrity's home without an invitation she or he would be happy to see me	**0.760**	0.163	0.164	0.194
11. If my favourite celebrity saw me in a restaurant he/she would ask me to sit down and talk	**0.704**	0.239	0.202	0.184
12. If my favourite celebrity found me sitting in his/her car he or she would be upset	**−0.648**	0.084	0.057	−0.025
13. If someone gave me several thousand pounds to do with as I please, I would consider spending it on a personal possession (like a napkin or paper plate) once used by my favourite celebrity, BP	**0.534**	0.403	0.196	0.233
14. My favourite celebrity would immediately come to my rescue if I needed help	**0.670**	0.281	0.179	0.170
15. I am obsessed by details of my favourite celebrity's life, IP	0.386	**0.566**	0.401	0.12
16. One of the main reasons I maintain an interest in my favourite celebrity is that doing so gives me a temporary escape from life's problems, ES	0.154	**0.545**	0.380	0.007
17. I have pictures and/or souvenirs of my favourite celebrity which I always keep in exactly the same place, IP	0.355	**0.606**	0.296	0.023
18. My favourite celebrity is practically perfect in every way	0.303	**0.624**	0.153	0.238
19. I have frequent thoughts about my favourite celebrity, even when I don't want to, IP	0.455	**0.633**	0.276	0.116
20. I often feel compelled to learn the personal habits of my favourite celebrity, BP	0.416	**0.548**	0.409	0.134
21. To know my favourite celebrity is to love him/her	0.374	**0.561**	0.288	0.192
22. It would be great if my favourite celebrity and I were locked in a room for a few days	0.117	**0.668**	0.103	0.254
23. I enjoy watching, reading, or listening to my favourite celebrity because it means a good time, ES	0.011	0.186	**0.571**	0.105
24. I love to talk with others who admire my favourite celebrity, ES	0.136	0.096	**0.791**	0.095
25. Learning the life story of my favourite celebrity is a lot of fun, ES	0.174	0.288	**0.647**	0.040
26. It is enjoyable just to be with others who like my favourite celebrity, ES	0.238	0.168	**0.734**	0.127
27. I like watching and hearing about my favourite celebrity when I am in a large group of people, ES	0.188	0.089	**0.669**	0.125

Table II (*Continued*)

	Factor			
	1	2	3	4
28. Keeping up with news about my favourite celebrity is an entertaining pastime, ES	0.137	0.364	**0.679**	0.050
29. News about my favourite celebrity is a pleasant break from a harsh world	0.115	0.498	**0.519**	0.110
30. My friends and I like to discuss what my favourite celebrity has done, ES	0.202	0.120	**0.677**	0.45
31. If my favourite celebrity endorsed a legal but possibly unsafe drug designed to make someone feel good, I would try it	0.225	0.166	0.159	**0.773**
32. If I were lucky enough to meet my favourite celebrity, and he/she asked me to do something illegal as a favour, I would probably do it, BP	0.210	0.263	0.199	**0.774**
33. I would gladly die in order to save the life of my favourite celebrity	0.498	0.424	0.158	0.187
34. If my favourite celebrity was accused of committing a crime that accusation would have to be false	0.463	0.406	0.198	0.200
Eigenvalue	7.3	5.6	5.3	1.9
% of variance	21.4	16.6	15.5	5.5

IP, Intense–Personal; ES, Entertainment–Social; BP, Borderline-Pathological. These notations indicate which of Maltby et al.'s (2004) three components a particular item was included in.
*Labelled ES in Maltby et al. (2004), relabelled IP here.

Study 2: Criminality

Overall CAS scores correlated positively with scores on the Criminality Scale ($r(1845) = 0.31$, $p < 0.001$). Again, responses to the CAS were entered into a principal components analysis, and as in Study 1, four components were identified. These each explained 21.4%, 16.6%, 15.5% and 5.5% of the variance. As before, Table II highlights loadings over 0.5 and also indicates which items formed Maltby et al.'s (2004) three CAS sub-scales. Once again, Maltby et al's Intense–Personal and Entertainment–Social components were identified, with the items indicated by asterisks appearing in the Intense–Personal component in the present work, rather than the Entertainment–Social component. The Intense–Personal components produced by both current studies are very similar, and both include one item that was in Maltby et al.'s Borderline-Pathological component. This component is absent from both the current sets of results. As in Study 1 and other work on the CAS, a Deleterious Imitation component was again identified. This component consists of just two items, but is identical over the two studies reported in the current paper. A fourth factor however, labelled "Infatuation" in Study 1, was not produced in identical form here in Study 2. The component identified here does contain the Infatuation items found in Study 1, but it also contains five more items that were scattered across Maltby et al.'s three sub-scales. This was thus labelled a "Mixed" component. Cronbach's alpha for the CAS in this study was 0.96, and 0.80 for the Criminality Scale. Cronbach's alpha for the Intense–Personal component was 0.95, 0.90 for the Entertainment–Social component, 0.76 for the Mixed component, and 0.74 for the Deleterious Imitation component.

There was a significant positive correlation between CAS and Criminality scores ($r(1843) = 0.31$, $p < 0.001$). Following the application of Bonferroni adjustments, all four components of the CAS correlated significantly with scores on the Criminality Scale. The correlation for the Intense–Personal component was $r(1843) = 0.16$, $p < 0.002$; the

Table III. Univariate results for the two MANCOVAs.

Study 1	Intense–Personal	Entertainment–Social	Deleterious Imitation	Infatuation
Acting	−0.156	0.606	0.442	1.140
Author	−0.340	0.131	−0.426	0.322
Artist	0.098	−0.511	−0.339	0.147
Modelling	−0.376	0.411	0.762	0.426
Music	−0.093	0.861	0.841	0.742
News	0.698	−0.675	0.128	−0.855
Politics	0.311	−0.211	−0.617	0.101
Religion	0.915	−0.754	0.112	0.345
Royalty	0.652	−0.756	−0.078	−0.001
Radio/TV presenter	−0.121	−0.414	−0.053	0.344
Science	−0.008	−0.166	−0.881	−0.232
Sport	0.125	0.111	0.175	−0.015
Other	−0.334	−0.318	−0.556	0.170
Humour	−0.029	0.062	−0.411	0.251
	F (13) = 2.28, p < 0.01	F (13) = 2.62, p < 0.01	F (13) = 6.38, p < 0.001	F (13) = 2.76, p < 0.01
Study 2	Intense–Personal	Entertainment–Social	Deleterious Imitation	Mixed
Acting	−0.222	0.311	0.373	−0.009
Author	−0.284	−0.460	−0.018	0.015
Artist	−0.004	−0.541	0.145	−0.110
Modelling	−0.620	0.312	0.389	−0.450
Music	−0.145	0.555	0.867	0.683
News	0.080	0.019	0.186	−0.067
Politics	0.641	−0.458	−0.376	0.080
Religion	1.012	−0.237	−0.289	−0.326
Royalty	0.156	0.489	−0.601	−0.067
Radio/TV presenter	0.022	−0.224	−0.284	0.234
Science	0.416	−0.368	−0.171	0.153
Sport	0.255	−0.102	0.182	−0.154
Other	0.206	−0.366	0.188	−0.043
Humour	−0.104	−0.470	−0.102	0.145
	F (13) = 5.12, p < 0.001	F (13) = 9.96, p < 0.001	F (13) = 10.24, p < 0.001	F (13) = 2.71, p = 0.001

correlation for the Entertainment–Social component was $r(1843) = 0.17$, $p < 0.002$; and the correlation for the Mixed component was $r(1843) = 0.11$, $p < 0.002$. As with Study 1, the strongest correlation with Criminality scores was produced by the Deleterious Imitation component ($r(1843) = 0.25$, $p < 0.002$).

Celebrity sub-types

Two MANCOVAs were carried out to investigate any differences in participants' scores on the four components identified by the principal components factor analyses as a function of the field of expertise of the nominated celebrity (e.g. music, acting, politics, etc.), controlling for participants' scores first on the Addiction Scale and then on the Criminality Scale. The results were significant in both cases: $F(52,4484) = 3.43$, $p < 0.001$ for Study 1 and $F(52,7312) = 6.90$, $p < 0.001$ for Study 2. Univariate statistics and means for each of the four components are presented in Table III.

Table III illustrates that those respondents who scored highly on the Intense–Personal component tended to favour news-related celebrities, religious leaders and royalty, rather than models, actors and musicians. Conversely, high scores on the Entertainment–Social component were associated more with a liking for actors, musicians and models. Those respondents who scored highly on the Deleterious Imitation component also tended to favour these three celebrity sub-types, as opposed to authors and scientists. These effects were similar across the two studies. The infatuation component was only found in Study 1, and was statistically linked with favouring of actors, musicians, models and religious figures.

Discussion

Both hypotheses were confirmed and it may be concluded that celebrity worship does have an addictive element and that that celebrity worship is associated with criminality. Although the correlations were not strong, they are consistent with those identified by previous research on celebrity worship and were highly significant. It is also worth noting Anderson and Bushman's (2002) comments following their meta-analysis of research on media violence and aggressive behaviour. Although the correlations were typically between only 0.10 and 0.30, the authors argued: "These effects are not trivial in magnitude. For example they are larger than the effects of calcium intake on bone mass or of lead exposure on IQ in children" (p. 2377). A similar case may be made concerning the present findings. Study 1 then, provides further support for the absorption–addiction model of celebrity worship. Conclusions relating to celebrity worship and addiction are less clear-cut however, when correlations between the Addiction Scale and sub-scales of the CAS are considered. After Bonferroni adjustments were made to the alpha level, the only factor that correlated with Addiction Scale scores was Deleterious Imitation. This factor contained just two items: "If my favourite celebrity endorsed a legal but possibly unsafe drug designed to make someone feel good, I would try it", and "If I were lucky enough to meet my favourite celebrity, and he/she asked me to do something illegal as a favour, I would probably do it". The Criminality Scale also saw the highest correlation with this factor.

Given that both items in the Deleterious Imitation factor suggest drug-taking and illegal acts, it would appear obvious that they would see the strongest associations between measures of addiction and criminality. Note also however that the associated r values for Addiction and Criminality (-0.24 and 0.25, respectively) indicate that the Deleterious Imitation component of the CAS is by no means identical to Addiction and Criminality. Furthermore, neither addiction nor criminality are simple constructs and it is likely that one or more additional factors will provide a more complete explanation of these associations. The current work speculated that liking for celebrities from particular domains would relate to different sub-types of celebrity worship and this was indeed found to be the case. In both studies, those who worshipped celebrities for Intense–Personal reasons were most likely to favour individuals related to significant world events, such as religious leaders, news reporters and royalty; while those scoring highly on the Entertainment–Social component preferred actors, musicians and models. This would suggest that the former group are seeking identification with leaders and heroes whilst the latter group are engaging with populist light entertainers and perhaps also their fans. Those participants producing high scores on the Deleterious Imitation component also preferred actors, models and musicians. The prior literature has informed that high-profile celebrity suicides are followed by increased numbers of suicides among the general population, and it would seem

reasonable to conclude that fans of more rebellious public figures may seek to emulate them with personally negative consequences.

It is clear that only limited proportions of public figures will constitute poor role models. Without deeper exploration of positive and negative role models *within* celebrity domains we cannot provide further linkage to negative, even delinquent, behaviour that may follow from imitating celebrities. The current findings have, however, provided the groundwork for close examination of these relationships, and it is predicted that the majority of poor role models would be located within the acting, modelling and musician sub-categories. It is further hypothesized that liking for certain "problematic" musical styles such as heavy metal and rap will be related to criminality and addiction. It would appear then, that in the search for a personal identity, particular fans are prone to deleteriously imitating their idols.

Another noteworthy aspect of the present data concerned differences in the factor structure of the CAS identified here and that identified by some of the early work on the CAS. One obvious source of this disparity is sampling differences. However, McCutcheon et al.'s (2002) original findings were based on responses from participants of "various educational backgrounds" in the USA (M_{age} 32.7), and Maltby et al. (2003) replicated the three subscales of the CAS (Intense–Personal, Entertainment–Social and Borderline-Pathological) in two UK groups of 317 undergraduates (M_{age} 20.4) and 290 community groups (M_{age} 34.3) convenience samples, as did Ashe and McCutcheon (2001) in a sample of 150 inhabitants of Florida, USA (M_{age} 24.6). The majority of the work that has measured celebrity worship via the CAS has employed convenience samples. The current work was rather different in that the two samples were self-selecting, having responded to media calls to complete an on-line questionnaire concerning attitudes towards celebrities (and it must be noted that this sample will not be representative of the general population and will likely demonstrate higher than usual levels celebrity worship or indeed antipathy towards celebrities). Only additional large-scale testing of the reliability and validity of the CAS will solve factor disparities. McCutcheon et al.'s (2002) conclusion that the CAS is uni-dimensional—its items demonstrating qualitative rather than quantitative differences across a celebrity worship dimension—should be borne in mind.

In conclusion, the current studies have added to the small but growing literature on celebrity worship by demonstrating that addiction and criminality are significantly associated with celebrity worship. Based on the current findings, it is not possible to propose that high levels of celebrity worship, or high scores on particular constructs of the Celebrity Attitude Scale, may predict addiction and criminality. It is more appropriate to conclude that the current findings support the absorption–addiction model of celebrity worship, which posited that pathological levels of celebrity worship reflect attempts to establish an identity. Rather than seeking positive role models or heroes, pathological worshippers are drawn to more entertaining, even anti-social, celebrities. Imitating these celebrities can have negative consequences for the worshipper. Future work should directly measure the proposed association between identity development and celebrity worship, and also examine the relationship between delinquency and preferences for particular celebrity sub-types.

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