

**Job Seekers' Attitudes Toward Cybervetting in China: Platform Comparisons and Relationships with Social Media Posting Habits and Individual Differences**

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**Abstract**

Cybervetting, or reviewing applicants' social media profiles, has become a central part of the hiring process for many organizations. Yet, extant cybervetting research is largely limited to Western platforms and samples. The present study examines the three core elements of attitudes toward cybervetting (ATC - perceived justice, privacy invasion, and face validity) using a sample of 200 Chinese job seekers providing their views on three popular platforms in China (WeChat, QQ, and Weibo). Attitudes were negative across all platforms, although slightly more positive for WeChat. ATC were associated with job seekers' social media posting habits (e.g., posting positive content more frequently) and individual differences (i.e., gender and extraversion). Organizations should be mindful that cybervetting might impede the recruitment of talents.

**Keywords:** Cybervetting, Social media, China, WeChat, QQ, Weibo

**Practitioners points:**

- We examined the Attitudes Toward Cybervetting (perceived justice, privacy invasion, and face validity) of Chinese job seekers
- Attitudes were generally negative across platforms, but more positive for WeChat than QQ or Weib
- Attitudes were more positive for job seekers who post content more frequently on social media
- Attitudes were more negative for women, but more positive for more extraverted individuals

## **Job Seekers' Attitudes Toward Cybervetting in China: Platform Comparisons and Relationships with Social Media Posting Habits and Individual Differences**

Over the last decade, organizations have started to review applicants' social media profiles as part of the hiring process, because they include information about their education, skills, work experiences, personality, and values that could be used to assess fit with the job requirements or organizational culture (Jeske & Shultz, 2019; Roulin & Bangerter, 2013). Roth et al. (2016) presented an agenda for cybervetting research focusing on better understanding (1) how organizations acquire and use information from social media, (2) the psychometric properties of social media assessments, (3) potential risks and biases (e.g., adverse impact against minority groups), and (4) applicant reactions to cybervetting. Researchers have started to accumulate empirical evidence for all four components. For instance, employers tend to focus largely on collecting negative information about applicants when cybervetting and use it to judge their job suitability (Hartwell & Campion, 2020; Tews et al., 2020). The validity of social media assessments appears somewhat limited, although it might depend on the platform used (Roulin & Levashina, 2019; Van Iddekinge et al., 2016). Such assessments can be prone to bias and adverse impact (Zhang et al., 2020). And, reactions to cybervetting are largely negative, although they vary depending on the platform used (Cook et al., 2020; Stoughton et al., 2015).

Most of the accumulated evidence comes from North America and (to a lesser extent) Western Europe, and might not generalize to other regions. In contrast, research on cybervetting in Asia, and in China specifically, is scarce. This is surprising for several reasons: Chinese social media platforms like WeChat (1.26 billion monthly active users), QQ (574 million), or Sina Weibo (573 million) rank amongst the Top-10 most popular platforms worldwide (Statista, 2022). Asia is the fastest-growing region for social media use (driven by India and China; Dean,

2021). A 2012 survey showed that although only 28% of Chinese employers were already cybervetting, more than 80% of respondents believed it would become an important hiring method in the future (Liao & Zhou, 2021). Overall, a large number of Chinese job seekers thus could be cyber-vetted every day, but we know very little about their attitudes or reactions toward such practices. This is unfortunate, because job seekers' attitudes or reactions can influence their views of the hiring organization or the likelihood of accepting a job offer (Bowen et al., 2021; McCarthy et al., 2017).

The present study contributes to the emerging literature on cybervetting in the following important ways: First, Cook et al. (2020) recently developed and validated a measure of job seekers' attitudes towards cybervetting (i.e., ATC), and examined such attitudes using four North-American social media platforms. We translate that measure into Chinese and examine its psychometric properties (i.e., reliability, factor structure, and measurement invariance) using data from Chinese job seekers. Second, we compare their ATC for three of the most popular social media platforms in China, namely WeChat, QQ, and Weibo. Third, cybervetting might represent a way for organizations and applicants to exchange reliable signals of fit (Roulin & Bangerter, 2013). However, research on employers' cybervetting approaches and applicants' reactions to them has been largely disconnected. We bring together these two research streams. Namely, we build on work highlighting that social media content can be viewed positively or negatively by prospective employers (Hartwell & Campion, 2020), and examine if job seekers' ATC is associated with how frequently they post such positive and negative content. Finally, expanding recent initial efforts to examine individual differences associated with social media use (e.g., Bowden-Green et al., 2020) or views of cybervetting (e.g., Gruzd et al., 2020), we

explore whether gender, extraversion, and history of social media usage are associated with Chinese job seekers' ATC.

### **Chinese Social Media Platforms**

In this study, we examine three of the most popular social media platforms in China: WeChat, QQ, and Weibo (see Chen et al., 2018 for a detailed overview). WeChat (also known as Weixin) is the most popular communication platform in the country. It includes not only a social media element (i.e., WeChat *Moments*), which can be used to share status updates, pictures, or videos, but also options for video calls, text messaging, or money transfers. WeChat is a “mega-platform”, which is somewhat similar to Facebook. QQ is a second large platform, which started as an instant-messaging app, but grew as another “mega platform”. It includes the *Qzone* social media feature, allowing users to share comments, pictures, and music (thus working somewhat like the now defunct platform Myspace), but also emailing, gaming, or money transfer services. Finally, Sina Weibo is a micro-blogging platform (like Twitter), where people can share their views, updates, etc. See our Online Supplement for more details about each platform.

### **Job Seekers' Attitudes Towards Cybervetting (ATC) in China**

Job seekers are generally familiar with organizations evaluating their qualifications for a job or their fit with a company's culture using traditional screening and selection methods, such as resumes or employment interviews, and thus tend to react positively to such procedures (Anderson et al., 2010). In contrast, cybervetting involves organizations accessing job seekers' social media profiles, and collecting and analyzing information that was not originally designed to be used for employment purposes (Roulin & Bangerter, 2013). For instance, one might post comments about the news, share photos of their weekend activities, or react to friends' posts, unaware that employers might use that information to assess job suitability (Tews et al., 2020).

Initial work examining reactions to cybervetting emphasized that such practices were seen as innovative (Folger et al., 2021), but also perceived as invading job seekers' privacy (Jeske & Shultz, 2019) and unfair (i.e., low on procedural justice; Stoughton et al., 2015). Cook et al. (2020) developed and validated a scale capturing three central elements of ATC: perceived justice (i.e., how fair it is for employers to cybervet social media profiles), perceived privacy invasion (i.e., how comfortable vs. concerned one is with cybervetting practices), and face validity (i.e., whether cybervetting is seen as an accurate way to assess qualifications or job suitability). They provided evidence for a stable 3-factor structure across four Western social media platforms (i.e., Facebook, Instagram, Twitter, and LinkedIn), demonstrated construct validity, and showed that North American job seekers' ATC were largely negative.

Cybervetting research has generally distinguished personal from professional platforms. For instance, Hartwell and Campion (2020) argued that individuals' posts on personal platforms like Facebook are largely unconstrained and might include a wide variety of information about personal activities and preferences, whereas posts on professional platforms, like LinkedIn, are focused on professional information. They further suggested that professional platforms should elicit more positive reactions from job seekers, because they are created to share professional content. Cook et al. (2020) confirmed that ATC were more positive for LinkedIn than all three personal platforms they examined. LinkedIn was never very popular in China, and ceased its activity there in 2021. WeChat, QQ, and Weibo are all personal social media, and should thus elicit relatively similar attitudes. However, the way these platforms are set up slightly differs (Chen et al., 2018). WeChat Moments is designed to have posts only visible to *friends* (i.e., individuals identified as personal connections and allowed to interact with the user) or specific groups of *friends*. Although QQ's Qzone offers various privacy settings, it gives users the option

to make their profile and posts publicly visible. Because QQ is also meant to be customizable and focused on entertainment, such profiles might also include more personal information. And, Sina Weibo is designed as a public micro-blogging platform, where posts (i.e., equivalent to *tweets*) are visible to everyone. The more strict and controlled privacy settings of WeChat make it easier for users to manage their online image, by controlling who can interact with them (e.g., comment on their posts). They can also control access to their profile, whereas Weibo and – to a less extent – QQ users could be unaware that their profile or online activities are being cyber-vetted. This should lead to slightly more positive attitudes:

*Hypothesis 1:* Chinese job seekers' attitudes towards cybervetting are more positive for WeChat than for QQ or Weibo.

### **Social Media Posting Habits, Individual Differences, and ATC**

Job seekers' ATC are likely related to their personal social media posting habits. Employers use social media as a way to assess potential fit between a job seeker and their organization (Roulin & Bangerter, 2013). And, there is evidence that job seekers can adapt their behaviors when made aware of employers' cybervetting practices (Roulin, 2014). Similarly, positive or negative attitudes toward cybervetting might be associated with posting habits viewed positively or negatively by employers. For instance, posting information that supports one's job qualifications or information and comments about family, leisure, or sporting events are viewed positively or neutrally by hiring managers (Hartwell & Campion, 2020). As such, job seekers who mostly post such positive (or neutral) content might not be particularly concerned about what organizations can find on their profiles. They should thus view cybervetting more positively (i.e., as more fair and valid, but less privacy invading). In contrast, posting negative comments about race, gender, or religion, disparaging a current or former employer, or posting

content that contradicts one's job qualifications are viewed negatively (i.e., as *red flags*) by hiring managers (Hartwell & Campion, 2020). Job seekers posting more negative content might realize that it could hurt their chances of securing employment if organizations engage in cybervetting. A such:

*Hypothesis 2:* ATC are more positive for job seekers who post (a) positive content more frequently, but (b) negative content less frequently, on social media.

Finally, research to date has largely failed to find stable individual differences associated with ATC. Age, gender, ethnicity, education, or work experience are not related to ATC (Cook et al., 2020) or the perceived justice of digital selection methods (Folger et al., 2021). Attitudes toward cybervetting do not differ between individuals actively looking for jobs and those who are not (Gruzd et al., 2020). And, agreeableness is not directly related to perceived procedural justice or privacy invasion (Stoughton et al., 2015).

Although gender was unrelated to ATC in prior research, this is surprising given established gender differences in privacy concerns on social media. For instance, meta-analytical evidence shows that female users are more likely to activate privacy settings, *untag* photos, and be concerned about privacy than male users (Tifferet, 2019). Moreover, traditional gender roles and gender inequality are more persistent in China than North America. Chinese women are less likely to be assertive, confident, and to take control of their careers (Yi et al., 2015). Women are often the targets of verbal misogyny on Chinese social media (e.g., the term “biǎo” or “slut” is used regularly on Weibo; Jing-Schmidt & Peng, 2018). And, they are the target of employment discrimination (e.g., nearly 40% of job ads directly excluding women; Woodhams et al., 2009). All this should make female Chinese job seekers particularly concerned about cybervetting.

*Hypothesis 3:* ATC are more negative for female than male Chinese job seekers



More extraverted individuals perceive social media platforms more positively and are more engaged on social media (e.g., spend more time online, post new content or comment on others' content more frequently; Bowden-Green et al., 2020). Two key components of extraversion are positive social self-esteem and a high level of comfort in social contexts (Lee & Ashton, 2018), which could lead to being more comfortable with being cyber-vetted.

*Hypothesis 4:* ATC are positively associated with job seekers' level of extraversion

Evidence about the relationships between ATC and job seekers' history of social media use is also limited. Cook et al. (2020) found that Facebook addiction was only positively related to the perceived justice element of ATC. But no research has explored whether job seekers' ATC is associated with the number of years they have been active on social media or intensity of use (i.e., hours per week spent on social media).

*Research Question:* Are ATC related to job seekers' history and intensity of social media use?

## Methods

### Sample and Procedure

We recruited 258 participants with the help of the Credamo online panel services (<https://www.credamo.com/>).<sup>1</sup> All participants were (a) Mainland China residents, (b) currently enrolled as university students, (c) graduating from their program within the next year (and thus looking for a job - or about to), and (d) a registered user of all three social media platforms (WeChat, QQ, and Weibo). Fifty-eight respondents were eliminated because they failed one of more of the three attention checks embedded in the survey (e.g., "please select 5 for this

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<sup>1</sup> Credamo works similarly to Prolific or Qualtrics Panels. It has been very popular for research relying on Chinese samples. Research using data recruiting with Credamo has been published in top-tier journals in psychology and management (see a full list of recent publications here: [https://help.credamo.world/web/#/4?page\\_id=118](https://help.credamo.world/web/#/4?page_id=118)).

question"), leading to a final sample of  $N=200$ . The sample was 40% male and 60% female, with a mean age of 22.4 ( $SD = 1.9$ ). Most participants were enrolled in a Bachelor's degree (80.5%, with 17% Master's and 2.5% PhD). All participants applied for at least one job in the last year ( $M = 6.1$  jobs,  $SD = 9.1$ ) and were looking for jobs in a variety of industries. A majority (59%) of participants had a part-time, contract, or casual job, were working on average 16.9 hours per week ( $SD = 19.5$ ). Participants had been using (Chinese) social media platforms for 8.5 years ( $SD = 3.2$ ), and spent 18.2 hours per week on social media ( $SD = 17.5$ ).

After reading an informed content form, participants completed a 10-minute survey including all measures in Chinese: their attitudes towards cybervetting and frequency of posting various types of content for each of the three platforms (the survey referred specifically to WeChat Moments, QQ's Qzone, and Sina Weibo), a measure of extraversion, and demographic information. Participants were compensated ¥14 (Chinese Yuan) via Credamo.

## Measures

*Attitudes towards cybervetting.* The ATC scale (Cook et al., 2020) includes measures of perceived justice (6 items), perceived invasion of privacy (5 items), face validity (3 items), with responses provided on a 5-point Likert scale (strongly disagree to strongly agree). We translated the measure into Chinese, using a back-translation approach (Brislin, 1970). A bilingual co-author first translated the 14 ATC items from English to Chinese. Two bilingual research assistants independently translated the items back to English. The back-translated versions were compared to one another (and were largely identical), as well as to the original version (to confirm that meaning and intent were equivalents). Minor edits were made to arrive to the final Chinese version (see Online Supplement). Participants completed the Chinese ATC scale for the

three social media platforms (WeChat, QQ, Weibo). Reliabilities ( $\alpha$ ) ranged from .76 to .87 (see Supplementary Table 1 in our Online Supplement for detailed reliabilities for all measures).

*Social media posting habits.* We created two measures to capture how frequently participants posted “positive” and “negative” content on social media. All items were derived from Hartwell and Campion (2020), who reported how positively or negatively various types of social media content influenced hiring managers' perceptions of job applicants. Positive content included 5 items (information about family; comments about sporting events; positive comments made about the participants by others; information supporting participants' job qualifications like skills, abilities, or experiences; and work achievements). Negative content included 7 items (negative comments about race, gender, or religion; alcohol use; profanity; sexual references; criticizing your current/former employer; negative comments made about the participants by others; and information that contradicts the participants' job qualifications). Participants were asked to rate how frequently they included each type of information for each of the three social media platforms, using a 1 (never) to 5 (always) scale. Reliabilities ( $\alpha$ ) ranged from .70 to .82.<sup>2</sup>

*Extraversion.* We used the 16-item ( $\alpha = .88$ ) measure of Extraversion from the Chinese version of the HEXACO-PI-R (Lee & Ashton, 2018), for which there is evidence for measurement (i.e., configural and metric) invariance across 16 languages, including Chinese (Thielmann et al., 2020). An example item was “I enjoy having lots of people around to talk with”. All responses were provided on a 5-point Likert scale (strongly disagree to strongly agree).

## Results

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<sup>2</sup> Confirmatory factor analysis results showed that the 2-factor structure did fit the data moderately-well to very-well for all three platforms: WeChat ( $\chi^2/df=2.15$ , RMSEA=.08, CFI=.91), QQ ( $\chi^2/df=1.53$ , RMSEA=.05, CFI=.96), and Weibo ( $\chi^2/df=2.83$ , RMSEA=.09, CFI=.88). In all cases, a 2-factor structure outperformed a 1-factor structure.

Our online Supplement provides information about descriptive statistics, internal consistency reliabilities, and correlations among study variables, as well as evidence for a 3-factor structure and measurement invariance for the Chinese ATC measure, across the three social media platforms (WeChat, QQ, and Weibo).

### **Comparing ATC Across Chinese Social Media Platforms**

We examined differences in attitudes towards the three cybervetting factors across the three platforms using repeated-measure ANOVAs<sup>3</sup>. We found a significant difference for perceived justice,  $F(2, 198) = 18.92, p < .001, \eta_p^2 = .09$ . Cybervetting was perceived as slightly fairer for WeChat ( $M = 2.69, SD = .70$ ) than QQ ( $M = 2.54, SD = .78$ ) or Weibo ( $M = 2.50, SD = .83$ ). Pairwise comparisons (with Bonferroni adjustments) demonstrated that both the WeChat-QQ ( $p < .001$ ) and WeChat-Weibo ( $p < .001$ ) differences were significant, but the QQ-Weibo was not ( $p = .80$ ). Similarly, we found a significant difference for face validity,  $F(2, 198) = 5.80, p = .004, \eta_p^2 = .06$ . Cybervetting was viewed as more face-valid for WeChat ( $M = 2.76, SD = .93$ ) than QQ ( $M = 2.65, SD = .97$ ) or Weibo ( $M = 2.60, SD = .99$ ). Pairwise comparisons again demonstrated that both the WeChat-QQ ( $p = .04$ ) and WeChat-Weibo ( $p = .03$ ) differences were significant, but the QQ-Weibo was not ( $p = .77$ ). We found no difference between the platforms for perceived privacy invasion,  $F(2, 198) = 1.53, p = .22, \eta_p^2 = .01$ : WeChat ( $M = 3.49, SD = .76$ ), QQ ( $M = 3.53, SD = .82$ ), and Weibo ( $M = 3.46, SD = .94$ ). Hypothesis 1 thus only received partial support.

### **Relationships Between Individual Differences, Social Media Posting Habits, and ATC**

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<sup>3</sup>  $F$ -values are based on Wilk's Lambda for face validity, with the Greenhouse-Geisser correction for perceived justice and privacy invasion - adjusting the degrees of freedom for a lack of sphericity (based on Mauchly's test). We also report a sensitivity analysis in our Online Supplement - showing that our sample size was sufficient.

We examined how the frequency of posting positive and negative content on social media and individual differences (i.e., extraversion, gender, as well as history and intensity of social media use) were associated with attitudes towards cybervetting for each platform using linear regressions (Table 1). The more frequently job seekers posted positive content on social media, the more positive their attitudes towards cybervetting were. Positive posting frequency was associated with significantly higher perceptions of justice for all three platforms ( $B = .19, p = .02$  for WeChat,  $B = .27, p < .001$  for QQ, and  $B = .37, p < .001$  for Weibo), significantly higher perceptions of validity for all three platforms ( $B = .27, p < .001$  for WeChat,  $B = .31, p < .001$  for QQ, and  $B = .39, p < .001$  for Weibo), and significantly lower perceptions of privacy invasion for two of the three platforms ( $B = -.17, p = .03$  for QQ, and  $B = -.26, p < .001$  for Weibo) but not for WeChat ( $B = -.10, p = .20$  – although this relationship was stronger and significant in correlations). Overall, these findings largely support Hypothesis 2a.<sup>4</sup> In contrast, negative posting frequency was only significantly negatively related to perceived privacy invasion for WeChat ( $B = -.17, p = .02$ ). In addition, all relationships for WeChat and QQ (but not Weibo) were significant in correlations, but were opposite to our predictions (i.e., more frequency of negative content posted associated with more positive ATC). Hypothesis 2b was not supported.

Female Chinese job seekers generally reported more negative attitudes toward cybervetting than their male counterparts. However, although all the relationships were significant in correlations, only two were in regressions: perceived privacy invasion for QQ ( $B = -.15, p < .04$ ) and Weibo ( $B = -.17, p = .02$ ). This provides only partial support for H3. In general, more extraverted Chinese job seekers reported more positive attitudes toward

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<sup>4</sup> Because the outcome (ATC) and predictors (positive and negative content) were all self-reports collected at the same time, we examined the potential for common-method variance (CMV) using CFA. For each platform, we tested models with 1, 2, and 5 factors. Results (see Online Supplement) demonstrated superior fit for a 5-factor structure, suggesting that CMV was likely not a critical issue.

cybervetting. Again, all the relationships were significant in correlations, but only a few were in the regressions: perceived justice for Weibo ( $B = .15, p = .03$ ), perceived privacy invasion for WeChat ( $B = -.23, p < .01$ ) and QQ ( $B = -.18, p = .02$ ), and face validity for WeChat ( $B = .15, p = .05$ ) and QQ ( $B = .18, p = .02$ ). This provides only partial support for H4. In relation to our Research Question, the longer job seekers had been using (Chinese) social media, the more negative attitudes towards cybervetting were. While many of the correlations were significant, only two relationships were in regressions: face validity for QQ ( $B = -.15, p < .04$ ) and Weibo ( $B = -.17, p = .02$ ). In contrast, the number of hours spent weekly on social media was unrelated to attitudes towards cybervetting.

## **Discussion**

### **Main Findings and Theoretical Implications**

This study was the first to empirically examine the emerging practice of cybervetting, and more precisely job seekers' ATC, in China. The Chinese context is particularly important to explore for several reasons: Its large population and stable unemployment rate (around 4% over the last decade - i.e., Statista, 2022); it is one of the largest and fastest-growing social media markets worldwide (Dean, 2021); and cybervetting has become increasingly popular with Chinese employers (Liao & Zhou, 2021). Overall, millions of applicants are likely cyber-vetted every year in China, but evidence from Western cultures might not generalize to that context, making our study on Chinese job seekers' ATC conceptually and practically relevant.

Using WeChat, QQ, and Weibo, three of the most popular platforms in China (and in the world), we demonstrated that a Chinese version of the ATC scale functioned similarly to the original English version used in a North American context (Cook et al., 2020). The scale was reliable, the original 3-factor structure was largely confirmed (although to a lesser extent for

WeChat), and we found evidence for measurement invariance across the three platforms.

Overall, our findings add to the preliminary evidence related to attitudes or reactions towards cybervetting from North America (Cook et al., 2020; Jacobson & Gruzd, 2020; Stoughton et al., 2015), Western Europe (Folger et al., 2021), or India (Gruzd et al., 2020).

Our results suggest that Chinese job seekers' ATC were generally negative across all three platforms, although they were slightly more positive (more fair and valid) for WeChat than for QQ or Weibo. This difference might be due to the more advanced privacy settings available on WeChat, for instance allowing users to restrict their posts to be viewed by a select group of friends (Chen et al., 2018). Yet, we did not find any difference for perceived invasion of privacy between the three platforms. The difference might also reflect the fact that WeChat is more popular than QQ or Weibo (i.e., more than twice as many active users; Statista, 2022). WeChat is also used for interacting with co-workers, and might thus appear somewhat more professional, as compared to QQ or Weibo, which are largely used for entertainment. For instance, Chen et al. (2018) reported that 80% of users had sent work-related files to coworkers via WeChat.

In addition, the mean ATC scores for the three Chinese platforms were largely similar to those observed with their Western equivalent for privacy invasion. For example, the means for privacy invasion were 3.49 for WeChat, 3.53 for QQ, and 3.46 for Weibo, which were only slightly higher than the means of 3.39 for Facebook and 3.37 for Twitter in Cook et al. (2020). However, face validity and perceived justice were generally higher for Chinese (means ranging from 2.60 to 2.76 and 2.50 to 2.69, respectively) than the North American (1.85 to 2.04. and 2.09 to 2.37) for personal social media.<sup>5</sup> Chinese job seekers might be less critical about the fairness and job-relevance of information employers can find on social media than their North

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<sup>5</sup> One-sample *t*-tests showed that all country comparisons were significant for perceived justice and face validity, but only the differences for WeChat and QQ were significant for privacy invasion.

American counterparts. These findings should also be interpreted in relation to prior work on applicant reactions in China, showing particularly positive views of work sample tests, interviews, or ability tests but more negative views of resumes or *Guanxi* - that is, relying on personal contacts (Liu et al., 2016). Cybervetting might thus be considered similar to those latter selection methods by Chinese job seekers.

Our findings showed that the more frequently job seekers post content that tends to be judged positively by hiring managers (according to Hartwell & Campion, 2020), the more positive their ATC also are. Job seekers' views about cybervetting might thus be, at least partly, based on a reflection of the content visible on their own social media profiles, and thus how they think it could be evaluated by prospective employers. This would be consistent with evidence that job seekers' perceptions and hiring managers' practices regarding how cybervetting can be used to assess applicants are generally aligned (Roulin & Bangerter, 2013). However, we also found that the frequency of posting content judged negatively by hiring managers (according to Hartwell & Campion, 2020) was not associated with more negative ATC (and was even associated with slightly more positive ATC, especially when looking at correlations). It is worthwhile noting that Chinese job seekers reported posting negative content rather infrequently (i.e., means ranging from 1.48 to 1.56), especially when compared to the frequency of positive content (i.e., means ranging from 3.03 to 3.30). They perhaps believe that the negative content does not matter because of its relative scarcity. Yet, this might also reflect some form of naivety from Chinese job seekers, who might not fully realize the risks associated with posting such negative content for job search success (Hartwell & Campion, 2020; Tews et al., 2020). It might also be because our sample was restricted to young job seekers (i.e., senior university students



about to graduate), and past work suggests that older job seekers are less likely to post negative content (i.e., *faux pas*) on social media (Roulin, 2014).

Finally, our research shows that men and more extraverted job seekers reported more positive ATC (especially regarding privacy invasion for gender), whereas those who had a longer history of using social media reported slightly more negative ATC (especially regarding face validity). However, the amount of time spent weekly on social media was unrelated to ATC. The gender differences in ATC in the Chinese context are particularly interesting, given that such differences were not found in prior studies with North American, German, or Indian job seekers (Cook et al., 2020; Folger et al., 2021; Gruzd et al., 2020). Gender differences were mostly visible for the privacy invasion component of ATC (and to a lesser extent justice perceptions). Because gender discrimination (Woodhams et al., 2009) and sexism on social media (Jing-Schmidt & Peng, 2018) are still prevalent in China, our findings suggest that female job seekers might rightfully be concerned with prospective employers accessing their profile. The positive relationship between extraversion and ATC is consistent with the conceptual definition of that personality trait (e.g., social self-esteem and boldness; Lee & Ashton, 2018) and the fact that extroverts have more positive views toward social media in general (Bowden-Green et al., 2020).

### **Practical Implications**

The results of this study have implications for both organizations and job seekers. Organizations or managers currently engaging in cybervetting, or planning to do so, should be aware that job seekers view such practices generally negatively. Applicant reactions to the selection process matter, because they impact recruitment outcomes like attraction to the organization, word-of-mouth, or the likelihood to accept an employment offer (McCarthy et al., 2017). Such relationships have been confirmed with cybervetting (Bowen et al., 2021). Chinese

organizations should thus be discouraged from cybervetting, especially on platforms like QQ and Weibo. While attitudes for WeChat were slightly more positive, they remained negative overall. Research on Western platforms showed that professional social media like LinkedIn were associated with significantly more positive attitudes (Cook et al., 2020). Yet, LinkedIn closed its activity in China at the end of 2021. The closest local equivalent, MaiMai, remains a relatively small player, and more research is needed to examine how Chinese job seekers view that platform. The surprising positive relationships between posting negative information on social media and ATC also indirectly suggest that Chinese job seekers might be somewhat naïve about the risks associated with such content. Combining our findings with past results about how employers use that information (e.g., Tews et al., 2020), we encourage job seekers to be mindful of what they post online and the impact it might have on their job search outcomes.

### **Limitations and Future Directions**

This study has a number of limitations, which are associated with promising avenues for future research. First, our sample of job seekers was composed of senior university students. Past research in North America suggests that age, education, or work experience are largely unrelated to ATC (Cook et al., 2020), and we thus expect our findings to generalize to other populations. However, we encourage future research to replicate our results with a larger sample and more diversity in terms of age, education, experience, or socio-economic background, or to explore differences in ATC between urban and rural China. Second, we focused on three of the most popular Chinese social media platforms: WeChat, QQ, and Weibo. However, future studies could also explore attitudes towards other platforms like MaiMai (equivalent to LinkedIn), DouYin (known outside of China as TikTok), or Baidu Tieba (a platform similar to Reddit). Third, research could extend the examination of job seekers' ATC to other countries, both with

global platforms like Facebook and local ones. ATC could also be examined from a cross-cultural perspective, for instance through a multi-country comparison exploring if differences in ATC could be explained not just by the type of platform, but also by cultural values. Finally, examining ATC only represents one of the four core cybervetting research areas delineated by Roth et al. (2016). Future research could expand the work examining the validity, reliability, or adverse impact of cybervetting done on Facebook (Van Iddekinge et al., 2016; Zhang et al., 2020) or LinkedIn (Roulin & Levashina, 2019) to other international social media platforms.

### **Conclusion**

With cybervetting becoming a selection method used by many organizations around the world, it is important to understand job seekers' attitudes toward such practices. This study shows that while Chinese job seekers might be slightly less critical than their North American counterparts about the fairness and job-relevance of cybervetting, they still generally view this practice negatively. Because applicant reactions to cybervetting can impact recruitment outcomes (Bowen et al., 2021), organizations should consider this when choosing whether or not (or how) to engage in such practices.

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Table 1.

Linear Regressions for Perceived Justice, Privacy Invasion, and Face Validity Across All Three Platforms

	Perceived Justice			Perceived Privacy Invasion			Face Validity		
	WeChat	QQ	Weibo	WeChat	QQ	Weibo	WeChat	QQ	Weibo
Negative Posts	.14	.14	-.00	-.17*	-.14	.14	.11	.09	-.05
Positive Posts	.19*	.27**	.37**	-.10	-.17*	-.26*	.27**	.31**	.39**
Gender (1=male/2=female)	-.05	-.11	-.13	.09	.15*	.17*	-.08	.01	-.07
Extraversion	.15	.12	.15*	-.23**	-.18*	-.11	.15*	.18*	.09
Years using social media	-.14	-.13	-.09	.04	.05	.13	-.11	-.14*	-.18**
Hours/week on social media	-.04	-.02	-.02	-.12	-.11	-.07	.00	.05	-.01
<i>F</i> -value	5.51**	7.78**	9.23**	5.43**	6.13**	5.78**	7.19**	8.36**	8.90**
<i>R</i> <sup>2</sup>	.16	.22	.25	.16	.18	.17	.20	.23	.24

Note.  $N = 200$ . Values are standardized estimates. \*  $p < .05$ , \*\*  $p < .01$ .



**Job Seekers' Attitudes Toward Cybervetting in China: Platform Comparisons and Relationships with Social Media Posting Habits and Individual Differences**

**Online Supplement**

### Chinese Version of the ATC (Translated from Cook et al., 2020)

下面我们想要知道你对【社交媒体】在招聘过程中被使用的态度。请阅读每句话，并决定你在多大程度上同意或不同意这句话：1 =非常不同意；2 =不同意；3 =中立(既不同意也不不同意)；4 =同意；5 =强烈同意

#### 公平度感知

- PJ1. 潜在雇主根据我【社交媒体】资料中获得的信息做出招聘的决定是公平的。
- PJ2. 潜在雇主基于从我的【社交媒体】资料中获得的信息，将我从申请流程中剔除是公平的。
- PJ3. 我认为筛查我的【社交媒体】资料是雇主在招聘过程中可以使用的一种有效工具。
- PJ4. 潜在雇主根据从我【社交媒体】资料获得的信息，将我的知识、技能和能力与其他候选人进行比较，这是公平的。
- PJ5. 我认为潜在雇主以任何方式记录我【社交媒体】资料中的信息都没有问题。
- PJ6. 我认为我应该对我【社交媒体】资料上的任何内容负责。

#### 隐私侵犯

- PI1. 如果我知道潜在雇主可能会访问我的【社交媒体】资料我会感到担心。
- PI2. 如果我知道一个潜在雇主在我不知情的情况下浏览了我的【社交媒体】个人资料，我会感到不舒服。
- PI3. 如果潜在雇主浏览我的【社交媒体】资料，我个人会觉得不受尊重。
- PI4. 如果潜在雇主将我【社交媒体】中的信息分享给其他员工，我会觉得有问题。
- PI5. 如果我知道潜在雇主会筛选我的【社交媒体】资料，我仍然能够自由地发布内容。

#### 表面效度

- FV1. 潜在雇主可以根据我的【社交媒体】资料准确评估我有多可靠。
- FV2. 潜在雇主可以根据我的【社交媒体】资料准确评估我的工作表现。
- FV3. 潜在雇主可以根据我的【社交媒体】资料准确评估我的性格。

**Overview of the Three Chinese Social Media Platforms Examined in the Study**

<b>Social Media Platform</b>	<b>WeChat</b> (also known as Weixin) 微信	<b>QQ</b>	<b>Sina Weibo</b> 新浪微博
<b>Content</b>	Social media Video calls Group and voice chat Text messaging Video games Location sharing Mobile payment Money Transfer and Shopping	Social media Instant messaging and emailing Group and voice chat Video games Microblogging Personalize virtual image Money Transfer and Shopping	Microblogging Text messaging
<b>Owned by</b>	Tencent	Tencent	Sina
<b>Number of users</b>	1.26 billion	574 million	573 million
<b>Age distribution</b> (in 2022 based on Statista.com)	< 24: 22.3% 25-30: 13.7% 31-40: 22.0% 41-50: 19.2% > 51: 22.7%	< 24: 27.7% 25-30: 17.3% 31-40: 25.8% 41-50: 17.3% > 51: 11.9%	< 22: 36.5% 23-27: 24.1% 28-32: 16.1% 33-37: 12.4% 38-42: 6.3% > 43: 4.6%
<b>Created in</b>	2011	1999	2009
<b>Specific function examined here</b>	WeChat Moments	Qzone	-
<b>Released in</b>	2012	2005	-
<b>Similar to (Western social media platform)</b>	Facebook (with features of WhatsApp)	Myspace	Twitter (and Instagram)
<b>Key goals and features</b>	Emphasize, maintain, and expand offline relationships	Create and maintain virtual relationships Entertainment	Share, disseminate, and receive information (text, pictures, videos) Create “stories”

	Connect with friends, post content, like or comment on friends' posts	Write blogs, keep diaries, create and share a photo album, share videos, set background music	
<b>Unique mechanisms</b>	Can only see (and interact with, like, comment on) content from your direct friends (but not second-degree friends) Strict censorship	User can customize their Qzone, but most accessories or extra services have to be purchased Multiple QQ accounts can be associated Qzone can be set up to be shared for people in couple (e.g., shared photo album)	2,000-character limit per post Attracted celebrities and organizations, verified via an orange or blue letter "V" symbol, respectively

**Supplementary Table 1:**

**Descriptive Statistics and Correlations Between Study Variables**

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19			
<b>WeChat</b>																								
1 Perceived Justice	2.69	0.70 (.77)																						
2 Perceived Privacy Invasion	3.49	0.76	-.48 (.76)																					
3 Face Validity	2.76	0.93	.73	-.42 (.82)																				
4 Negative Posts	1.51	0.51	.22	-.19	.20 (.82)																			
5 Positive Posts	3.30	0.68	.29	-.24	.40	.23 (.70)																		
<b>QQ</b>																								
6 Perceived Justice	2.54	0.78	.85	-.55	.74	.27	.37	(.83)																
7 Perceived Privacy Invasion	3.53	0.82	-.45	.86	-.42	-.21	-.25	-.59 (.80)																
8 Face Validity	2.65	0.97	.61	-.34	.78	.22	.39	.73	-.47 (.84)															
9 Negative Posts	1.48	0.48	.16	-.19	.15	.85	.27	.25	-.20	.18 (.81)														
10 Positive Posts	3.19	0.78	.23	-.22	.31	.21	.84	.35	-.27	.39	.26 (.76)													
<b>Weibo</b>																								
11 Perceived Justice	2.50	0.83	.77	-.55	.70	.27	.36	.86	-.59	.69	.24	.32	(.86)											
12 Perceived Privacy Invasion	3.46	0.94	-.40	.72	-.38	-.18	-.26	-.54	.81	-.42	-.17	-.24	-.65 (.87)											
13 Face Validity	2.60	0.99	.62	-.39	.74	.24	.31	.69	-.45	.79	.18	.30	.78	-.51 (.84)										
14 Negative Posts	1.56	0.57	.10	-.06	.06	.73	.17	.10	-.06	.08	.81	.20	.11	.04	.11 (.82)									
15 Positive Posts	3.03	0.87	.28	-.30	.32	.28	.67	.38	-.31	.32	.28	.72	.43	-.29	.42	.26 (.78)								
<b>Individual differences</b>																								
16 Gender (1=male/2=female)	1.60	0.49	-.17	.20	-.18	-.24	-.15	-.21	.25	-.13	.14	-.15	-.22	.24	-.14	-.12	-.11							
17 Extraversion	3.29	0.65	.25	-.29	.28	-.08	.38	.25	-.25	.26	-.05	.32	.29	-.22	.20	-.09	.26				-.14 (.88)			
18 Years using social media	8.45	3.24	-.18	.11	-.17	-.19	-.20	-.18	.14	-.21	-.16	-.18	-.13	.18	-.23	-.05	-.13				.12	-.00		
19 Hours/week on social media	18.16	17.51	-.04	-.07	.04	.01	-.00	-.05	-.06	.03	-.06	-.02	-.09	-.01	-.07	-.05	-.11				-.07	-.03	-.12	
20 Work experience (months)	2.51	4.11	.16	.03	.18	.12	.22	.16	.05	.16	.06	.19	.11	.06	.17	.10	-.14				-.10	-.01	-.10	-.02

Note. *N* = 200. Values > |.14| are significant at *p* < .05, Values > |.19| are significant at *p* < .01; Values > |.23| are significant at *p* < .001. Reliability coefficients in the diagonal.

### **Factor Structure and Measurement Invariance Testing**

We initially examined the factor structure of the Chinese ATC measure across the three social media platforms (WeChat, QQ, and Weibo). We followed the same approach used by Cook et al. (2020). First, we examined a 3-factor structure separately for each platform using Confirmatory Factor Analysis. Fit indices are presented in the top part of Supplementary Table 2, and suggest acceptable fit for QQ and Weibo (e.g., RMSEA  $\leq$  .09, both CFI and TLI  $\geq$  .90), but somewhat weaker fit for WeChat (RMSEA = .11, CFI = .86, TLI = .83). We then tested measurement invariance across the three social media platforms, by testing increasingly restricted models to test configural, metric, scalar, and full uniqueness invariance (Marsh et al., 2009; van de Schoot et al., 2012). Fit indices (e.g., Hu & Bentler, 1999) as well as the Wald test of equality (e.g., Jiang et al., 2017) are presented in the bottom part of Supplementary Table 2, and suggest acceptable fit to support invariance (i.e., RMSEA = .09, both CFI and TLI  $\geq$  .90, non-significant Wald statistic). Overall, and despite a lower fit for WeChat, the ATC 3-factor structure was largely confirmed with the Chinese platforms.

**Supplementary Table 2.****Model Fit Indices to Examine Measurement Invariance for the Chinese ATC Scale**

Model	N	$\chi^2$	df	$\chi^2/df$	RMSEA	Model fit					Joint Wald test <sup>c</sup>		
						90% C.I. RMSEA	CFI	TLI	AIC	BIC	$\chi^2$	df	p-value
Models per platform <sup>a</sup>													
WeChat	200	240.33	74	3.25	.11	[.09 - .12]	.86	.83	7242.96	7391.39			
QQ	200	179.53	74	2.43	.08	[.07 - .10]	.92	.90	7204.22	7352.64			
Weibo	200	200.80	74	2.71	.09	[.08 - .11]	.93	.91	7004.70	7152.90			
Measurement Invariance Models <sup>b</sup>													
Configural													
MGI1	600	620.66	222	2.80	.09	[.09 - .10]	.91	.89	21451.88	22045.24	27.06	28	.52
Metric (i.e., weak)													
MGI2	600	648.20	250	2.59	.09	[.08 - .10]	.91	.90	21423.42	21893.71	39.05	28	.08
Scalar (i.e., strong)													
MGI5	600	686.76	278	2.47	.09	[.08 - .09]	.90	.91	21405.98	21753.21	34.14	28	.20
Strict (i.e., full uniqueness)													
MGI7	600	725.47	294	2.47	.09	[.08 - .09]	.90	.91	21412.69	21689.59			

*Note.* Based on the MLMV method (i.e., maximum likelihood with missing values) computed with STATA.

<sup>a</sup> See Supplementary Table 3 for detailed estimates. Model fit for WeChat was lower, but did improve (e.g.,  $\chi^2/df = 2.29$ , RMSEA = .08, CFI = .92, TLI = .90) when item PJ5 was allowed to load onto all three factors and item PPI5 was allowed to load on the face validity factor.

<sup>b</sup> Models are based on Marsch et al.'s (2009) typology of multiple group invariance (MGI) testing: MGI1 involves imposing no constraints and ensuring that the same items significantly load on the same latent variables across platforms. MGI2 involves imposing constraints on the factor loadings/coefficients only. MGI5 involves imposing constraints on the factor loadings/coefficients and intercepts. MGI7 involves imposing constraints on the factor loadings/coefficients, intercepts, and items error variances. The *chi-squares* for all model fit indices are significant at  $p < .001$ .

<sup>c</sup> Joint Wald tests examine whether all measurement coefficients (MGI1), intercepts (MGI2), and error variances (MGI5) are equal across the three platforms (with a non-significant chi-square confirming equivalence).

**Supplementary Table 3:****CFA Estimates per Social Media Platform**

	WeChat			QQ			Weibo		
	Estimate	95% C.I.		Estimate	95% C.I.		Estimate	95% C.I.	
Item-Latent									
PJ1 – PJ	.82	.69	.94	.95	.83	1.08	.98	.85	1.11
PJ2 – PJ	.76	.63	.89	.78	.66	.91	.83	.71	.96
PJ3 – PJ	.86	.72	.99	.93	.79	1.08	1.00	.87	1.14
PJ4 – PJ	.78	.64	.93	.82	.70	.95	.97	.84	1.10
PJ5 – PJ	.48	.35	.61	.55	.41	.69	.61	.48	.74
PJ6 – PJ	.10	-.03	.22	.28	.15	.41	.30	.16	.43
PPI1 – PPI	.62	.47	.77	.66	.51	.82	.82	.67	.97
PPI2 – PPI	.88	.73	1.04	.57	.43	.71	.98	.84	1.12
PPI3 – PPI	.69	.55	.84	.88	.74	1.02	.95	.80	1.10
PPI4 – PPI	.55	.41	.70	.91	.79	1.04	.83	.69	.97
PPI5 – PPI	.61	.45	.77	.65	.51	.80	.81	.66	.96
FV1 – FV	.89	.76	1.01	.97	.85	1.09	.98	.86	1.11
FV2 – FV	1.03	.90	1.16	1.06	.92	1.19	1.05	.92	1.18
FV3 – FV	.64	.50	.78	.67	.53	.81	.69	.55	.84
Covariances									
PJ – PPI	-.52	-.66	-.39	-.59	-.71	-.48	-.69	-.79	-.60
PJ – FV	.82	.74	.89	.81	.74	.88	.87	.82	.92
PPI – FV	-.49	-.63	-.34	-.53	-.65	-.40	-.61	-.72	-.51

*Note.*  $N = 200$ . PJ = Perceived justice, PPI = Perceived privacy invasion, FV = Face validity. Based on the full information maximum likelihood option in Jamovi. All estimates are unstandardized and significant at  $p < .001$  (except for the WeChat PJ6 item).



**Supplementary Table 3:****Comparing Fit for 1, 2, and 5-Factor Models for Each Platform to Examine Potential Common-Method Variance**

Model	$\chi^2$	df	$\chi^2/df$	RMSEA	90% C.I. RMSEA	CFI	TLI	AIC	BIC
1-Factor									
WeChat	1266	299	4.23	.13	.12 - .13	.51	.46	13152	13410
QQ	1286	299	4.30	.13	.12 - .14	.55	.51	13253	13510
Weibo	1425	299	4.77	.14	.13 - .14	.58	.54	13691	13948
2-Factor									
WeChat	956	298	3.21	.10	.10 - .11	.66	.63	12844	13105
QQ	999	298	3.35	.11	.10 - .12	.68	.65	12969	13230
Weibo	1122	298	3.77	.12	.11 - .13	.69	.66	13389	13650
5-Factor									
WeChat	613	289	2.12	.07	.07 - .08	.84	.81	12519	12809
QQ	492	289	1.70	.06	.05 - .07	.91	.90	12480	12770
Weibo	554	289	1.92	.07	.06 - .08	.90	.89	12839	13130

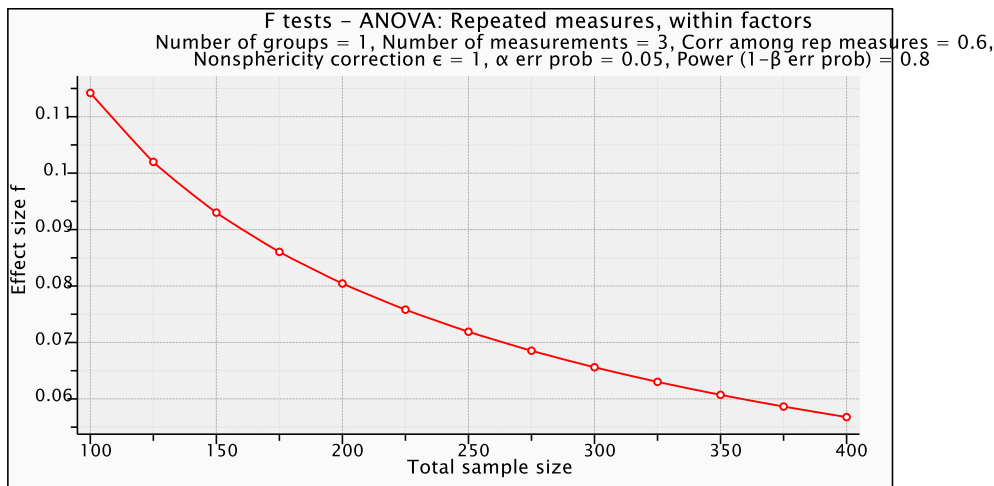
*Note.*  $N = 200$ . 1-factor models involved all ATC and posting frequency items loading into a unique factor. 2-factor models involved all ATC items loading into one factor, and all posting frequency items loading into a second factor. Finally, 5-factor models involved items loading into their respective theoretical factors (i.e., perceived justice, perceived privacy invasion, face validity, negative posts, and positive posts). Based on the full information maximum likelihood option in Jamovi.

### Sensitivity Analyses for our ANOVAs

In our study, the effect sizes for differences in ATC across the three platforms (i.e., partial eta squared  $\eta_p^2$  – or the percentage of variance in the dependant variable) were .01 for privacy invasion, .06 for face validity, and .09 for perceived justice. That is equivalent to Cohen's  $f$  values of .09, .18, and .31, respectively.

To better these effect sizes, we ran a sensitivity analysis using G\*Power, for our repeated-measure ANOVAs (i.e., the analyses to compare ATC factors across the three social media platforms). Using a design with 3 repeated measures (our 3 platforms), an  $\alpha = .05$ , a power level of .80, our  $N = 200$ , and an average correlation of 0.6 between measurements (i.e., the exact value is .595 - from averaging the 9 relevant correlation coefficients from Supplementary Table 1 above), the results suggest that our design was sufficient to detect effect sizes as small as  $f = .08$ . This value is similar to the smaller effect size found in our study (i.e., for privacy invasion), suggesting that our sample size was sufficient.

For the sake of transparency, we also plotted a figure, which describes effect size values for various sample sizes ( $N$  ranging from 100 to 400).



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