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WHAT DETERMINES A JOURNALIST'S POPULARITY ON TWITTER? A Case Study of Behaviour and Self-Presentation¹

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ABSTRACT: Popularity on social media has become more important for journalists as news organisations increasingly encourage their journalists to develop online personas which are popular with audiences. However, outlets' social media guidelines have also narrowed journalists' scope for action to do so, particularly in what they can post. Using a quantitative analysis of Twitter data and profiles of 300 UK journalists, this study asks if the strategic use of low-level forms of behaviour as well as journalists' professional self-presentation on social media offer 'a way out'. It finds that a 'golden formula' to increase popularity on Twitter through these means does not exist and suggests that journalists' popularity on Twitter is largely beyond their immediate control, raising important questions about the significance and use of popularity metrics on social media as benchmarks in news organisations.

KEYWORDS: journalism; journalists; self-presentation; social media; popularity; Twitter

Introduction

The role of social media in shaping journalistic practices has received much attention from journalism scholars in the past decade. Twitter, in particular, has been studied intensively, owing to the platform's role as an increasingly integral part in newsrooms and many journalists' lives in technologically advanced societies (Hanusch 2018).

While research on Twitter has studied how it has redefined journalistic boundaries and traditional practices – ranging from reporting and researching, to detecting trends and allowing journalists to connect with audiences (Vis 2013; Nuernbergk 2016; Tandoc Jr. et al. 2018) – one strand of scholarship has devoted particular attention to the opportunities Twitter presents for journalists to present themselves, develop an online persona and engage in branding (Hanusch 2018; Molyneux and Holton 2015; Ottovordemgentschenfelde 2017). Developing an online persona that is popular with audiences is increasingly important as journalism is undergoing a quantitative turn (Coddington 2015). Such popularity – quantified in the metrics afforded by social media – has become a critical benchmark for journalists and news organisations alike, allowing them to make assumptions about their own performance and impact (Ferrer-Conill 2017; Stray 2012; Green-Barber 2014). Yet, what is not always clear to journalists is how their popularity online transpires, how their own behaviour and self-presentation on social media shape it and how their popularity can be increased without getting in conflict with news organisations' social media guidelines.

To address these questions, this study focuses on the professional self-presentation and four low-level forms of behaviour of a sample of 300 political journalists in the United Kingdom on Twitter in relation to their popularity on the platform. Using a quantitative analysis of Twitter data and Twitter profiles, the article explores how these factors affect journalists' popularity on Twitter and discusses the relevance of being a popular journalist on social media in an increasingly challenging media environment.

Journalistic Branding on Social Media

As part of an ongoing individualisation of journalism, journalists increasingly use social media like Twitter to build online personas and to brand themselves, often with the aim to further their careers (Molyneux and Holton 2015). Olausson (2017) has highlighted the difficulty for journalists to resist this trend, as it now constitutes a part of modern identity. Curating an online persona allows journalists to make appeals for attention and authority (Molyneux, Holton, and Lewis 2017) and to garner peer recognition and audience attention (Powers 2017). Other research indicates that branding helps journalists to achieve influence and visibility that subsequently also transfers into the offline world (Hanusch 2017, 3), thus raising their market value (Brems et al. 2017, 445). This accumulation of social capital on social media through self-branding is critical in an increasingly difficult work environment where journalists constantly have to prove that they can add value to the organisation (Hanusch 2017, Molyneux and Holton 2015).

News organisations have started to recognise the value of their journalists developing online personas, as it can strengthen the reputation of their brand and increase audience participation and

traffic coming from social media (Brems et al. 2017, Hedman 2016). Consequently, news organisations often encourage individual journalists to maintain their personal accounts to engage with audiences (Tandoc Jr. et al. 2018). Other evidence even suggests that journalists are increasingly coerced into being active on social media by their employers (Hanusch 2017; Holton and Molyneux 2017) in order to strengthen the brand. Yet, differing expectations between journalists and news organisations when it comes to branding on social media have also created tensions. Increasingly, news organisations have sought to control their staff's social media activities, developing best practice guidelines (Newman 2009, Molyneux and Mourão 2017; Hanusch 2018) to protect their own reputation from damage caused by what they see as inconsiderate or harmful behaviour (Cozma & Chen 2013; Newman 2009). Arguably, this has also limited journalists' scope for branding themselves as they wish while these guidelines also rarely specify what 'successful' branding actually entails.

Consequently, these efforts have not been without criticism from journalists. Bossio and Saccio (2016) describe how some journalists have been left disappointed by these guidelines, expressing a desire for clearer guidance on proper conduct on social media. cursory evidence from interviews with 15 journalists conducted in preparation for this study further suggests that journalists – while experiencing pressure from employers to be successful and popular on social media – miss advice on how such popularity can be achieved.¹ While social media metrics play an increasingly important role in journalists' careers, news organisations are rarely concerned with advising their staff on how to improve and expand their online presence. Instead, existing guidance (see Times 2017; NPR 2017) focuses mostly on avoiding trouble for news organisations, rather than helping journalists to find “success” and popularity on social media – leaving the latter out in the cold when it comes to achieving their employers demands.

Popularity, Self-Presentation, and Behaviour of Journalists on Twitter

As already mentioned, popularity on social media has become increasingly important for journalists, not least because the affordances of social media make it easy to measure and compare journalists' popularity through metrics such as the number of followers on Twitter. This form of 'metricated popularity' has a value which transcends the ecosystem of the platform (van Dijck 2013, 76) and matters in times when journalists have to justify themselves to 'bosses increasingly concerned with generating exposure across multiple platforms' (Molyneux, Holton, and Lewis 2017). As Ferrer-Conill suggests, 'social [popularity] metrics [...] are translated into a metricated version [and understanding] of journalistic performance' (2017, 11), allowing for judgments about journalists' success in branding themselves and promoting a news organisation through their popularity online. Arguably, such metrics are not officially used to inform hiring decisions, promotions or layoffs, but cursory evidence from journalism and other industries (Kueng, L., personal communication, 28 July 2017; Thompson 2011) suggests that they are increasingly seen as reliable benchmarks by decision makers. More and more, journalists have to negotiate between this demand for popularity and outlets' increasingly strict social media guidelines – often while lacking adequate knowledge and guidance from employers about how to be popular and what return they might expect from particular behaviour or actions they take on social media.

Given the potential implications of popularity as a benchmark, it is necessary to understand the factors upon which the popularity of journalists on Twitter hinges. While the role of the content of tweets has been studied in the past, the effect of journalists' behaviour and self-presentation on the platform has received less attention. Drawing on Goffman's theoretical framework of self-presentation (1971), Brems et al. (2017) outline how we can conceive of journalists on Twitter as actors on a stage. The profile and feed act as the front stage, where journalists “perform” for their audience – actively trying to control the impression they make. Using the concept of “imagined audiences”, Marwick and boyd (2010, 115) emphasise that this audience is not necessarily homogenous, even though it is imagined as such. Managing one's appearance on Twitter is an ongoing process and since the platform works primarily public, we can expect journalists “to construct versions of themselves that are strictly curated” (Brems et al. 2017, 456).

Empirical evidence supports the idea that popularity on Twitter is the result of specific behaviour or careful curation of the self (Quercia et al. 2011). According to Cha et al. (2010), popular

Twitter users limit their tweets to a narrowly defined area of interest while others (Romero et al. 2011; Lasorsa et al. 2012; Cozma & Chen 2013; Mueller & Stumme 2017; Baker 2017) have found that highly active users are more popular. While behaviour is one aspect which determines popularity on Twitter, the professional self-presentation of journalists is another, critical component. For one, journalists present themselves on Twitter through their tweets, retweets and likes. However, Ottovordemgentschensfelde (2016) and others (Hanusch 2018; Lough, Molyneux, and Holton 2017) have also drawn attention to the profile page of journalists as a means of professional self-presentation and branding. In a US context, Lough et al. (2017) found a normalisation of news practices in online spaces where most journalists chose to put a professional self forward, which the researchers ascribe to organisational pressures. This finding corresponds to research by Holton and Molyneux (2017) who show that employers require or encourage their journalists to portray a professional identity that does not clash with the employer's brand – often to the dislike of the journalists and despite audiences' interest in the personal side of journalists on social media (Hanusch 2018).

Research Hypotheses

Against this backdrop, the current study attempts to examine the effect of lower-level forms of behaviour as well as self-presentation on journalists' popularity. While the content of tweets is likely among the main drivers of a journalist's popularity on Twitter, there is reason to expect that more low-level forms of behaviour on Twitter (e.g. the retweet frequency or the use of audio-visual content in tweets) as well as journalists' professional self-presentation also have an effect. In the context of the increasing regulation of journalists' social media activities – parallel to a greater emphasis on journalists' social media popularity and its use as a performance metric by news organisations – this paper understands these second-tier affordances as key tools by which journalists potentially have agency over their popularity on social media without getting into conflict with news organisations' guidelines. While the content of journalists' social media posts usually falls squarely under the remit of such guidelines, the forms of behaviour and self-presentation analysed in this study predominantly sit outside of these and thus theoretically open avenues for journalists to satisfy growing demands for a strong social media performance without having to worry about inflicting harm on their employer's reputation.

This study identifies and analyses four such types of behaviour in addition to journalists' self-presentation in their profiles. Firstly, journalists are often advised to make use of multimedia content to increase their popularity on Twitter (BBC Academy n.d.; Journalism.co.uk 2016). Multimedia content, it is claimed, 'grabs the eye' of audiences, in turn leading to higher popularity of the journalist. Accordingly we hypothesise that:

H1: There is a positive relationship between the use of media content in original tweets and popularity.

Another key activity of journalists on Twitter is to provide information, often by linking to articles or other resources. While 'linking' is a routine behaviour and has been shown to increase the 'retweetability' of a tweet (Suh et al. 2010), extant research is ambiguous about its effect on popularity. For example, in their study on foreign correspondents, Cozma & Chen (2013) observe that excessive linking can have a negative effect on a journalist's popularity. To understand if this relationship holds true, we hypothesise that:

H2: There is a negative relationship between the use of links and popularity.

Past scholarship (Ruhela et al. 2016; Cozma & Chen 2012) has further found that popular users tweet more than they retweet, by a factor of 60:40, while for less popular users this ratio is nearly inverse (Ruhela et al. 2016, 225). As an explanation, it has been suggested that audiences prefer original content and dislike retweets, especially when the retweeted content seems to be random (Kwak et al. 2011, 1098). Research by Cha et al. (2010) further indicates that users who

retweet too much are seen as 'spammers' by their followers (2010, 16). Consequently, we hypothesise that:

H3: There is a negative relationship between the number retweets and popularity.

Journalists often use hashtags to chip into larger conversations and reach a wider audience. In general, existing research has found a positive relationship between the use of hashtags in tweets and popularity (Martín et al. 2016). However, excessive use seems to have a negative effect. Tweets with too many hashtags seem to become too broad to be popular (Baker 2017), are seen as annoying (André et al. 2012) or even as 'spamming' (Baker 2017; Mittelstädt 2014). To understand if this applies to journalists, we develop our fourth hypothesis:

H4: There is a negative relationship between the number of hashtags used and popularity.

Audiences value more direct forms of interaction with journalists on social media (Jahng & Littau 2016; Hedman 2016). Maintaining personal engagement on Twitter can signal an appreciation of news consumers and their opinion, an interest in transparency, credibility, and journalistic accountability (ibid., 2016) and an understanding of journalism as a reciprocal 'discussion', rather than one-way, top-down broadcasting (Lewis et al. 2012). Hence we develop two related hypotheses:

H5a: There is a positive relationship between a more conversational use of Twitter and popularity.

H5b: There is a positive relationship between including more people in conversations on Twitter and popularity.

Eventually, Twitter is also the playing field for the presentation of a journalist's professional identity. Appearing the right way is difficult but crucial for their popularity (Sacco and Bossio 2017; Ottovordemgentschensfelde 2016), as the profiles helps other users to evaluate a journalist's status and to decide whether to follow or engage with them. Following Broddason's (1994) assertion that a more professional appearance of a journalist is often associated with notions of quality, credibility, and ethical behaviour, we hypothesise:

H6: There is a positive relationship between the professionalism of a profile and popularity.

Methodology

I. Data Sources and Sampling

To analyse these hypotheses, this study focuses on a sample of journalists working in the political news and politics section of news media in the United Kingdom. Political journalists were chosen for several reasons. First, nearly every outlet employs journalists covering politics, either on a regional or national/international level (or both), which ensures comparability. Moreover, politics is a topic of broad general interest. This made it more likely that journalists would have at least some measurable popularity, if they were on Twitter. Lastly, politics is a comparably clear-cut category, which is easier to define than other journalistic beats, such as 'culture' or 'living'.

What counts as a journalist is difficult to define, not least because 'journalist' is not a legally protected occupational job title in the United Kingdom. For the purpose of this study, a journalist was defined as someone associated with an organisation on a permanent basis. Freelancers were not included in the sample, as they are harder to identify and often do not appear in staff directories or Twitter lists. Also not included were foreign correspondents. Based on methods recommended by Sehl et al. (2017) and Lawrence et al. (2013), journalists were sampled from a total of 28 media outlets to achieve a satisfactory and representative cross-section of the British media landscape (see appendix).

The final sample comprised of 300 journalists. 77 were women (25.66%) and 223 men (74.33%). 109 worked for a national newspaper (36.33), 18 for a regional newspaper (6%), 138 for a national broadcaster (46%), 20 for a weekly magazine (6.66%) and 15 for a digital-born outlet (5%).

The oldest Twitter account was set up in 2007, while the youngest accounts were set up in 2015. The median and average Twitter uptake was around 2009.

II. Operationalising Popularity on Twitter

Popularity is a slippery concept and difficult to define. For the purposes of this study four key measures were identified. First, popularity is measured through the number of followers (Garcia et al. 2017, 8; Kwak et al. 2010, Cha et al. 2010; Querica et al. 2011). In public, the follower number is often seen as a barometer for popularity (van Dijck 2013, 76), as it 'indicates the size of [her] audience', with more followers signifying greater popularity (Cha et al. 2010, 12).

A second measure is the retweet or social influence of a user (Garcia et al. 2017, 8; Cha et al. 2010) which 'captures the power of a user to spread information across Twitter as a manifestation of immediate social influence, i.e. the activity of other users in terms of retweets' (Garcia et al. 2017, 8). Calculated as the average amount of retweets received by each original tweet of a user, it indicates the ability of a user to generate content which is interesting for others (Webberley et al. 2013) and has 'pass-along value' (Cha et al. 2010, 12).

A third measure is the favourite influence of a user, that is the average amount of 'favourites' received per tweet. While the significance of retweets has been relatively well studied, little research exists on the meaning of 'favourites' on Twitter. In this study, in line with findings by Kwak et al. (2011) and Gorrell and Bontcheva (2016), favourite influence is defined as the ability of a user to create popular content.

A fourth measure for popularity is the ratio between followers and following. Here, a larger coefficient denotes stronger popularity, as it means that a user follows very few people but receives a lot of attention from other users. Previous research has identified this measure as a reliable way of detecting popular users on Twitter (Querica et al. 2011; González-Bailón et al. 2013; Majó-Vázquez 2017).

III. Data Collection

Similar to the method used by Lawrence et al. (2013), the last 3200 tweets and related metrics were downloaded for every journalist in the sample by using the Twitter Rest API (Application Programming Interface). In a second step, the sample was limited to the all tweets appearing in a period between the 20th of April 2017 and the 15th of June 2017 inclusive, to ensure that the recorded data would cover all journalists in the sample. In total, 150,376 tweets were collected from 300 journalists for the respective period. During the sampling period no major platform changes occurred which could have affected the results.

IV. Variable Determination

The position of a journalist (national or regional) as well as their gender were manually added as binary variables during the sampling. Furthermore, the 'years active' on Twitter and the reach of the outlet were added, the latter by using ComScore data for the online reach of the respective outlets' websites.

To categorise the level of professionalism of a journalist's profile, a quantitative content analysis and a quantitative visual content analysis were conducted. Screenshots of the profile pages of all accounts in Twitter (known as the 'Twitter bio') were captured, annotated and archived, creating a dataset of 300 profiles. A coding scheme for the categorisation of the profile pages was developed a priori to the coding process, based on the scheme used by Ottovordemgentschensfelde (2016) in her study of political journalists' self-presentation on Twitter in the US and informed by comparable studies by Hanusch and Bruns (2017), Olausson (2017) and Sacco and Bossio (2017). The resulting codebook allowed coders to categorise the profile pages as either 'professional', 'semi-professional', or 'personal/non-professional'.

Each profile page was manually and independently coded and categorised by three coders (the author and two volunteering graduate students). The codebook was discussed in-depth with coders in advance and coders were trained on test data in order to overcome misunderstandings and

subjectivity. Percentage agreement and Krippendorff's α were used to measure intercoder reliability. The reliability of each profile's categorisation was estimated on the basis of 900 (300 x 3) independent decisions in the coding process.

On average, percentage agreement reached a value of 0.91 while Krippendorff's α was 0.898 on average. In 26 cases one of the coders disagreed, but there was no case in which all coders disagreed. According to Krippendorff, the coefficient should be $\alpha \geq 0.800$ for valid conclusions (2004: 241). Given a coefficient of 0.898, the coding can be seen as reliable. In cases where one of the coders disagreed, the result of the agreeing coders was used. 154 journalists (52.2%) were categorised as having a professional, 128 (43.3%) a semi-professional, and 13 (4.40%) a personal profile. For the subsequent analysis, the resulting coding scheme was transformed into two dummy variables, 'Professional' and 'Semi-Professional', with 'Personal/Private' acting as the general default against which any difference was measured.

V. Data Analysis

To address the main analytical questions of this study, four multiple linear regression models were built, which addressed the relationship between several types of behaviour and self-presentation on Twitter (independent variables, IVs) and the four popularity measures identified earlier (dependent variables, DVs), as well as a variety of other potential confounding variables. The dependent variables acting as proxies for popularity in this study were a) the absolute number of followers (Followers Count), b) the average amount of retweets received per original tweet of a journalist during the studied date range (Retweet Count), c) the average amount of 'favourites' received per original tweet during the date range (Favourite Count), and d) the ratio between followers and following (Foll./Following).

The key independent variables in this study were:

1. the professionalism of the profile (Professional and Semi-Professional),
2. the percentage of tweets with media files of all original tweets, that is how many of a journalist's tweets during the date range contained images, videos or GIFs (Media Files-pct.),
3. the percentage of tweets with links of all original tweets, that is how many of a journalist's tweets during the date range linked to information (Links-pct.),
4. the average number of hashtags per original tweet (Hashtags),
5. the percentage of retweets of all tweets, that is how often a journalist retweeted something (Retweet-pct.),
6. the percentage of mentions of all original tweets, that is how often a journalist engaged in conversations on Twitter (Mentions-pct.), and
7. the average number of users mentioned (replied to) in tweets which are mentions (Average users mentioned).

To control for confounding factors which could moderate effects, several control variables were introduced. The first, 'Years active' accounts for the number of years an account has existed. Someone who has been longer on Twitter is likely to have amassed more followers over time, which also affects other popularity measures. 'Following', the number of users a journalist follows, is a plausible criterion for other users when evaluating whether or not to follow the journalist (which then also affects favourite and retweet numbers). The tweet frequency during the study period (Tweet freq.) was introduced as an additional control, as previous research (Romero et al., 2011; Lasorsa et al., 2012; Cozma & Chen, 2013; Mueller & Stumme, 2017; Baker, 2017: 154) indicates that users who tweet more are more popular. As the UK's general election and several major political events fell within the study period, it is possible that journalists' tweeted more than usual, a factor that was accounted for by introducing the additional control 'Total tweet freq.' as a variable, that is the total number of tweets sent since the account creation. Further controls included whether the journalist worked as a national or regional journalist (National/Regional), the gender of the journalist (Gender) and the reach of the outlet the journalist was working for (Outlet reach).

Selected variables were log transformed to ensure that they followed a normal distribution and thus would meet the assumptions of inferential statistics. IVs were tested for multicollinearity, with the results indicating that there was no collinearity between variables. Furthermore, to account for the error term having a different variance across values, heteroskedasticity-consistent standard errors were used in the regression models.

Regression Results

Table 1 presents a descriptive profile of the journalists in the sample as of July 2017.

Variable	Description	Observations	Mean	Std. Dev.	Min.	Max.
<i>Followers Count</i>	Number of followers	295	41,105.22	128,268.6	123	1,219,717
<i>Following</i>	Number of accounts a journalist follows	295	1432.32	1448.69	22	12,009
<i>Favourites Count</i>	Average number of favourites per tweet during date range	295	32.96	114.14	0	1365.28
<i>Retweets Count</i>	Average number of retweets per tweet during date range	295	21.53	73.01	0	975.53
<i>Media Files-pct.</i>	Percentage of tweets during sent the date range which contained images, videos or GIFs [in an interval from 0 to 1]	295	0.14	0.14	0	1
<i>Links-pct.</i>	Percentage of tweets sent during the date range which contained links [in an interval from 0 to 1]	295	0.32	0.22	0	1
<i>Hashtags</i>	Average number of hashtags per tweet during the studied date range	295	0.23	0.29	0	2.01
<i>Average users mentioned</i>	Average number of other users mentioned (replied to) in tweets which are mentions	295	0.71	0.45	0	2.71
<i>Mentions-pct.</i>	Percentage of tweets sent during the date range which are mentions [in an interval from 0 to 1]	295	0.46	0.23	0	1
<i>Retweets-pct.</i>	Percentage of retweets of all tweets sent by a journalist during the studied date range [in an interval from 0 to 1]	295	0.35	0.23	0	0.98
<i>Tweet freq.</i>	Number of tweets in study period	295	509.74	631.52	2	3225
<i>Total tweet freq.</i>	Number of tweets since account creation	295	13,042.57	18,754.85	60	161,358
<i>Years active</i>	Number of years active on Twitter	295	7.15	1.32	2	10

Table 1 – Descriptive Statistics of the sample of journalists

In order to test the hypotheses, four multiple linear regression models were estimated. Table 2 reports unstandardised correlation coefficients (B), significance levels, and standard errors (SE B). Table 3 reports standardised correlation coefficients (β) and significance levels.

Regression Results	Model I	Model II	Model III	Model IV
Variable	<i>Followers Count (log)</i>	<i>Favourites Count (log)</i>	<i>Retweets Count (log)</i>	<i>Foll./Following (log)</i>
<i>Media Files-pct. (log)</i>	-1.667** (0.606)	0.253 (0.589)	0.337 (0.540)	-2.457** (0.807)
<i>Links-pct. (log)</i>	-0.157 (0.415)	-0.800 (0.422)	-0.776 (0.404)	-0.569 (0.620)
<i>Retweet-pct. (log)</i>	-0.934* (0.429)	-0.670 (0.405)	-0.646 (0.366)	-1.384* (0.688)
<i>Hashtags (log)</i>	-1.055** (0.318)	-0.829** (0.292)	-0.786** (0.268)	-1.121* (0.432)
<i>Mentions-pct. (log)</i>	-2.601* (1.185)	-1.418 (1.067)	-1.544 (0.972)	-2.953 (1.586)
<i>Average users mentioned (log)</i>	1.811* (0.718)	0.611 (0.644)	0.471 (0.604)	1.494 (0.906)
<i>Professional</i>	0.601 (0.557)	0.115 (0.435)	0.379 (0.403)	0.997 (0.613)
<i>Semi-Professional</i>	0.020 (0.547)	0.028 (0.424)	0.241 (0.393)	0.323 (0.589)
<i>Tweet freq. (log)</i>	0.216** (0.081)	0.315*** (0.075)	0.336*** (0.069)	0.037 (0.098)
<i>Total tweet freq. (log)</i>	0.514*** (0.096)	0.175 (0.093)	0.105 (0.086)	0.265* (0.126)
<i>Outlet reach (log)</i>	0.058 (0.052)	0.058 (0.047)	0.040 (0.046)	0.057 (0.069)
<i>Following (log)</i>	-0.266* (0.103)	-0.283** (0.098)	-0.212* (0.087)	
<i>National/Regional (log)</i>	0.853*** (0.145)	0.643*** (0.141)	0.560*** (0.130)	0.847*** (0.189)
<i>Years active</i>	0.135* (0.055)	0.061 (0.052)	0.076 (0.047)	-0.007 (0.077)
<i>Gender</i>	-0.086 (0.144)	-0.084 (0.127)	-0.219 (0.121)	-0.379* (0.190)
No. of Observations	295	295	295	295
Adjusted R²	0.521	0.322	0.343	0.264

Table 2 – Linear models of the relationship between Twitter behaviour and self-presentation and four measures of popularity (unstandardised coefficients). Cell entries are final model unstandardised coefficients (B). The standard error for the unstandardised beta (SE B) is reported in brackets.

* $p < 0,05$; ** $p < 0,01$; *** $p < 0,001$

Regression Results	Model I	Model II	Model III	Model IV
Variable	<i>Followers Count (log)</i>	<i>Favourites Count (log)</i>	<i>Retweets Count (log)</i>	<i>Foll./Following (log)</i>
<i>Media Files-pct. (log)</i>	-0.116**	0.022	0.030	-0.163**
<i>Links-pct. (log)</i>	-0.015	-0.097	-0.099	-0.052
<i>Retweet-pct. (log)</i>	-0.917*	-0.082	-0.083	-0.129*
<i>Hashtags (log)</i>	-0.129**	-0.127**	-0.126**	-0.131*
<i>Mentions-pct. (log)</i>	-0.249*	-0.170	-0.194	-0.268
<i>Average users mentioned (log)</i>	0.271*	0.114	0.924	0.212
<i>Professional</i>	0.178	0.042	0.147	0.281
<i>Semi-Professional</i>	0.005	0.010	0.092	0.090
<i>Tweet freq. (log)</i>	0.193**	0.354***	0.395***	0.031
<i>Total tweet freq. (log)</i>	0.400***	0.170	0.106	0.196*
<i>Outlet reach (log)</i>	0.052	0.066	0.047	0.049
<i>Following (log)</i>	-0.144*	-0.191**	-0.150*	
<i>National/Regional (log)</i>	0.216***	0.204***	0.186***	0.204***
<i>Years active</i>	0.106*	0.060	0.078	-0.005
<i>Gender</i>	-0.022	-0.027	-0.074	-0.093*
No. of Observations	295	295	295	295
Adjusted R²	0.521	0.322	0.343	0.264

Table 3 – Linear models of the relationship between Twitter behaviour and self-presentation and four measures of popularity (standardised coefficients). Cell entries are final model standardised coefficients (β).

* $p < 0,05$; ** $p < 0,01$; *** $p < 0,001$

The first model (see table two) is a simple linear regression looking at the relationship between different forms of behaviour and self-presentation on Twitter and the follower number.

Gender and the outlet have no significant influence on follower number. However, the latter could be due to the method used, which is not ideal to quantify reach. In contrast, both the years active on Twitter, the tweet frequency during the studied date range, as well as the overall tweet frequency have a significant, positive effect on the number of followers. Perhaps unsurprisingly, a journalist who has been on the platform for a longer time and who engages more with an audience by tweeting more, is also more popular in terms of the number of followers. Equally, we find a highly significant positive relationship between the position of a journalist (national or regional) and her number of followers. Journalists who work on the national level have on average 85 percent more followers than regional journalists. Finally, for every 10 percent increase in the number of users a journalist follows, we can observe a 2.6 percent decrease in the number of followers he or she has—a plausible finding, given that potential followers often take into account the number of users someone follows before deciding to follow them themselves, with a higher number of followees seen as making a user less attractive to follow (Hutto et al., 2013).

Holding other variables constant, we can observe a significant and negative relationship between the number of mentions ('mentions-pct') and the follower number. We can roughly expect a 26 percent decrease in the number of followers for every 10 percent increase in mentions a journalist sends ($B = -2.601$; $p < 0.05$). However, the opposite is the case when it comes to the number of people replied to in a mention. Here we find an 18 percent increase in the number of followers for every 10 percent increase in the number of people replied to ($B = 1.811$; $p < 0.05$). For the number of hashtags used in original tweets, and the number of retweets a journalist sends on average, we can observe a similar, statistically significant but negative correlation. For every 10 percent increase in the number of hashtags used in tweets we can observe a 10 percent decrease in the number of followers ($B = -1.005$; $p < 0.01$). Similarly, for every 10 percent increase in the number of retweets a journalist sends, we can see a nearly 10 percent decrease in the number of followers ($B = -0.934$; $p < 0.05$). The relationship between the use of links and the number of followers is insignificant, however, we can observe a significantly negative relationship between the use of media files and the number of

followers. For every 10 percent increase in the use of media files in tweets, we can detect a 16 percent decrease in the number of followers ($B = -1.667$; $p < 0.01$). Finally, the regression suggests that neither a professional nor a semi-professional profile seem to be significantly related to the number of followers a journalist has on Twitter.

The second model is again a linear regression looking at the relationship between the same set of variables and the average number of favourites a journalist receives per tweet. The control variables remained the same, however the total tweet frequency and the years active no longer have a significant effect on the number of favourites received.

In predicting the number of favourites, holding all other variables constant, we can observe only one statistically significant relationship: the number of hashtags used in original tweets. Again, as in model one, it is negatively correlated with the dependent variable. For every 10 percent increase in hashtags used per tweet, we can observe a 8 percent decrease in the number of favourites a journalist receives on her tweets ($B = -0.829$; $p < 0.01$). We find that more hashtags per tweet have a negative effect on a journalist's popularity, or in this case, on the popularity of her tweets (H4).

The third model looks at the relationship between behaviour and self-presentation and the average number of retweets a journalist receives per original tweet (see table 2). Journalists who work on the national level are getting retweeted 56 percent more than their regional counterparts, while journalists who follow more users are getting two percent less retweets. Holding all other variables constant, we can observe only one significant relationship: between the number of hashtags used in original tweets and the number of retweets a journalist receives. For every 10 percent increase in the number of hashtags, a journalists' tweets get retweeted 8 percent less ($B = -0.786$; $p < 0.01$). As postulated by H4, it could be confirmed that more hashtags per tweet have a negative effect on a journalist's popularity, or in this case, on the popularity of her tweets.

Finally, the fourth model looks at the relationship between the independent variables and the ratio of followers to followees, with a higher ratio value in the dependent variable denoting higher popularity and vice versa. Here, again, we can observe a statistically significant relationship between the position of a journalist and her popularity. A journalist who works on the national level has a roughly 84 percent higher Follower/Friends ratio value, hence he or she is more popular ($B = 0.847$; $p < 0.001$). As in model one, we can further observe a relationship between the overall number of tweets a journalist sends and popularity, with every 10 percent increase in the number of tweets sent resulting in a two percent higher ratio ($B = 0.265$; $p < 0.05$). Interestingly, we can also observe a negative relationship between the gender of a journalist and popularity. Female journalists have on average a 38 percent lower ratio, hence, they are less popular than their male counterparts ($B = -0.379$; $p < 0.05$).

Holding all other variables constant we can, as in model 1, observe a statistically significant relationship between the number of retweets a journalist sends and her popularity. For every 10 percent increase in the number of retweets a journalist sends, we can observe a 14 percent lower ratio ($B = -1.384$; $p < 0.05$). A similar relationship can be observed for the number of hashtags used, with more hashtags being related to lower popularity ($B = -1.121$; $p < 0.05$). Finally, we find a strong relationship between the use of media files and a journalist's popularity. For every 10 percent increase in the amount of tweets with media content, we can observe a 25 percent lower Follower/Following ratio ($B = -2.457$; $p < 0.01$). Popularity does not increase through the use of media files (H1). However, the results confirm the hypotheses that more retweets (H3) and more hashtags per tweet (H4) have a negative effect on a journalist's popularity.

Discussion

Most of the factors that underlie journalists' popularity on Twitter are still under-researched. This study contributes to answering these questions by examining the extent to which different forms of low-level behaviour as well as their self-presentation influence journalists' popularity on Twitter. The models explain between 26% and 52% of the variance in the data, which is sufficient given that the content of tweets—a main driver of popularity—was not tested for.

The Effect of Media Content and Linking to Content

It was assumed that journalists who regularly include media files in their tweets would be more popular. However, this hypothesis could not be confirmed. Instead, for two popularity measures (the number of followers and Followers/Following ratio) it was found that the use of media files has a significant negative effect on popularity. One explanation could be that users who follow journalists are more interested in original content, opinion, and witty comments in tweets (Ruhela et al. 2016; Lasorsa et al. 2012), and less in journalists who mainly provide visual content. Another explanation is a moderating effect of a journalist's position on the relationship, with journalists who are not yet popular on Twitter posting disproportionately more media files in hopes of becoming more popular, whereas very popular journalists do not exhibit the same kind of behaviour, in which case a positive relationship could be concealed.

Another assumption of this study was that linking to content would have a negative effect on a journalist's popularity. While the hypothesis could not be confirmed as the found relationships remained insignificant in all models, the coefficients consistently showed a negative trend.

The Use of Retweets and Hashtags

Two assumptions of this study that could be confirmed in all models were the relationship between the percentage of retweets sent, as well as the number of hashtags used, and popularity. In both cases it was hypothesised that a higher percentage/number would negatively affect popularity, a finding that proved consistent in the quantitative analysis. As for the negative effect of too many retweets, one explanation could be that users are more interested in journalists who provide original content instead of 'second-hand information'.

One explanation for the negative effect of hashtags is a lack of specificity, as pointed out in research by Baker (2017). While hashtags generally broaden the audience of a tweet, heavily 'hashtagged' tweets are often seen as too unspecific. Thus, respective journalists and their tweets are more likely to be ignored by other users, who prefer to follow users with a tight focus on a single topic (Cha et al. 2010). Another explanation could be that many hashtags make a tweet harder to read, which is likely to annoy users. There is also the possibility that journalists who 'hashtag' too much are seen as desperate for attention and consequently more likely to be shunned.

Interacting with Audiences

A somewhat unclear picture emerges for the direct engagement of journalists with their audience on Twitter. The regressions seem to suggest that journalists who engage more with their audience are less popular in terms of number of followers, while at the same time interacting with more users makes them more popular. However, existing research (Hedman 2016; Jahng & Littau 2016) suggest the opposite, with higher engagement generally making a journalist more popular, as it is seen as a sign of transparency and interest in the audience. One possible explanation is that we again observe a moderating effect: less popular journalists are able to interact more with their audiences, while a popular journalist cannot engage in the same kind of behaviour as a large audience makes communicating with individual followers very time-consuming and hence less desirable. It is conceivable that one effect overlaps the other.

Self-presentation and Professionalism of the Twitter Profile

Finally, while it was assumed that the professionalism of a profile would have an effect on a journalist's popularity, no such relationship could be found. However, the coding of the profiles – a majority of journalists in the sample had a professional or semi-professional profile – confirms research by Lough et al. (2017), Holton and Molyneux (2017) who observed an increasing professionalisation of journalists' online personas, as well as research by and Hanusch (2018) who observed that UK journalists focus on a corporate identity due to market pressures. Further research should try to understand audiences' attitude towards varying levels of professionalism of a journalist's

self-presentation. It should also enquire into the effect of having a verified account, which is seen by many users as a form of distinction and has, so far, received little academic attention.

Limitations and Avenues for Further Research

The present study is not without limitations. The content of tweets, a main driver of popularity, was not taken into account. Second, using online reach as a control is not an ideal measure of an outlet's popularity. Third, the 'public exposure' and productivity of the journalists could not be measured within the limits of this study, factors which likely affect a journalist's popularity. Fourth, future research should discuss if the current status of a journalist leads to different effects. It is possible that the studied forms of behaviour have a greater effect for a journalist who is not yet popular, while they yield less of an effect for a journalist who is very popular on Twitter. Likewise, it is possible that journalists with different popularity levels exhibit different behaviours, which could affect results.

Conclusion

The growing importance of social media as a conduit to the public, as well as increasing job insecurity, has encouraged journalists to create their own online personas (Brems et al. 2017). News organisations have also recognised the value of such branding and increasingly coerce their staff into being active online (Hanusch 2017; Holton and Molyneux 2017), as popular journalists help to promote their brand. At the same time, however, journalists are increasingly required to abide by outlets' guidelines which not only limit their scope to act freely on social media, but also often lack guidance on how popularity – despite it being an implicit demand by employers – can be achieved.

This paper contributes to extant scholarship in several ways. Acknowledging the tension between increasing regulation of journalists' social media activities and demands for success on social media such as Twitter, it has asked if the use of more low-level forms behaviour as well as professional self-presentation might offer journalists 'a way out'. While the content of tweets generally falls under news organisations' guidelines, a journalist's self-presentation and how they make use of a platform's other affordances is – at least in the UK – usually not policed and thus offers a potential remedy. Yet, the findings suggest that journalists' ability to influence their popularity on Twitter through the studied second-tier affordances – for instance, the use of media files or hashtags – is fairly limited. Similarly, the professionalism of a profile seems to make no discernible difference to their popularity.

Secondly, the findings throw outlets' emphasis on popularity on social media as a benchmark of journalists' performance and value into sharp relief. Ferrer-Conill (2017) has described how popularity on social media often is another factor by which journalists' performance can be evaluated and while Twitter metrics are not officially used to inform hiring decisions or promotions, they can play an implicit role for executives in news organisations (Kueng, L., personal communication, 28 July 2017). This study, however, has shown that these metrics cannot be relied on, with the evidence suggesting that popularity on Twitter is contingent upon factors which are largely beyond a journalist's immediate control.

It is in this context, that yet another area of tension opens up. If we consider the organisation's perspective for a moment, one could argue that the question of how a journalist achieves his or her popularity on social media not necessarily needs to trouble the respective outlets, even if they – explicitly or implicitly – demand popularity from their staff. Popular journalists are valuable for an organisation whether or not that popularity stems from their journalistic efforts on the job or if it derives from other factors. One could argue that while it might then be unfair for journalists that outlets put an emphasis on their online popularity or even use it as a metric of performance – in particular for those who, despite good performance offline fail to attract attention online – it ultimately serves the organisation's purposes. In other words, how or why a journalist gets popular, whether this process is shaped by existing inequalities and other factors beyond a journalist's control, and thus, if an emphasis on such metrics is just, does not have to interest an outlet, as long as the outcome – a few very popular journalists attracting attention to the outlet – is achieved.

With this in mind, future research should study how journalists themselves perceive increasing pressures from peers (Molyneux, Holton, and Lewis 2017) and the industry to be popular on social media, as well as how they navigate the regulations imposed on them when it comes to improving their standing on platforms such as Twitter. Given the findings of this paper, the focus on social media popularity metrics as a benchmark in journalism is a questionable practice, potentially harming those journalists who fail to 'make it online'. How, and to what extent, they will be used to estimate a journalist's worth will be an important area of future study.

NOTES

1. The journalists were drawn from the sample of political journalists used in this study.

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APPENDIX

Sample of outlets

Outlet	Type	Online Reach in % (ComScore, Jan 2017)
BBC	Public service media organisation	26.55
ITV	Commercial TV	2.49
Channel 4	Public service media organisation	0.20
Channel 5	Commercial TV	N/A
Sky	Commercial TV	3.72
The Sun	Tabloid newspaper	8.40
The Daily Mail	Mid-market newspaper	18.68
Daily Mirror	Tabloid newspaper	10.20
The Telegraph	Up-market newspaper	15.41
The Times	Up-market newspaper	2.08
Daily Star	Tabloid newspaper	3.47
Daily Express	Mid-market newspaper	8.12
The i	Mid-market newspaper	0.50
Financial Times	Business newspaper	N/A
The Guardian	Up-market newspaper	17.09
Daily Record	Tabloid newspaper	1.52
London Evening Standard	Regional newspaper	4.40
Metro	Regional newspaper	4.90
Express & Star	Regional newspaper	0.63
Press & Journal	Regional newspaper	0.26
Manchester Evening News	Regional newspaper	2.26
Liverpool Echo	Regional newspaper	1.60
BuzzFeed UK	Digital-born, international	4.27
The Independent	Digital-born, international	3.11
The Independent	Digital-only, domestic	9.80
The Economist	Weekly	1.06
The Week	Weekly	0.79
The Spectator	Weekly	0.81

The criteria for selecting the media outlets were as follows:

- The 17 national and regional newspapers (broadsheets and tabloids) with the highest print circulation. (Press Gazette 2017a, 2017b).
- 3 magazines based on their print circulation (Press Gazette 2017c; Newman et al. 2016).
- 5 broadcasters (public service and commercial) based on their reach for TV news (Ofcom 2017; Newman et al. 2016).
- 3 digital born news websites (domestic and/or international) with the highest reach based on ComScore data for reach in January 2017.

The final sample of journalists from the list of selected news media was obtained by drawing on a combination of six resources:

- Each media outlets website and directories of their political news staff (if existent).
- Emails which were sent to every selected news organisation's press office with a request for a list of names of their staff currently covering politics.
- News organisation's institutional Twitter profiles which often contain so-called 'Twitter lists' of political journalism staff members and their respective Twitter accounts.
- The users followed by respective news organisation's Twitter accounts.
- The independent online database MuckRack which compiles digital directories of journalists and can be searched for medium, topic and country.
- The last 50 articles posted in the section 'Politics' on the respective outlet's website at the time of sampling, as 50 articles usually cover a large enough period that all journalists appear at least once.

The sampling rationale itself then followed four pre-defined criteria:

First, each journalist had to work for one of the selected media in the United Kingdom. Each journalist had to be a full-time employee. All journalists had to specialise in the genre of politics or political news, as ascertained by a combination of the above described sources and recurring authorship of political articles (e.g. interviews, reports, features) or news items (e.g. TV report, interview). Journalists had to have an active and public Twitter account and a minimum of activity (at least 50 tweets in the last year) to ensure comparability and to have a reasonable amount of data for the analysis. Only journalists with a Twitter account satisfying these criteria were included in the sample.

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