

You're so mean but I like it – Metapragmatic evaluation of mock impoliteness in Danmaku comments

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ABSTRACT

Mock impoliteness, a term encompassing a wide array of phenomena (e.g., banter, teasing, mocking, jocular mockery, jocular abuse/insults, humour, etc.), has long been grounded in the framework of (im)politeness. However, the research on the participants' metapragmatic evaluations of mock impoliteness is scarce, with the exception of Sinkeviciute (2017). This research aims to investigate the third-party participants' metapragmatic evaluation in Danmaku comments in a Chinese online talk show *Roast!* that features mock impoliteness speech events. Danmaku, as a commenting system that displays users' synchronous comments within the video stream, is widely used in Asian countries, especially in China and Japan (Wu & Ito, 2014). Danmaku comments provide easy access to a vast amount of third-party participants' evaluations of mock impoliteness, which is an ideal data source for this research. Such metapragmatic evaluations offer invaluable insight to the first-order understanding of mock impoliteness, which resonates with the discursive approaches to (im)politeness that advocates first-order understanding of (im)politeness interactions (Eelen, 2001; Locher and Watts, 2005; Locher, 2006, 2012, 2015; Mills, 2003). By qualitatively categorizing the information provided in the Danmaku comments, a data-driven coding scheme is created, which captures different aspects of information: (i) in-text reference (*Referent* and *Speech Event*); (ii) pragmatic phenomena that is relevant to mock impoliteness (*Impoliteness* and *Funniness*), and (iii) metapragmatic evaluation (*positive/negative Evaluation*). Then a conditional inference tree model (Hothorn et al., 2006; Tagliamonte and Baayen, 2012; Tantucci and Wang, 2018) was fitted to investigate to what extent the above factors contribute to third-party participants' metapragmatic evaluations of mock impoliteness. This method generated clear data visualization by displaying the ranking of contributing factors to the metapragmatic evaluations. Such quantitative results were then interpreted through qualitative analysis of typical examples from the data. The analysis concludes that funniness and impoliteness are the two most statistically significant factors contributing to Danmaku users' qualitative evaluations. This conclusion, in return provides solid empirical evidence for second-order theoretical underpinning of mock impoliteness.

1. Introduction

Mock impoliteness, as an umbrella term that covers many phenomena in (im)politeness research, has been studied under terms such as teasing, jocular mockery/insults/abuse, ritualized insults, kidding and joking. However, research on the viewers' metapragmatic evaluations of mock impoliteness is scarce. Recently, a popular show *Roast!* in China has thrived on mock impoliteness. The technical affordance of its rather novel commenting system — Danmaku, offers an excellent opportunity to investigate viewers' metapragmatic evaluations of mock impoliteness. This paper will firstly examine the literature of metapragmatic evaluations and mock impoliteness in Section 2. Section 3 introduces the source of the data — Danmaku and *Roast!*. Section 4 explains in detail

the process of data collection, the development of a data-driven coding scheme and a rather novel machine-learning method — conditional inference tree model, fitted for statistic analysis. Section 5 illustrates the statistic results with extensive qualitative analysis and finally Section 6 draws the conclusion.

2. Metapragmatic evaluations and mock impoliteness

The study of metalanguage dates to Jakobson's (1960) metalingual function of language. However, as Sinkeviciute rightly points out, the term *metapragmatics* “appears to be somewhat new” (2017: 42). Indeed, *metapragmatics*, as “the study of the metalinguistic dimension of language”, has recently received more attention since Verschueren's call

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that it is not only merely interesting and useful, but also “absolutely necessary if we want to understand language use” (2000:441-442). Culpeper (2011:74) makes a clear distinction between metapragmatic comments and metalinguistic expressions: a metapragmatic comment is an opinion about the pragmatic implications of utterances, their functions, indexical relations, social implications, and so on (e.g., “That’s rude”); while metalinguistic expressions are the linguistic expressions conventionally understood within a speech community to refer to such metapragmatic evaluations (e.g., “rude”). The aim of this paper is to understand how mock impoliteness is evaluated via metapragmatic comments, though of course, metalinguistic expressions are important parts of the metapragmatic comments.

Mock impoliteness research is grounded in (im)politeness research. Leech (1983:144) uses the term mock impoliteness to refer to an offensive way of being friendly, which equals to behaviors known as “banter”. Having attracted much scholarly attention for several decades (Culpeper, 2005, 2011; Culpeper et al, 2017; Mills, 2003; Grainger, 2004; Terkourafi, 2008; Haugh, 2010; Haugh & Bousfield, 2012), mock impoliteness is now commonly viewed as an umbrella term encompassing a wide array of phenomena, such as teasing (Eisenberg, 1986; Drew, 1987; Norrick, 1993; Boxer & Cortés-Conde, 1997; Partington, 2008; Dynel, 2009); jocular mockery/insults/abuse (Labov, 1972; de Klerk, 1997; Kienpointner, 1997; Zimmermann, 2003; Bernal, 2008; Albelda Marco, 2008; Fuentes and Alcaide, 2008; Schnurr and Holmes, 2009; Haugh and Bousfield, 2012; Maiz-Arévalo, 2015; Chen, 2019), ritualised insults (Dayter, 2017; Eder, 1990; Kochman, 1983; Labov, 1972), and kidding and joking (Haugh, 2016; Goddard, 2018). Not surprisingly, these different labels focus on different aspects of mock impoliteness where contradictions regarding its definition can be found. Culpeper (2011) and Culpeper & Haugh (2014) view mock impoliteness as the opposite of genuine impoliteness and defines it as consisting “of impolite forms whose effects are (at least theoretically for the most part) cancelled by the context” (Culpeper, 2011:208). Haugh and Bousfield (2012:1099) hold that “jocular mockery and jocular abuse very often occasion evaluations of mock impoliteness, that is evaluations of potentially impolite behaviour as non-impolite, rather than politeness or impoliteness per se”. Although generally mock impoliteness is associated with banter and teasing, and mock politeness with sarcasm, many studies argue that such distinction is not straightforward. Culpeper et al. (2017: 334) argue that “mock politeness and mock impoliteness are not limited to sarcasm and banter respectively, as they can arise through a range of different actions or practices”, such as jocular mockery/abuse in Haugh and Bousfield (2012). Taylor (2015:76) also points out that “the sub-types of mock impoliteness may also be seen to overlap with those of mock politeness”. Moreover, mock impoliteness is even understood as “overtly pretended politeness” in Dynel’s (2016) study. Therefore, a working definition of mock impoliteness is needed, which draws on 3 prototypical features agreed upon in the previous literature: (i) the speaker has no (ostensible¹) intention to cause offence; (ii) there is a certain degree of impoliteness in the messages communicated; and (iii) the target or the hearer perceived them without overtly (ostensible) taking offence. This working definition offers a guideline in identifying mock impoliteness speech acts for the ensuing study.

Understanding mock (im)politeness through metapragmatic evaluations also resonates with the discursive approaches to (im)politeness, which advocate first-order understanding of (im)politeness interactions (Eelen, 2001; Locher and Watts, 2005; Locher, 2006, 2012, 2015; Mills, 2003). Such discursive approaches, in return can provide solid theoretical (second-order) underpinning of (im)politeness.

A few empirical studies investigate people’s evaluative judgements of (im)politeness (Chang and Haugh, 2011; Fukushima, 2013; Haugh

and Chang, 2019; Kárdár and Marquez-Reiter, 2015), and some researchers focus on the theorization of the evaluation process (e.g., Culpeper, 2011; Davies, 2018; Haugh, 2013; Spencer-Oatey and Kádár, 2016; Spencer-Oatey and Xing, 2019). However, the work related to the evaluation of mock impoliteness is scarce with only a few exceptions. Haugh and Bousfield (2012) discuss the evaluations of mock impoliteness yet they do not focus on metapragmatic evaluations (2012:1109). Sinkeviciute’s (2017) work studies the metapragmatic evaluations of jocularity from the perspective of non-participants (recruited interviewees). This area still requires further theoretical and empirical research.

Danmaku data is a promising source for studying metapragmatics. Previous research on metapragmatics collected data through questionnaires (Ide et al., 1992), corpus (Pizziconi, 2007; Culpeper, 2011), reports (Culpeper, 2011) and interviews (Obana and Tomoda, 1994; Spencer-Oatey, 2011; Fukushima and Haugh, 2014; Sinkeviciute, 2017). Danmaku data, which is unelicited data from many individuals, offers a different perspective on issues of metapragmatics compared to elicited data. In addition, Danmaku as a rather novel type of data is of descriptive interest in its own right. The data-driven coding scheme developed and the conditional inference tree model adopted to study unelicited participants’ metapragmatic evaluations of mock impoliteness will also contribute to theory and method.

3. Danmaku and Roast!

Danmaku is a commenting system that has been widely applied to video websites in Asian countries, especially in China and Japan (Wu & Ito, 2014; Zhang & Cassany, this issue). This system was created by Niconico, an ACG (animation, comic, game) video website in Japan in 2006 (Hsiao, 2015). In Japanese, the term Danmaku means barrage, or “bullet strafe” (Lin et al, 2018:274). In Chinese, it is also called “danmu” (弹幕) since its introduction in China around 2010 (Hsiao, 2015).

A few studies on Danmaku focus on the system itself within the discipline of informatics and media studies (Wu and Ito, 2014; Liu et al, 2016; Chen et al 2017; Lin et al, 2018). Within Computer-mediated communication (CMC), Hsiao (2015) studies *tucao* (roast) and face-threatening acts in *danmu*; Zhang and Cassany (2019a) explore multimodal humour in Danmaku; Locher and Messerli (2020, this issue) investigate a similar system (Viki’s timed comments) in communal TV watching of Korean TV drama; Yuhong (2021) focuses on users’ collaborative translation on the *danmu* interface; and Teng and Chan (2022) studies the use of colour as a semiotic resource for meaning-making in *danmu*. While research on Danmaku is increasing, this area is predominantly situated in Asian cultural contexts. Recently, commenting systems that resembles Danmaku (such as Periscope, Twitch.tv, timed comments) are also spreading to western media practices, which deserves further scholarly attention.

The Danmaku data for this research is collected from a show *Roast!*. *Roast!* (吐槽大会 Tu Cao Da Hui) is an online comedy talk show exclusively aired on Tencent Video², a major Chinese video streaming website. Each episode of *Roast!* invites several celebrities to roast each other. Dynel and Poppi (2019: 03) define a roast as “a humorous interaction (private or mass-media) in which one or more individuals is/are subjected to jibes, i.e., disparaging remarks, produced by roasters with a view to amusing themselves and others, including the target (the roastee)”. *Roast!* provides a great opportunity for an investigation of mock impoliteness in depth.

The show had run for 3 seasons when this research started in 2019 and it has reached 5 seasons as of 2023. Each season of the show contains 10 episodes, with each episode lasting about 90 min including advertisements. This research collected data only from the first two seasons as they were carried out in the same format. Each episode invites

¹ Since the researchers can never truly access the intention of the speaker or the feeling of the hearer, ostensible (para)linguistic cues are relied on to make such judgements (see Liu, 2022:29-33 for further detail).

² <https://v.qq.com/detail/5/50182.html>.



Fig. 1. The display of Danmaku comments in the show *Roast!*.

a celebrity as the major guest (主咖 Zhu ka) and then the major guest invites their celebrity friends, colleagues or staff as the “minor” guests (副咖 Fu ka). The host, also called “Captain Roast” (吐槽队长 Tu Cao Dui Zhang), roasts each guest as he introduces them. The “minor” guests then take turns to roast every person on stage, leaving the major guest the opportunity to roast them and the host at last. This format allows the host and guests to shift between two roles — roaster and roastee, who are the participants of the mock impoliteness interactions. Importantly, the Danmaku users also actively participate in the mock impoliteness interactions. For instance, one roaster asked the Danmaku users to type “Chizi (a roastee) is shameless” during his performance, and many Danmaku users typed the exact comments. Unlike post-facto commenters underneath a YouTube video, the Danmaku users’ contributions are an integral part of the dynamics of mock impoliteness. Therefore, Danmaku users are termed as third-party participants in this research, which is different from non-participants (recruited interviewees) in Sinkeviciute’s (2017) study.

In the show *Roast!*, the Danmaku comments are displayed from right to left at the top of the video frame as presented in Fig. 1 below, which can be turned off by users. The host Shaogang Zhang, who will be mentioned in the examples and analysis in section 4 and 5 is seen in Fig. 1. The text at the bottom left is subtitles and the logo of the show appears at the bottom right, where “vivo” is the logo of the sponsor of the show. Vivo is a technology company and develops and sells mobile phone, and their latest model “x20” at the time of the show was being advertised on the host’s desk.

4. Data and methodology

4.1. Danmaku data collection

The collection of Danmaku data followed three steps.

First, the eighth episode of the first season of show *Roast!* were chosen for a pilot study, then the eighth episode of the second season were randomly³ chosen (referred to as S01E08 and S02E08 hereafter) to compare if the patterns revealed in one episode also apply to the other.

Second, as this research aims to investigate the metapragmatic evaluations of mock impoliteness, it is important to ensure that the data collected are indeed evaluating *mock impoliteness* rather than other

issues. According to the working definition of mock impoliteness (Section 2), 405 mock impoliteness speech acts (213 in S01E08 and 192 in S02E08) are identified. It is important to emphasize that the process of identifying mock impoliteness episodes does not take Danmaku comments into consideration, as it would be circular to identify mock impoliteness by relying on Danmaku comments and then analyse how such mock impoliteness episodes were evaluated in the Danmaku comments. The mock impoliteness episodes were analysed in (Liu, 2022) to study the construction of mock impoliteness, where the adopted analytical/coding frameworks ensure each mock impoliteness speech act demonstrates all three prototypical features of the working definition. Building on mock impoliteness speech acts, a larger unit is called mock impoliteness event. In the show *Roast!*, mock impoliteness speech acts often appear in clusters within one participant’s turn of roasting, which leads to the related evaluations pointing to such clusters instead of a particular act (mostly). Therefore, a mock impoliteness event is defined as a group of mock impoliteness speech acts produced by one speaker during their turn of roasting.

Third, only Danmaku comments that pertain to the metapragmatic evaluations of the identified mock impoliteness speech events were then collected through two methods:

- i) When the Danmaku comments explicitly refer to the roaster, the roastee by using their names or repeating a phrase uttered in a speech event, such comments are collected.
- ii) The Danmaku comments that appear to be in the same cluster of a comment that is collected according to method i), and any comments that appear in the short interval between two speech events are collected.

The method ii) is adopted based on the “pseudo-synchronicity” of Danmaku proposed by Johnson (2013:301), which refers to the fact that the collection of comments appearing on the video frame together are posted by viewers at the same moment in the timeframe of the video (“text-time” in narratology, see Rimmon-Kenan, 2002: 45-48) (see also Locher and Messerli, 2020:23-24; Chen et al., 2017: 2; Zhang and Casany, 2019a,b: 2). Therefore, when a Danmaku comment appears to be in the same cluster of a comment that can be collected via method i), or when it appears in the short interval between two speech events, it is very likely that they also react to the former speech event. Such comments still reveal significant evaluations of mock impoliteness and constitute 53.4% (S01E08) and 48.3% (S02E08) of the collected Danmaku data. However, method ii) poses a difficulty for further data

³ The data was indeed chosen randomly using Research Randomizer <https://randomizer.org>.

Table 1
Danmaku Coding Scheme.

Coding Category	Description	Coding value
Referent	This category codes for the referents of the Danmaku comments, i.e. who/what they are talking about.	Roaster Roastee Roasting ¹
Speech Event	This category corresponds to which mock impoliteness speech events the Danmaku comments refer to.	0, a, b, c, d, etc. • Speech events are sequentially labeled as a, b, c, etc. • “0” represents the data collected via method ii) in Section 4.1
Impoliteness	A list of indicators (Table 2) is used as evidence for coding.	Yes No
Funniness	A list of indicators (Table 3) is used as evidence for coding.	Yes No
Evaluation	This variable codes for whether there is a positive or negative evaluation towards mock impoliteness. ²	PositiveNegative • Positive/negative evaluations can be indicated by stance markers, such as “I like it”, “I hate it”, etc or positive/negative attitudes towards the participants.

¹ When neither roaster nor roastee is mentioned, the Danmaku comment is coded as roasting. This applies to example [3].

² One might expect that this variable could overlap with *Impoliteness* and *Funniness* in that impoliteness seems to be more negative while funniness more positive. However, this is not the case in the Danmaku Data. There are examples where a comment positively evaluates aspects of impoliteness of a mock impoliteness speech event, and examples where the positive/negative evaluation does not involve funniness at all as demonstrated in Table 4.

coding, as one can never be 100% sure if they are linked to a particular speech event. A methodological compromise was made by labelling such Danmku comments with a “0” value for the coding category of Speech Event (see Table 1, Section 4.2). The effect of this methodological compromise is not significant, as the results in Section 5 show that Speech Event turned out to be the least significant factor.

Based on these selection criteria, 653 and 522 Danmaku comments for S01E08 and S02E08 respectively were collected. The data collection adheres to the primary ethical norms —“respect for persons, beneficence and justice” stated in AoIR (2020:4). The Danmaku comments are publicly available, anonymous, unsearchable and do not involve sensitive information.

4.2. Danmaku coding scheme

A data coding scheme emerged when categorizing different aspects of information that can be *textually* derived from each Danmaku comment. Below are 3 examples.

[1]. 张绍刚太搞笑了, 都返回看几遍

“Shaogang Zhang is too funny, I even went back to watch it again several times”.

[2]. 王岳伦被吐槽的好惨啊

“Yuelun Wang is roasted (so much) that he must feel miserable”.

[3]. 好贱 好喜欢

“(This roasting is) so mean, (but I) like it very much”.

Examples [1] and [2] refer to the roaster and the roastee respectively. Example [1] also *textually* evaluates what the roaster said as “funny”, while example [2] metapragmatically evaluates how mock impoliteness is done. Example [3] metapragmatically evaluates the

Table 2
Indicators of Impoliteness.

	Original terms in Danmaku	Translation	Notes
Metalinguistic terms	过分 (挺/太/够) 狠 吐槽/吐 讽 贱 犀利 损	crossed the line Quite/too harsh/harshly enough roast mock/tease/jibe mean/despicable sharp/trenchant speak sarcastically/deride	
	怼	diss/mention, or speak to somebody rudely	
	堵	Make someone feel oppressed/suffocated	
	蹭/消费	leech off	This term is very contextualized in the data, meaning to gain attention by mentioning another celebrity
	砸(现)挂	tease	A term in Chinese traditional crosstalk, which refers to a method to create humorous effect by making fun of someone
	一夸一踩 黑/自黑/自嘲	praise and trample ridicule/ridicule oneself/mock oneself	
	敢说/不敢 深吐 说/提	dares (not) comment/ roast talk/speak about/criticize/mention	Such terms are contextualized in the data for some cases to mean “criticize”
	嘴好毒/毒舌 得罪 冒犯 骂街/骂	foulmouthed offend offence call people names in public/abuse	
	开涮 欺负 诅咒 打脸	joke bully curse Slap on the face	This terms explicitly mentions the notion of “face” in both literal and figurative sense.
	不要脸	not wanting face (shameless/shameful)	This term explicitly mentions the notion of “face”
Impolite retorts	忘恩负义 欺师灭祖	ungrateful extremely disrespectful and sinful	
	不知道感恩 小肚鸡肠 你才(猥琐)	ungrateful petty/vindictive You are (obscene)	This is sort of a tit-for-tat response to the roaster’s comment on the roastee being obscene.
	太能伤害了	very hurtful	
	(说话)太讨厌	(what was said/how it was said) too annoying	
	(这句话)有点可怕 要被打死了	(this utterance is) quite scary (someone) is going to be hit to death	
Negative attitudes			

(continued on next page)

Table 2 (continued)

	Original terms in Danmaku	Translation	Notes
	(这句)是暴击 要哭晕了 针针见血 好扎心啊	(because of what they said) (this) is a great/harsh attack (roastee) is going to cry so much to faint (what was said) is like a needle that makes the (hearer) bleed very hurtful	

Table 3

Indicators of Funniness.

	Original forms in Danmaku	Translation	Notes
Forms imitating laughing	哈哈(哈哈)	Haha	onomatopoeia
	嘿嘿(嘿嘿)	Hehe	
	ㄅ/ㄅ/ㄅ	ㄅ/ㄅ/ㄅ	
	哈哈(ㄅ/ㄅ)	Haha (ㄅ/ㄅ) hiahiahia	
Terms describing funniness	梗	joke	A term used in Xiangsheng ¹
	包袱	punchline	
	段子	joke	
	笑点	Things that are considered funny/laughable	
	喜感	funny	An expression for exaggeration
	(不)搞/好笑	(not) funny	
	好逗/玩	Very funny/amusing	
	冷/干	Joke falls flat	
	有意思/无聊	Interesting/boring	
	笑(哭/疯/死/尿/傻/岔气)(了)	(I'm) laughing so hard that (I'm) crying/crazy/dying/peeing/silly/(having)trapped wind	
	尴尬地抠脚	(this is) so awkward that (I'm) scratching my feet	
	尴尬死了	(this is) so awkward that (I'm) dying	
	尴尬癌犯了	(having an) awkwardness cancer attack (as in heart attack)	

¹ Xiangsheng, also known as crosstalk or comic dialogue, is a traditional performing art in Chinese culture, which dates to late Qing dynasty.

mock impoliteness act as “mean”, but also demonstrates positive evaluation by textually indicating “I like it very much”. Such information can be further categorized to develop a coding scheme, which allows for further quantitative analysis that could reveal what factors and how such factors could contribute to the metapragmatic evaluations of mock impoliteness at the level of statistical significance. Table 1 below demonstrates this coding scheme:

As for the category of Impoliteness and Funniness, recurring terms emerged from the data that could indicate whether Impoliteness or Funniness are textually perceived by the third-party participants. Table 2 and 3 below list such indicators which are used as textual evidence for coding the two categories. Variations and combinations of a few indicators also occur in the data.

In this way, the collected Danmaku comments can be coded according to the above 5 variables. A coding sheet comprising the

Table 4

Demonstration of Danmaku coding sheet.

Danmaku	Referent	Speech Event	Impoliteness	Funniness	Evaluation
[1]张绍刚太搞笑了,都返回看几遍 Zhang is so funny, I rewound to watch it several times	Roaster	a	No	Yes	Positive
[2]王岳伦被吐槽的好惨啊 Yuelun Wang is roasted (so much) that he must feel miserable	Roastee	b	Yes	No	Negative
[3]好贱 好喜欢It's so mean, (but) I like it	Roasting	0	Yes	No	Positive

variables is presented in Table 4 below (with example [1]–[3]):

This coding scheme captures 3 aspects of textual information in the Danamku data, including (i) in-text reference (*Referent* and *Speech Event*); (ii) pragmatic phenomena that is relevant to mock impoliteness (*Impoliteness* and *Funniness*); and (iii) metapragmatic evaluation (*Evaluation*) which is at the core of this study. This coding scheme is data driven. This means that the researcher did not set out to “find” elements such as the perception of impoliteness, or funniness in the data, rather, such elements were textually present in the data and then qualitatively categorized to develop the coding scheme. Referent and Speech Event information is explicitly present in the Danmaku comments. The coding of Impoliteness and Funniness relies on above indicators illustrated in Table 2 and 3, which are textual, and data driven. Evaluation which is coded according to explicit stance markers and positive/negative attitudes towards the roaster/roastee which in the case of Danamku data in *Roast!*, is often obvious as presented in Table 4. All ambiguous comments were excluded from the dataset. The coding scheme is thus data-driven involving as little subjective judgement as possible. Conducting an inter-rater reliability test was infeasible due to several reasons: i) it is an extremely demanding task for a rater to first watch the 2 chosen episodes, understand the coding scheme well and then code a large enough sample to establish reliability; ii) it requires the rater to be bilingual and understand various cultural references; iii) with the limited time and resources of this self-funded research, the researcher was unable to find a suitable rater. Therefore, intra-rater reliability was chosen and conducted successfully. The researcher repeated the coding process in four cycles within a 6-month interval, with agreement for each category over 99.7% each time. The intra-rater reliability demonstrates that the data-driven coding scheme is robust.

4.3. Conditional inference tree model

A conditional inference tree model (Hothorn et al., 2006; Tagliamonte and Baayen, 2012; Tantucci and Wang, 2018), which is “a method for regression and classification based on binary recursive partitioning” (Levshina, 2015:291), was fitted to investigate to what extent the above factors contribute to third-party participants’ metapragmatic evaluations of mock impoliteness. There are several advantages of this method in that the variable selection is unbiased, overfitting can be avoided, and the algorithm also returns the p-values to show how confident one can be about every split (Levshina, 2015). A split is the “binary recursive partitioning”, which is like the split of branches on a

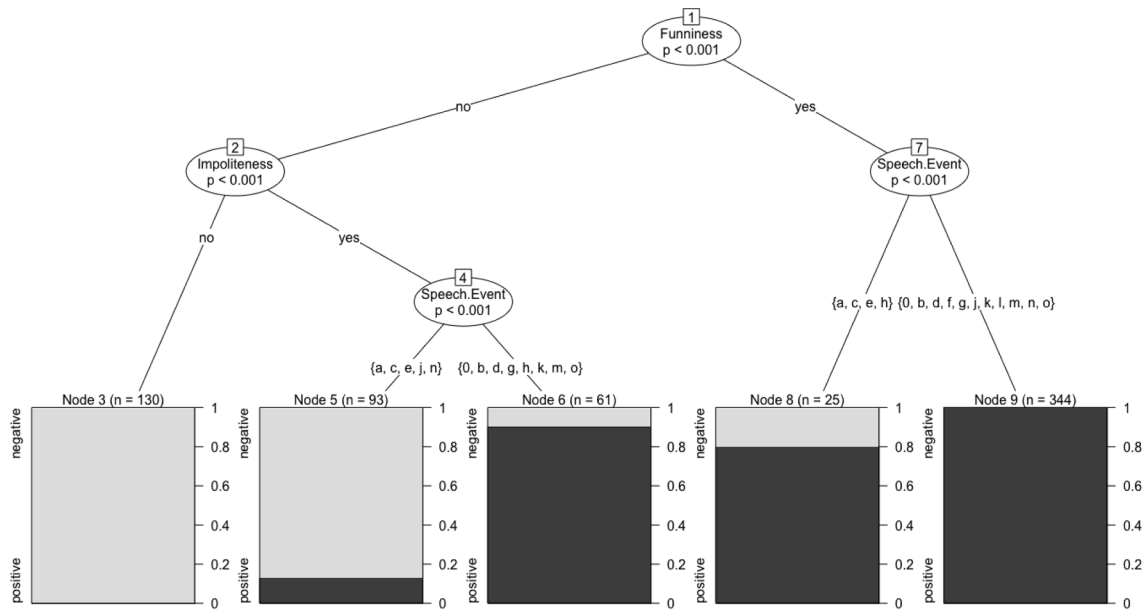


Fig. 2. Conditional inference tree of Evaluation for S01E08.

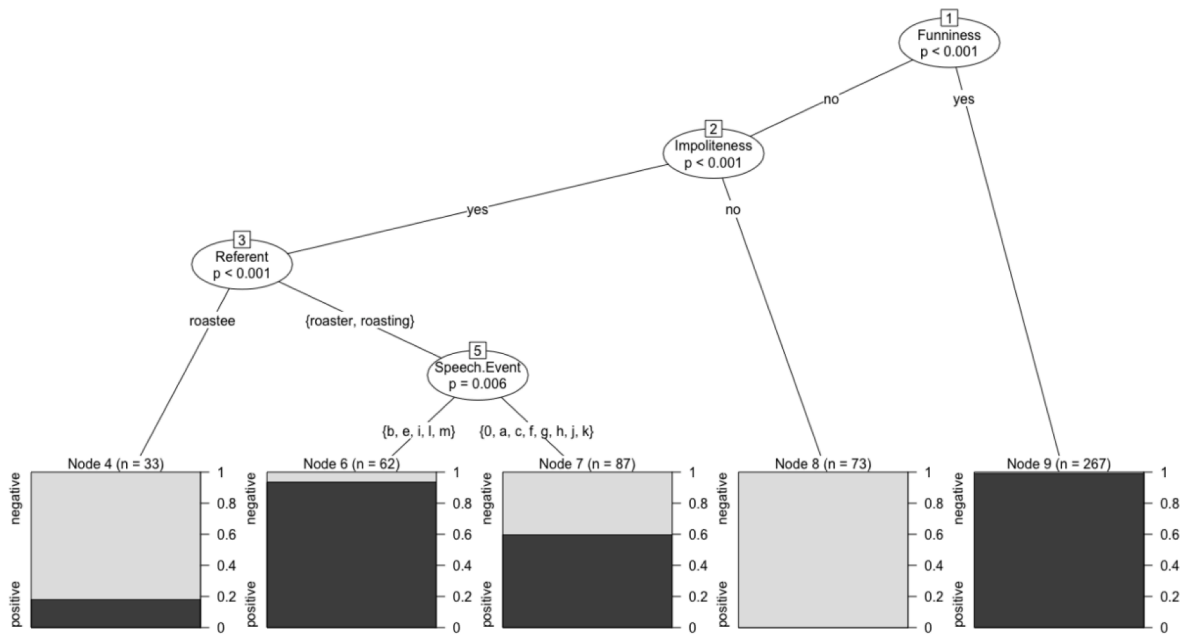


Fig. 3. Conditional inference tree of Evaluation for S02E08.

tree, only that this split is binary and determined by statistical significance (p-values). If we think of the metapragmatic evaluations as the fruits on a tree, the conditional inference tree model can visually display how the branches (factors such as Speech Event, Referent, Impoliteness and Funniness) split to result in ripe or unripe fruits (positive or negative evaluations). Just as the main branch is thicker than the branches split from it, the conditional inference tree displays the factors *hierarchically* according to their statistical significance. Therefore, this model was selected to investigate to what extent the above factors contribute to the third-party participants' metapragmatic evaluations of mock impoliteness.

5. Results and discussion

To continue the tree analogy, as the goal is to investigate how various factors (branches) extracted from the data contribute to the “Evaluation” (fruits), when fitting the conditional inference tree model to the data, “Evaluation” is the dependent variable, and “Speech Event”, “Referent”, “Impoliteness” and “Funniness” are the independent variables. The results of the conditional inference tree model are shown in Figs. 2 and 3 respectively:

Figs. 2 and 3 were obtained with the “ctree” function of the R package “party” (cf. Levshina 2015:291) and demonstrate to what extent each factor contributes to positive and negative evaluations.

Taking Fig. 2 for instance, each node, as displayed in the figure with numbers from 1 to 9, was generated based on the statistical significance

of conditional dependencies among variables, as indicated by the p-value. Nodes 3, 5, 6, 8 and 9 (the ones corresponding to the bars at the bottom of the Figure) show the distribution of Danmaku comments of the outcome variable, Evaluation, in two values, with the rising dark grey bars indicating positive evaluation and the falling light grey bars negative evaluation. The numbers in the brackets on top of the bars indicate the number of observations at each node, and the scales to the right side of the bars indicate percentages. Node 1, 2, 4, 7 correspond to the independent variables and are ranked spatially in terms of how significant they affect the dependent variable, Evaluation. The higher the node is spatially in the figure, the more significant that conditional decision is (cf. Tantucci & Wang 2018).

Each node simulates the “decision” made in the model at predicting the outcome variable, in this case, whether the evaluation is positive or negative. Based on the data fitted in this model, there are 5 hierarchical pathways (pathways hereafter) representing the decision-making process of the third-party participants’ evaluations (node 3, 5, 6, 8 and 9) depending on the effect of independent variables at node 1, 2, 4 and 7. Thus the five pathways represent the hierarchical effect of each node on the outcomes — pathway 1-2-3 (encompassing node 1, node 2 and node 3), 1-2-4-5, 1-2-4-6, 1-7-8, 1-7-9. Of course, the same way of interpretation applies to Fig. 3.

Comparing Fig. 2 and Figs. 3, 3 findings are revealed:

- i) The factors that influence the third-party participants’ evaluations are hierarchical, with Funniness being the most significant factor and Impoliteness the second most significant factor.
- ii) Referent contributes to evaluations in S02E08 but not in S01E08.
- iii) Speech Event in both data sets are the least significant contributing factor to evaluations, and there are always splits between groups of speech events where one group is more likely to be positively evaluated than the other.

The following analysis will address these findings one by one.

5.1. Funniness and impoliteness

The hierarchical pathways 1-2-3 in Figs. 2, and 1-2-8 in Fig. 3 indicate the same pattern. Taking pathway 1-2-3 (Funniness-Impoliteness-Evaluation) in Fig. 2 for example, the first factor (statistically significant at $p < 0.001$) in third-party participants’ evaluation is Funniness (node 1). When Funniness is not referred to by third-party participants, then the next contributing factor is impoliteness (node 2). When impoliteness is not referred to, then the evaluations of 130 Danmaku comments in node 3 are definitely (100%) negative. The following example demonstrates this clearly.

[4]. 无聊吗?这是吐槽大会。不是澄清大会

“Isn’t this boring? This is *Roast!*. Not *Clarify!*”.

Example [4] explicitly indicates the negative evaluation of the lack of impoliteness (“roast”) and funniness (“boring”)⁴. The pathway 1-2-3 in Fig. 2 demonstrates that when funniness is not mentioned, and when impoliteness is not mentioned either, the third-party participants always make negative evaluations. In other words, when third-party participants evaluate mock impoliteness, the focus is primarily on Funniness and then on Impoliteness. This result can be explained by a function of mock impoliteness, that is, exploitative entertainment, which “involves pain for the target but pleasure for other participants”

⁴ It is important to note that in English, boring is the opposite meaning of interesting, which does not necessarily contrast with funny. However, in Chinese, the semantic meanings of interesting and funny can be expressed by the same form, “有意思” (you yisi, interesting/funny), thus “boring” in example [4] is the opposite meaning of funny.

discussed in Culpeper (2011:215). The third-party participants want to be entertained, especially when they can exploit the pleasure at the cost of the roastees. The lack of Funniness and Impoliteness would thus result in a failure of exploitative entertainment, which is reflected in negative evaluations at node 3 in pathway 1-2-3. The pathway 1-2-8 in Fig. 3 indicates the same pattern, which validates that this pattern is consistent in both selected episodes.

5.2. Referent

In Fig. 3, pathway 1-2-3-4 (Funniness-Impoliteness-Referent-Evaluation) can be interpreted in this way: When Funniness is not referred to (node 1), then the next most influential factor is Impoliteness (node 2). When Impoliteness is referred to, then the next factor is Referent (node 3), and when the referent is roastee, more than 80% (light grey bar of node 4) of the 33 Danmaku comments are negative evaluations. Example [5] below demonstrates negative evaluation:

[5]. 王岳伦被吐槽得好惨啊

“Yuelun Wang is roasted (so much) that he must feel miserable”.

When the referent is the roastee, the evaluations tend to take a sympathetic view on the roastee being the target of mock impoliteness, thus resulting in negative evaluations. This finding echoes Sinkeviciute’s (2017:52) analysis of non-participants’ evaluations of potentially humorous remarks, that is, when non-participants comment from the target’s perspective, the evaluations project a negative attitude towards a jocular remark. An explanation is that when the third-party participants choose to refer to the roastee or target, potentially they are psychologically projecting themselves as the roastee or target, thus more likely to make negative evaluations of the remarks.

Occasionally, the third-party participants support the roastee being roasted as shown in example [6], although such cases are less than 20% in node 4.

[6]. 肖骁怼金主 这下被怼回来了吧

“Xiaoxiao dissed the investor and now he is being dissed back”.

In example [6], Xiaoxiao was the roaster of a previous speech event where he roasted a representative of the investor of the show, and in this particular speech event, the representative is now roasting Xiaoxiao. The construction of “这下。。。吧” (this time/now...ba⁵) indicates a somewhat gloating tone, that the one who roasted other people also deserves to be roasted back. This fits the Principle of (Im)politeness Reciprocity (PIR) proposed by Culpeper and Tantucci (2021:150), which is “a constraint on human interaction such that there is pressure to match the referred to or anticipated (im)politeness of other participants, thereby maintaining a balance of payments”. In the third-party participants’ view, Xiaoxiao being roasted back maintains a balance of payments. This comment reflects a judgement that the roastee deserves to be roasted, thus the evaluation towards the roasting (mock impoliteness) is positive.

5.3. Speech event

There are 2 splits (node 4 and node 7) of Speech Event in Figs. 2, and 1 split (node 5) in Fig. 3. All splits divide mock impoliteness speech events into two groups, where one group is more likely to be positively evaluated. Take the pathway 1-2-4-5 and 1-2-4-6 in Fig. 2 as an example, when the evaluations are about speech events a, c, e, j and n, the evaluations tend to be negative as more than 80% (the light grey bar in node

⁵ “吧-ba” is a sentence-final particle, which is a polysemous construction performing various functions (see Tantucci, 2017; Liu, 2022:29-33). A possible “equivalent” to its use in example [6] in British English is “eh”.

Table 5

Correspondence between each speech event and the roaster in S01E08.

Speech event	a	b	c	d	e	f	g	h	j	k	l	m	n	o
Roaster	Yunjin Cao	Dan Li	Yunjin Cao	Yuan Chang	Yunjin Cao	Jianguo Wang	Yunjin Cao	Yun Liu	Yunjin Cao	Chizi	Yunjin Cao	Yang Xiao	Yunjin Cao	Xiaolu Li

5) of the 93 Danmaku comments are negative evaluations. However, at node 6, when the evaluations are about speech events 0, b, d, g, h, k, m and o, the evaluations tend to be positive as more than 80% (the dark grey bar of node 6) of the 61 Danmaku comments are positive evaluations. Then what are the reasons that the speech events (a, c, e, j and n) in node 5 are statistically significantly ($p < 0.001$) different from the ones in node 6?

Each speech event is the unit of multiple mock impoliteness speech acts performed by one roaster. Therefore, there is a correspondence between each roaster and their speech events, which is demonstrated below in Table 5:

Interestingly, as presented in table 5, the speech events in node 5 (a, c, e, j and n) all correspond to the same roaster Yunjin Cao, who is also the host of the chosen episode S01E08.

The majority of the negative evaluations in node 5 appear to suggest that Cao or Cao's roasting tend to attract negative evaluations. There might be three reasons for this. Firstly, in S01E08, Cao was the standing host of the show as the usual host of the show, Shaogang Zhang was not available for this episode. Third-party participants who are not in favor of this substitution may compare Cao to Zhang and give negative evaluations such as example [7]:

[7]. 文化层次不一样, 张绍刚是吐槽, 这就是纯粹损人了 (speech event a)

"Their levels of education are not the same, while Shaogang Zhang is roasting, this is purely deriding people".

Secondly, example [7] also shows that the reason for a negative evaluation is possibly because the degree of impoliteness in Cao's roasting is too high, indicated by the use of "sun" (harm/damage/deride). To the third-party participants, the degree of impoliteness of "sun" seems to be higher than that of "tucao (roasting)", which supports Dynel's (2009: 1293) argument that "the degree of aggression in teasing is gradable". It may be argued that when the degree of impoliteness or aggression is acceptable (although what counts as acceptable varies among individuals and contexts⁶), the third-party participants would give positive evaluation, however when it goes over a certain threshold, then negative evaluation might incur.

Thirdly, Cao, as a Xiangsheng actor, constantly alludes to his dispute with his former teacher and ridicules him. This is considered as highly disrespectful, especially in the traditional art form of Xiangsheng in China, where the teacher-student relationship is often referred to as father-son like relationship. Thus, the act of mocking one's former teacher could entice severe criticism in Chinese culture, such as example [8]:

[8]. 不要脸! 没师傅你自己学的放屁!?? (speech event c)

"Shameless! How could you say that you don't have a teacher!?? Did you teach yourself to do crosstalk/fart!??".

However, for node 6, when the speech events (0, b, d, g, h, k, m and o) are of concern, more than 80% of the evaluations are positive. Except for speech event g corresponding to the roaster Cao, other speech events

correspond to other guests' turn of talking are positively evaluated such as example [9]:

[9]. 李小璐不错, 敢说会说!!!!!! (Speech event o)

"Xiaolu Li is not bad. She dares and can speak/roast!!!!!!".

This result indicates that when Funniness is not referred to while Impoliteness is referred to, the third-party participants evaluation is highly dependent on in-text reference, which may be further related to a specific referent, and/or the degree of impoliteness in mock impoliteness.

To summarise, the findings are:

- Funniness and Impoliteness are the most significant factors contributing to evaluations. Third-party participants tend to give positive evaluations when Funniness is referred to. After Funniness, Impoliteness is then likely to attract positive evaluations (although negative evaluations could incur when the degree of impoliteness is considered to have "crossed the line");
- Referent and Speech Event are correlated, and both episodes and evaluations are strongly dependent on in-text reference.

6. Conclusion

To conclude, Danmaku, as a rather novel commenting system, offers abundant information to study the third-party participants' metapragmatic evaluations of mock impoliteness. Capturing a general pattern (which manifests through statistical significance) from such abundance of information can be challenging. This paper attempted a data-driven coding scheme of Danmaku, which not only aids the investigation of metapragmatic evaluations of mock impoliteness, but also can be adapted to other research on Danmaku in the future. Methodologically, a rather novel method, the conditional inference tree model was chosen for a machine-learning simulation of the third-party participants' decision-making process of their evaluations. The data-visualization demonstrated the ranking factors of the evaluations according to statistical significance, which provided solid empirical evidence that for the third-party participants of *Roast!*, Funniness and Impoliteness are the two most significant factors (and in that order) in positive evaluations. This pattern is consistent in both data sets. Speech Event and Referent are less significant, but they also contribute to the evaluations. These two factors are very context-dependent, and they always divide the third-party participants into positive-evaluation-prone group and negative-evaluation-prone group. This echoes previous findings that there is a threshold between mock impoliteness and impoliteness, but where that threshold is might very across local contexts, participants, and cultural contexts.

There are also several limitations. First, the "pseudo-synchronicity" of Danmaku posed some obstacles for data analysis, and some methodological compromises were made. As Danmaku research is so far a novel area, there were little literature and methodologies to draw on, which is an issue that this special issue fortunately tackles with and hopefully prompts future research. Second, while the current research focused on the metapragmatic evaluations of mock impoliteness, during the data analysis, I also found many interesting phenomena in Danmaku communication, such as (im)politeness within Danmaku, community of practice building among anonymous viewers, language change,

⁶ Contexts here refer to both its narrow sense, as in the contexts of the show *Roast!*, and its broad sense as in psychological, physical, social, cultural contexts, etc.

gendered discourse, etc, which requires further research.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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