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Deciphering emoji variation in courts: a social semiotic perspective

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Emojis are increasingly being used as digital evidence in courts due to the miscommunication and misinterpretation arising from the high variability of their usage and interpretation. Emojis in courts have been extensively researched in extant studies, but relatively little attention has been paid to the emoji variation phenomena in Chinese courts. Through an empirical qualitative content analysis of the court judgments in China and the United States and some supplementary materials, this study posits that an emoji's meaning in courts can be subject to the following six categories of variations: i. variation across platforms, including devices, operating systems, software programs and clients; ii. temporal variation; iii. variation in court cases under different rules of evidence; iv. variation in individual participants; v. variation across social groups; and vi. linguistic-cultural variation. From a social semiotic perspective, emojis as dynamic signs have great meaning potentials, making their meanings context-dependent and interpreter-dependent. For this reason, it is suggested that legal professionals untangle and weave historical, social, cultural and legal contexts into the interpretation of an emoji's meaning. Moreover, a probe into the contextualized configuration of emojis can offer practical insights into the interpretation of emoji-bearing texts in judicial decision-making as well as the admissibility and investigation of digital evidence in courts.

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Introduction

Emojis, created by Japanese artist Shigetaka Kurita in 1999 and then hailed as a new-era hieroglyphic language, have become increasingly prevalent in online messaging and social media platforms. The word *emoji*—a compound of two Japanese words *e* (“picture”) and *moji* (“character”)—refers to “graphic symbols with predefined names/IDs and code (Unicode)”, including representations of facial expressions, abstract concepts, emotions, animals, plants, activities, gestures and objects (Rodrigues et al., 2018: p. 393). Prior to emojis, people highly used emoticons which were first used by Professor Scott Fahlman in 1982 and considered as a succession of characters representing merely facial expressions (Novak et al., 2015). Despite the differences between emojis and emoticons, the two notions are used interchangeably in this study as both are digital symbolic forms to express emotions or labels for the negative and positive poles of the same construct. In the cyber era, emojis are primarily used to convey emotions and intentions and improve communication efficiency. Nevertheless, due to the varied contexts in which emojis are used or interpreted (Cheng et al., 2020), emojis embrace several technical and social features that could cause significant misunderstandings and misinterpretations (Goldman, 2018), thereby leading to their inevitable invasion to the courtrooms. According to Goldman’s (2022) latest survey, cases relating to emojis in the United States (hereinafter US) grow exponentially, particularly in sexual predation, employment discrimination and murder cases.

As Danesi (2016: p. 118) has put it, variation is a crucial and inevitable topic in any discussion of emoji use and interpretation. Prior studies have widely researched this topic, such as the temporal variation of emoji usage (Barbieri et al., 2018; Marino, 2022), language and cultural variation (Barbieri et al., 2016; Massa and Simeoni, 2017), gender and age variation (Herring and Dianas, 2020), variation across platforms (Miller et al., 2016). Emoji variation has both pros and cons: at one level, it allows users to introduce ambiguity and playfulness where they see proper and make emojis more attractive from an expressive perspective (Pohl et al., 2017); at another level, it is wrought with ambiguity and the risk of miscommunication. A courtroom is a place to disambiguate emojis’ meanings and to resolve miscommunication between parties. Although legal context prioritizes clarity, precision and unambiguity (Bhatia et al., 2008), considerable variation in emoji interpretation does exist in courts. Compared to the variation in daily online communication, the variation in courts appears to be a more intricate and intriguing issue that deserves exploration since it allows in more contextual variables, such as judges and broad legal contexts. In this light, the present study focuses on the variation concerning emoji interpretation in the Chinese and US judicial contexts.

The reasons for choosing China and the US are threefold: firstly, according to Statista¹, the five most-popular global-mobile messenger apps as of January 2022 are WhatsApp, WeChat, Facebook Messenger, QQ and Snapchat, whose principal users are from the US and China, making the legal disputes concerning emojis more likely to arise in the two jurisdictions. Secondly, China and the US embrace particularly distinct legal systems and cultures, which is conducive to permeating the variation phenomena about how emojis are displayed, represented and interpreted in courts. Thirdly, data in this study show that emojis have emerged as crucial digital evidence impinging on judges’ final decisions in China, which has been rarely touched upon in extant studies. It is thus hoped that this study can shed light on emoji and law studies in the Chinese context.

Social semiotics, which foregrounds the importance of interpreting language in social contexts where meanings are exchanged (Halliday, 1978), has proved a useful hermeneutical toolkit

for examining how emojis are produced and interpreted in unique social and cultural contexts (e.g., Danesi, 2016, 2021; Cheng et al., 2020; Logi and Zappavigna, 2021). Against this background, this study engages with social semiotic analyses of emojis in the Chinese and US court judgments. More specifically, it centers on the following two questions: first, to identify the variations in emoji usage and interpretation through a careful reading and thorough summary of the US and Chinese court judgments and a reference to several supplementary materials; and second, to explain the rationales underpinning such variations by exploring the specific social, cultural and legal contexts in which emojis are composed and interpreted.

The semiotics of emojis in law

Emojis in legal settings, as crucial semiotic resources employed for meaning-making and communication, have been extensively researched from a semiotic perspective, particularly their contextualized flexibility (Wagner et al., 2020a) and variation in usage and interpretation (Cheng et al., 2020). Danesi (2016: p. 118) has aptly summarized four categories of variation concerning emoji usage, including cross-cultural variation, nation-based variation, variation coming from visibility and variation according to individuals. These variations are also perceived as contextual factors bringing on emoji misunderstandings (Glodman, 2018). It also lays forth the idea that emojis function not only as graphic signs used in digital venues such as text messages, emails and social media but also as social and cultural signs used to achieve specific social and cultural goals. In legal settings, Danesi (2021: p. 1135) stresses the shift of viewing emojis as mere signs to engender congenial communication to signs of aggression, threats and criminal intent. Besides, the meaning interpretation of emojis as evidence in law should be constrained by who to interpret and how to interpret (Cheng et al., 2020), as well as by spatio-temporal dynamics (Wagner et al., 2020a).

The inherent variation of emojis and the lack of court guidelines for handling emojis can leave ample room for court interpretation and create interpretative challenges for courts. As regards emojis as digital evidence, prior related studies primarily dwell on whether to allow emojis as evidence in courts, how to present emojis in trial and how to interpret emojis. As Kirley and McMahon (2017) claim, some judges addressed the high evidentiary value of emojis, such as in the high-profile American Silk Road case², whereas not all judges admit the evidentiary contributions of emojis, such as in the case *Kinsey v State*³. Concerning the way of presenting emojis in courts, court opinions rarely display actual emojis at issue (Henry and Harrow, 2015; Goldman, 2017). For the sake of the accurate and exact perception of the meanings of emojis, Goldman (2019) suggests that lawyers should present the exact emoji depictions that their clients saw, fact-finders should see the actual emojis to directly judge their meanings, and judges should include a display of the actual emojis in their court opinions when possible.

The increasing need of emojis as evidence (Foltz and Fray, 2020; Goldman, 2022) has intimated the need for a field called “emoji forensics” (Danesi, 2021: p. 1118) that aims to investigate “the meanings and uses of emojis in criminal endeavors and in legal cases”. Emojis with negative or aggressive emotional valence, which may easily fuel disputes and social injustices, have become an increasingly significant research hotpot (Cheng et al., 2020; Wagner et al., 2020a). For emojis as evidence, another threshold question is to what extent the emoji evidence is considered relevant and how to interpret it. In this connection, the judges may encounter similar problems: does a bomb or a gun emoji constitute terrorism, and does a smiley face, a thumbs up or a sun

emoji constitute a binding contract? The interpretation of emojis needs to take into account the communicative functions emojis serve (Robson, 2019), emojis' associated texts such as words and phrases or other emojis if they are in a string of emojis (Miller et al., 2017; Danesi, 2021), the overall context of communicative exchanges (Goldman, 2018), and the varying forms of emojis across programs, platforms and devices (Danesi, 2021).

Social semiotics can serve as an effective approach to examining the variation and change of semiotic resources and exploring how and why these resources vary and evolve (Van Leeuwen, 2005). For this reason, the present study aims to adopt a social semiotic perspective to elucidate the variations of emoji interpretation in the Chinese and US jurisdictions and to unmask the contextual ingredients constraining such variations. The analytical method used to examine emojis in judicial settings is predominantly a qualitative and empirically oriented content analysis of the court judgments referencing emojis, such as a qualitative survey of the Israeli, US and Canadian court cases (Danesi, 2021), a qualitative analysis of Canadian, UK, Australian and New Zealand case law (Crystal et al., 2021), and a review of over 100 US court cases (Tenzer and Cangro, 2021). In the same vein, the variation phenomena of emojis in this study are categorized and summarized through a thorough content analysis of the Chinese and US cases pertaining to emojis.

Data and methods

The data used in the present study are the Chinese and US court documents related to emojis. The Chinese court judgments were drawn from the official website of China Judgments Online by keyword searches of Chinese characters “表情符号” (emojis) and “微信表情” (WeChat emojis). China Judgments Online is an electronic database that offers the largest collection of judgments and decisions from Chinese courts. The US court judgments were extracted through keyword searches of “emoji” and “emoticon” for cases in the legal database WestLaw. The time span set for the data collection ranges from the first time the emoji-related case occurred in the databases to 31 December 2021 when the data were extracted (at the time of writing). Finally, 955 Chinese cases and 475 US cases were obtained. In addition to court judgments, this study also uses supplementary data through direct observation of emoji usage activities in daily life and a reference to findings from previous studies, in order to provide a more comprehensive view of situational contexts where potential emoji variations in courts occur.

This study proceeds along the following two steps. The first step is a preliminary analysis and a close reading of the court judgments to identify the situational contexts where emojis occur and then to pinpoint the contexts worthy of further exploration. Results demonstrate that emojis often occur in judicial judgments in three ways: first as the subject of a lawsuit, particularly the lawsuits concerning patent, copyright and trademark infringement; second as one component of a user's nickname for apps such as WeChat described in the court judgments; and third as language communicated by people through digital communication, such as text messages, apps and websites. The third one consists of two situations: one is that emojis are merely recorded in the judgments but without being taken as evidence, and the other is that emojis serve as evidence of people's intentions or actions at trial. This study devotes more care to the latter situation of the third one in that emojis as digital evidence act as the most commonly addressed concern in prior studies (e.g., Goldman, 2018; Danesi, 2021), analysis of which can help to unravel the meaning ambiguity or flexibility of emojis.

Secondly, with a qualitative content analysis of court judgments where emojis are used as digital evidence and a reference to

the aforementioned supplementary data, this study identifies six types of situational variations concerning emoji interpretation: i. variation across platforms, including devices, operating systems, software programs and clients; ii. temporal variation; iii. variation in court cases with different rules of evidence; iv. variation in individual participants; v. variation across social groups; and vi. linguistic-cultural variation. The principles of delineating the six types of variations are based on Biber's (1994: p. 40–41) analytical framework that comprises seven general parameters and several sub-parameters, including communicative characteristics of participants, relations between addressor and addressee, setting, channel, relation of participants to the text, purposes, intents and goals, and topic/subject. The variation across platforms, temporal variation and variation in cases with different rules of evidence are illustrated based on the parameter of setting that concerns the specific place and time of communication. The place here is broadly interpreted as the context of emojis' use (Biber, 1994: p. 43), including the virtual cyberspace where emojis are communicated and the court where emojis are evoked as evidence. The variation in individual participants and variation across social groups are described under the parameter of communicative characteristics of participants, considering the stratum of both community and individuals. The linguistic-cultural variation is examined under the parameter of relations between the addressor and addressee, which refers to the extent of shared knowledge, more specifically, the relevant cultural world knowledge in cross-cultural communication (Biber, 1994: p. 42).

It bears mentioning that given the space constraints, the analyses did not provide an exhaustive display and analysis of all the Chinese and US cases. In so doing, we purposively selected relevant cases situated in each type of variation to elaborate how the understanding and interpretation of emojis evoke such a variation. The subsequent section is a qualitative description, interpretation and explanation of the six categories of emoji variation.

Results and discussion

Variation across platforms and over time. A detailed investigation of the court judgments demonstrates that the sender's and recipient's various perceptions of what an emoji means could be activated by the different platforms, including devices, operating systems and software programs. First of all, an emoji may signify something markedly distinct depending upon which device or platform it is viewed on. As the court stated in the case *People ex rel. R.D.*⁴, an emoji that resembles a toy squirt gun in a message sent on one platform may appear as a revolver on a recipient's device. In the case *Scissors Co. v. Liao*⁵, an emoji in a message on the sender's device appears as a string of numbers on the recipient's device, causing significant confusion and miscommunication. In this case, it is estimated that the emojis shown on either the sender's or recipient's device fall within the ambit of proprietary emojis. As noted by Goldman and Zicarelli (2018), emojis consist of two categories: (i) Unicode-defined emojis, which can be recognized across platforms by using the Unicode standards established by the Unicode Consortium; and (ii) proprietary emojis, which are invented and implemented by the platforms themselves to work only on particular platforms. When a proprietary emoji is sent outside the platform, it typically appears as a symbol such as a blank square, indicating that the recipient's platform does not recognize the character (Goldman and Zicarelli, 2018).

Moreover, an emoji in a message on the sender's device may appear as nothing on the recipient's device. In the case *Xie v. Liu*⁶, the plaintiff Xie sent an emoji-bearing message containing the words “you borrowed RMB 65000 yuan from me on February 7”

and emojis to the defendant *Liu*. However, the message was not sent successfully since *Liu* had unfriended *Xie* on WeChat. At trial, *Xie* used her unsuccessfully sent message as evidence to show that she lent money to *Liu*. Eventually, the court refuted *Xie's* allegation by reasoning that the evidence she provided merely showed that she called in the loan from *Liu*, but *Liu* did not express his intent to acknowledge the private lending fact or promise to repay the loan. In this case, due to the utterly lost information in emoji translation, the emoji-bearing messages visible on the sender's phone but invisible on the recipient's cannot be used as evidence of the recipient's assent.

Secondly, emojis may look different depending on the sender's or recipient's operating system. In the case *Roszbach v. Montefiore Medical Center*⁷, the plaintiff *Roszbach* presented evidence that she claimed was from her iPhone 5, which can only run an iPhone operation system up to version 10, but the actual emoji symbol depicted in the evidence was only available on version 13 or higher. Accordingly, the court concluded that the plaintiff fabricated the disputed text message evidence. This case indicates different emoji renderings both across operating systems and over time. It also underscores the evidentiary significance of emojis and the pivotal role of emoji forensic work in authenticating evidence and safeguarding judicial justice. Digital evidence, by its very nature, is fragile and can be altered, damaged, or destroyed by improper handling or examination. For these reasons, special precautions should be taken for the fabrication and preservation of this type of evidence.

Thirdly, an emoji may differ considerably depending upon whether it is viewed through software programs such as Facebook, Google and Twitter, among others. Even though relevant cases have not been found in the corpus of the present study, prior studies have greatly noted the emoji variation across different programs. By pointing out that the shape and color of the gun emoji vary synchronically across different programs and may influence its emotional valence, Wagner et al. (2020a) argue that legal professionals need to make a close inspection of the color and shape of an emoji as well as the programs where it is in use.

Complicating things further, the same software program may synchronically display the same emoji in a different manner, depending on whether it is viewed via desktop or mobile clients. For instance, in order to express leisure and ease, QQ, an influential application created by Internet giant Tencent, synchronically used the emoji 🧑🏻🔪 (a commando with a cigarette between his lips) in the QQ computer version and the emoji 🧑🏻🌿 (a commando with a green leaf between his lips) in its mobile version. Although QQ endows the two emojis with the same meaning, some people deem that they convey different emotional meanings. The emoji 🧑🏻🔪 denotes a slightly negative connotation since it may mislead people into considering smoking as a symbol of fashion and handsomeness (Jiang, 2017). In fact, this inconsistency between desktop and mobile clients also implies the temporal dynamics of this emoji. On 28 February 2021, Tencent posted on Weibo that they had swapped out the emoji 🧑🏻🔪 with the emoji 🧑🏻🌿 on WeChat (another popular application owned by Tencent) by removing a lit cigar in the commando's mouth. The temporal change of this emoji representing "at ease or chilling" was advocated by Beijing Tobacco Control Association who warned that it hindered the fight against tobacco use among youngsters (Xue and Deng, 2021). As a consequence, it is speculated that the emoji 🧑🏻🔪 in the QQ computer version be replaced with the emoji 🧑🏻🌿 in its mobile version sooner or later.

The aforementioned analyses demonstrate that emoji diversity across devices, operating systems, software programs and clients may result in variation in an emoji's visual appearance,

particularly its visibility extent, color and shape, and may further lead to the varying interpretation and understanding of its meaning. Besides, legal professionals also need to take into account the temporal variation of emojis, whether for authenticating evidence or interpreting users' intended meanings.

Variation in court cases with different rules of evidence. Emoji interpretation may diverge across court cases with different rules of evidence, particularly on the dimensions of formality and casualness. For example, in the case *Bardales v. Lamothe*⁸ concerning whether the use of the thumb-up emoji demonstrated acquiescence to a custody arrangement, a Honduran father alleged that his child's mother (from whom he was separated) had abducted their child from Honduras to the US. The mother defended that the father subsequently acquiesced to the child remaining in the US, by displaying text messages in which the father responded with a thumbs-up emoji to her message that they had arrived in the US. The father maintained that this emoji only meant that she should enjoy her mother's (with whom she was staying) company, and not that he consented to the child's removal. The court then cited the precedent *Friedrich v. Friedrich*⁹, stating that acquiescence under the *Hague Convention on the Civil Aspects of International Child Abduction* requires "either an act or statement with the requisite formality, such as testimony in a judicial proceeding; a convincing written enunciation of rights; or a consistent attitude of acquiescence over a significant period of time". Hereby, the court reasoned that these emoji-bearing messages, generally considered as "very causal communications, striking devoid of formality", are not statements with the requisite formality that demonstrate acquiescence; besides, they cannot display a consistent attitude of acquiescence over a significant period of time.

It is telling that the emoji-bearing messages, which exhibit a relatively low degree of formality (Beißwenger and Pappert, 2019) and explicitness (Miller et al., 2017), were excluded by this court. In fact, other US courts also note the requirement of higher formality for the proof of acquiescence to the removal or retention of a child (Lee and Seymour, 2022). In the above-mentioned case, it is observed that the court gave little weight to the semantic meaning of emoji-bearing messages and finally made a decision by considering their admissibility as digital evidence. Note that this court did not randomly minimize the admissibility of digital evidence, but instead took a pragmatic reading of the emoji-bearing messages by taking into account the whole legal context of the actual case itself, more specifically, the high and sterner standards for the formality of evidence for acquiescence in cases concerning child abduction.

Likewise, a similar issue can occur when it comes to cases concerning disputes over private lending from the Chinese jurisdiction. For instance, in the case *Zhang v. Yan and Jia*¹⁰, *Zhang* sent *Yan* a WeChat message about the exact amount of money *Yan* owed him, and *Yan* then responded solely with an emoji 🤝. At trial, *Yan* claimed that this emoji did not signal his recognition of *Zhang's* message contents. The court finally decided that this emoji could not be perceived as a manifestation of *Yan's* explicit approval, and thus could not be taken as evidence of *Zhang's* claim of the debt. According to Article 9 of the *Decision of the Supreme People's Court to Amend the Provisions on Several Issues concerning the Application of Law in the Trial of Private Lending Cases* in China, the contract of loan is a kind of real contract rather than consensual contract. Consequently, it shall be considered to be formed from the moment the borrower receives the cash, the funds are transferred to the borrower's account or the borrower obtains the right on negotiable instruments. In other words, the sole electronic records

with the emoji 🙌 are insufficient to convey clear contractually binding approval or acceptance.

The two cases suggest that according to the overall legal context, at issue is not how to interpret the meaning of the thumb-up emoji and the OK hand emoji but whether the two emojis employed as digital evidence can meet the formality and explicitness required by the rules of evidence in the two cases. In effect, the two cases indicate a purposive interpretation of emojis or emoji-bearing messages. This purposive interpretation requires attention to the individuality of legal texts (Barak, 2005), such as the ones requiring evidence with particular degrees of formality and explicitness. To that end, the meaning of an emoji should be understood and interpreted on a case-by-case basis and in the context of particular types of cases, particularly taking into account the cases requiring higher requirements for evidence on the dimensions of formality and explicitness. This finding strongly suggests that the meaning interpretation of emojis in courts requires consideration not just of the interpersonal, social and cultural contexts, but also of specified legal contexts.

Variation in individual participants, including plaintiffs, defendants, and judges. The plaintiffs, defendants and judges, as critical individual participants in emoji usage and interpretation in courts, may understand the same emoji in various ways. In most cases, the premise of judges' deciding the precise meaning of an emoji is that defendants and plaintiffs (also senders and recipients) have different perceptions of the emoji at issue, particularly the emojis that can be used to denote assent, approval and encouragement in digital communications, such as sun ☀️, thumbs-up 👍, OK hand 🙌 and handshake 🤝. Such perceptions can be either undesigned or intentional: undesigned due to the ambiguous meaning of one emoji, and intentional for gaining a personal advantage in courts. It will be more difficult to identify an emoji's true meaning when it stands alone without any accompanying text. For instance, in the case *Daoyi Co. v. Lu*¹¹, *Lu* sent the lyrics he created to *Tian*, the legal representative of *Daoyi Co.*, and the latter then merely replied with the emoji 👍. The court held that this emoji was not an endorsement of *Lu's* lyrics but a polite reply, so it could not be considered as evidence that the lyrics delivered by *Lu* were in conformity with the contract. The two parties' varying understanding is because the emoji 👍 can be used to signal assent, approval or encouragement in digital communications¹². This emoji, as a polysemous sign, is open to a range of different interpretations. At trial, the plaintiff and defendant often construct their respective preferred meaning of this emoji according to their own positions and interests.

In the case *Zhizhou v. Pinyue*¹³, at the expiration of the lease, the lessor frequently sent WeChat messages to remind the lessee of the expiration of the lease and his will of increasing rents. Yet, the lessee only replied with an emoji sun ☀️, clarifying neither his intention of continuing renting nor that of moving out of the property. The lessor insisted that this emoji denoted the lessee's recognition and consent of increasing rents, whereas the lessee maintained that the lessor's claim lacked factual and legal basis. Finally, the court supported the lessor, stating that this emoji indicated that the lessee agreed to continue the lease by the standard of the rent increase. The lessee's and lessor's distinct meaning understanding can be ascribed to the lessee's use of emoji ☀️ to convey his opinion indirectly, whether deliberately or adventitiously. Such an indirect reply violates Grice's (1975) maxim of relation, making this emoji's intended meaning context-dependent (Holtgraves and Robinson, 2020).

Judges also play a significant role in invoking variation in emoji interpretation, primarily including the following two aspects: one

is variation concerning the evidentiary value of emoji evidence and the other is variation concerning interpreting the meaning of the same emoji. Nowadays, although the evidentiary values of emojis have gradually been recognized, there is no lack of judges excluding or minimizing their evidentiary values. For instance, in the case *Chen v. Wang*¹⁴, the plaintiff used three sets of WeChat emojis as evidence to show that the defendant continually harassed her, including four 🙌, six 😊, and four 🙄 emojis. Instead, the court did not wade into the meanings of these emojis during the fact-finding process, nor signal how they should be presented or interpreted. Similar cases were found in the US jurisdiction. For example, in the case *Elonis v. United States*¹⁵, the defendant argued that his conviction for posting threatening communications on Facebook should be reversed in part because the presence of emoticons in some of the posts made them "subject to misunderstandings" and not as threatening as they would otherwise have been. Finally, the court overturned the conviction but without reference to the meaning of the emoticons. Similarly, in the case *People v. George*¹⁶, the judge refused to take judicial notice of the precise meaning of the three emoticons. Hence, judges are not unanimous in assigning radical evidentiary values to emojis.

The variability issue also comes down to judges' different meaning interpretations of the same emoji-bearing texts. For instance, in the case *State v. D.R.C.*¹⁷, *D.R.C.*, after a fight with her mother, sent her friends messages including several texts that could be interpreted as threatening and violent such as "imma get her killed" and "Imma fucking kill this bitch". The lower court reasoned *D.R.C.'s* messages constitute true threats. Rather, the Washington appeals court reasoned that the context of *D.R.C.'s* statements about harming or killing was not indicative of a serious threat since the statements were accompanied by the face with tears of joy emoji 😂, a shrug emoji 🤷, a smiling face with horns emoji 🐮, a zany face emoji 🤪 and a heart emoji ❤️. Apparently, the two courts adopted different ways of construing the emoji-bearing messages entered as evidence in court: the lower court adopted a semantic perspective of the statements by recognizing only the literal meaning of the words in the messages, whereas the appeals court adopted a pragmatic or purposive approach by considering and identifying the purpose or actual intent of *D.R.C.'s* statements through the use of emojis. The pragmatic interpretation, which takes account of contextual factors, enables the exploration of the communicative meaning of a legal text (Slocum, 2017). Consequently, it is the strong endorsement of the pragmatic approach that allows for a careful reading of emojis that serve as critical evidence justifying *D.R.C.'s* intent.

Thus, it is argued that the meaning of an emoji may vary depending upon the individuals interpreting it. More specifically, users of emojis, such as plaintiffs and defendants in legal contexts, may disagree on the meaning of the same emoji. The judges, as critical interpreters of emojis, may hold inconsistent stances as to whether an emoji can be used as evidence in courts and how to interpret its meaning.

Variation across social groups. Social groups such as criminal groups and gangs may assign specific group-based meanings to existing emojis to maintain secrecy and establish a unique identifier system (Danesi, 2021). The present study also identifies similar ways of using emojis as code words and jargon by specific social groups, such as people working in the prostitution and gambling transactions in China and those working in the drug field in the US. During the process, an emoji first loses its original meaning assigned by the designer, and then becomes an identity sign or marker. In the Chinese prostitution case *Gao and Lai*¹⁸,

coffee ☕ emoji means that John is coming and the hooker should get ready, rose 🌹 emoji means that John is pleased with the hooker, the charge has been received and the prostitution service can be rendered, and wilted rose 🌿 emoji means that John has left and the service ends. In the case *Liang and Tan*, if emergent situations (for instance, the policeman is nearby) occur when the hooker is offering services, the massage workers will send the police car 🚓 emoji to notify the hooker. In the cases *Liang and Tan*¹⁹ and *Zhu, Deng and Peng et al.*²⁰, the smiley 😊 emoji was sent by the hooker to denote the end of the prostitution service and for reimbursement. In the gambling field, the gamblers often use the dice 🎲 emoji to determine their seating positions, such as in the case *Zhong and Wang*²¹. These cases indicate that emojis could lose their original meanings allocated by the creators and then be reconstructed by particular communities for specific purposes. Besides, emojis can function as identity markers and emblems within particular communities to foster in-group savvy.

As summarized in the report *Criminals and Violent Extremists Use of Emojis* published by three US intelligence agencies (JIB, 2020), emojis may serve as indicators of criminal activity including human trafficking, gang activity, drug use or sales, school threats, and other threats. For example, in the drug field, emojis may be used to indicate a specific type of drug (the snowman 🧊 and the snowflake ❄️ emojis), its potency (the rocket 🚀 and fire 🔥 emojis), its weight (the billiards 🎱 emoji) or its price (the backpack 🎒 emoji) (JIB, 2020). In a US drug-related case *Johnson v. State*²², the fire 🔥 emoji acts as a critical emoji in figuring out the criminal's intent since the expert testified that it meant that the drugs were really good and the State argued that "the use of the fire emoji demonstrates Mr. Johnson's knowledge that the drug sale was so inherently dangerous as to show a wanton disregard for human life".

In social semiotic terms, the above analyses show that emojis' meanings can be attached by particular social groups or discourse communities in given contexts to achieve specific social goals, such as facilitating communication, avoiding sensitive wordings, avoiding leaving traces and evidence for the police, and establishing an identity identifier system. For legal professionals, emojis can be employed to decode the code words and jargon of a particular social group and to infer the criminals' intentions.

Linguistic-cultural variation. Certain emojis are assigned with culture-loaded meanings, probably leading to cultural variation in using and interpreting emojis. The true understanding and interpretation of an emoji should be interwoven within specific cultural backgrounds and based on shared cultural knowledge between individual participants. In the case *Beijing v. Li*²³, the court decided that "🐍🐭一窝" indicates derogatory and insulting remarks. The animal emojis 🐍🐭 respectively correspond to two Chinese characters 蛇[shé] (snake) and 鼠[shǔ] (rat), which constitute a Chinese four-character idiom in tandem with their subsequent two Chinese characters 一[yī]窝[wō], namely 蛇鼠一窝[shé shǔ yī wō] (Original: snakes and rats in the same nest. Metaphorical: bad people work together). In Chinese culture, both snakes and rats, as two of the twelve zodiac animals, tend to be used in extremely negative or derogatory senses. For example, rats in Chinese idioms are often metaphorically associated with timidness, shortsightedness, evilness and ugliness (Wang et al., 2014), and snakes are metaphorically described as vicious and greedy (Zhao and Qu, 2015).

The Chinese and US cultures may assign different metaphorical meanings to the same animal emoji. For instance, in the case *People v. Smith*²⁴, the court concluded the rat 🐭 emojis in the

defendant's Facebook comments disparaging the plaintiff were used to convey that the plaintiff was a despised female who had snitched. Rat in modern American slang is a well-known euphemism to label those who are disloyal or untrustworthy (Dalzell, 2009). Although the rat emoji is endowed with negative connotations in both cultures, rats are rarely metaphorically construed as disloyal in Chinese culture. Accordingly, though the rat emoji refers to virtually the same mammal in both cultures (no matter what specific form it takes), its interpretant may vary considerably. It is thus argued that deciphering the symbolic meaning of the animal emojis requires lots of cultural and spatial contexts to obtain the metaphorical implications.

Similarly, in the US case *Taylor Dumpson v. Brian Andrew Ade et al.*²⁵, the court ruled that the monkey 🐵 emojis, especially in combination with banana 🍌 emojis, are commonly used as a form of racist insult to dehumanize, belittle or intimidate African Americans. The monkey 🐵 emoji does not connote a negative meaning in China since monkeys in Chinese culture are considered clever or playfully naughty, and Chinese people are by and large fond of monkeys, possibly influenced by the classic tale, *The Monkey King* (Zhang, 2010: p. 65). By contrast, the monkey can receive a derogatory perception in the US context where racism against blacks has been deeply embedded in American culture (Gadlin, 1994). Consequently, the same emoji can have radically different implications in different cultural contexts, making emojis' meanings enacted in specific social and cultural settings. It is suggested that the judges perceive emojis as a "culturally constituted sign-system" (Wagner et al., 2020b: p. 239) and interpret such emojis through the prism of tacit knowledge such as culture, particularly when dealing with emoji cases caused by cross-cultural miscommunication and when ascertaining the parties' actual intentions in such cases.

Conclusions

An emoji, as a sign, is plentiful of potential meanings and is contingent upon time and space. This study contributes to the existing body of knowledge on emojis in courts in two ways. Firstly, it adds to prior scholarship by offering a more systematic empirical and cross-jurisdictional investigation of emoji variation phenomena in courts, with novel variation phenomena uncovered, such as the variation in court cases under different rules of evidence. Secondly, it contributes to the growing body of literature on emojis in courts by examining how emojis as evidence in courts are used and interpreted in China, which is underexplored in the existing literature. Findings show that the emoji variation phenomena could be invoked by an ensemble of "semiotic encounters" (Agha, 2007: p. 10), including designer-user interaction, sender-recipient interaction in daily communication, as well as plaintiff-defendant-lawyer-investigator-judge interaction in courts. Hence, the meaning variation of an emoji is constrained by such contextual cues as platforms, time, legal cases with different rules of evidence, individual participants, social groups and cultures, which may pose interpretative challenges for legal decision-making. In other words, an emoji cannot be construed to have a meaning that is inconsistent with other sign systems such as time, culture, society and legal system in which it is located.

As alluded to above, the social semiotic interpretation of emojis points up the interpretation of emojis in authentic contexts of use, since emoji semantics is generally inadequate to perceive the intended meaning of emoji-laden messages (Dainas and Herring, 2021). Legal professionals are thus recommended to pore through the multi-layered contextual elements for the real meaning of an emoji or emoji-bearing texts. Moreover, it is incumbent upon judges to precisely clarify the contextual meanings of emojis in courts. The contextualized interpretation of emojis, in turn, can

aid the courts in examining and identifying evidence, such as the use of temporal cues to authenticate the emoji-laden messages as digital evidence and the use of cultural or community information to infer emojis' intended meanings.

The foregoing cases reveal that the emoji variation phenomena are also concerned with judges' interpretive approaches to emojis or emoji-bearing messages. Their differing approaches may determine whether the literal meaning or communicative meaning of digital evidence should be prioritized and even result in divergent decision results. This paper thus claims that the legal meaning of digital evidence should be pinpointed across the spectrum of both its semantic meaning and communicative meaning. The examination of communicative meaning arises from a pragmatic interpretation and gives expression to the context in which the legal text is interpreted. In a sense, the pragmatic interpretation resonates with the basic tenets of social semiotics, namely the emphasis on the use of signs and the context-bound nature of their meanings (Chandler, 2017). It allows legal professionals to devote more care to both the authorial intention of the emoji-bearing texts and the values of the legal system.

This study also provides practical insights into the rules of digital evidence regarding emojis, particularly evidence admissibility and investigation. Firstly, the cases reveal that failure to admit emojis' evidentiary values can give rise to markedly different conclusions. Within the ambit of the law of evidence, it is of importance to clarify the situations in which other kinds of evidence should be prioritized over digital evidence. Even though China is a civil law jurisdiction where case law does not constitute a formal source of law, the guiding cases released by the Supreme People's Court (hereinafter SPC) could acquire de facto binding effect through the SPC's authority over lower courts (Herbots, 2018). As provided in Article 2 of the 2020 *Notice by the Supreme People's Court on the Guiding Opinions on Unifying the Application of Laws to Strengthen the Retrieval of Similar Cases* in China, a people's court shall refer to the guiding cases released by the SPC when adjudicating similar cases. It is thus suggested that the SPC release relevant guiding cases pertaining to digital evidence including emojis to provide explanatory guidance for lower courts. Secondly, given the fragile and easily fabricated nature of digital evidence, the authenticity and integrity of emoji-bearing texts should be ensured throughout the investigative process. Such an inability could lead to a failure to punish a guilty party. Additionally, their originality should be prioritized by attorneys, investigators and judges alike since an emoji may be diverse across platforms and over time, and any changes or alterations to an emoji's visual appearance may result in a differing interpretation of its meaning.

It is noteworthy that this paper does not seek to exhaust all the variations that emojis can bring for their meaning interpretation in courts, but it is aimed at examining how different contextual variables shape or affect the emoji meaning in courts by illuminating the elicited essential variations. Besides, a definitive and full category of emoji variations would probably be impossible to tabulate since emojis as semiotic signs are fluid by nature. Further research could investigate how the meaning variation of emojis in courts is triggered by such contextual factors as gender and age that have been proven able to influence people's emoji usage and meaning interpretation in daily communication (Herring and Danias, 2018, 2020).

Data availability

The datasets analyzed during the current study are available in the China Judgments Online [<https://wenshu.court.gov.cn>] and West-Law database [<https://legal.thomsonreuters.com/en/westlaw>].

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Notes

- 1 See <https://www.statista.com/statistics/258749/most-popular-global-mobile-messenger-apps/>. Accessed 28 January 2022.
- 2 United States v. Ulbricht, 79F. Supp. 3d 466 (2015).
- 3 Kinsey v. State, 2014 WL 2459690 (2014).
- 4 People ex rel. R.D. 2020 CO 44 (2020).
- 5 Scissors Co. v. Liao Xuanwang, Yangjiang Interm. People's Ct., Guangdong Province, China (2019).
- 6 Xie v. Liu, Jiangcheng District People's Ct. of Yangjiang City, Guangdong Province, China (2020).
- 7 Rossbach v. Montefiore Medical Center, 2021 WL 3421569 (2021).
- 8 Nunez Bardales v. Lamothe, 423F. Supp. 3d 459 (2019).
- 9 Friedrich v. Friedrich, 983F.2d 1396, 1400 (1993).
- 10 Zhang v. Yan and Jia, Fuyang Intem. People's Ct., Anhui Province, China (2021).
- 11 Daoyi Co. v. Liu, Shenzhen Intem. People's Ct., Guangdong Province, China (2019).
- 12 See the definition of thumbs up emoji, <https://www.dictionary.com/e/emoji/thumbs-up-emoji/>. Accessed 2 March 2022.
- 13 Zhizhou v. Pinyue, Baoan District People's Ct. of Shenzhen City, Guangdong Province, China (2019).
- 14 Chen v. Wang, Bijie Intem. People's Ct., Guizhou Province, China (2020).
- 15 Elonis v. United States, 575 U.S. 723 (2015).
- 16 People v George, 2018 WL 2191559 (2018).
- 17 State v. D.R.C., 13 Wn. App. 2d 818 (2020).
- 18 Gao and Lai, People's Ct. of Xinfeng county, Shanxi Province, China (2020).
- 19 Liang and Tan, Guangnan District People's Ct. of Guigang City, Guangxi Zhuang Autonomous Region, China (2020).
- 20 Zhu, Deng and Peng et al., Yuhang District People's Ct. of Hangzhou City, Zhejiang Province, China (2019).
- 21 Zhong and Wang, Xinmi People's Ct., Henan Province, China (2019).
- 22 Johnson v. State, 245 Md. App. 46 (2020).
- 23 Beijing v. Li, The Fourth Intermediate People's Ct. of Beijing Municipality, China (2020).
- 24 People v. Smith, No. B284766, Cal. App. Unpub. (2019).
- 25 Taylor Dumpson v. Brian Andrew et al., 2018 WL 2022303 (2018).

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