IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

Digital Discourses Of Food Safety: Analysing The Maggi Controversy On Twitter In India

Prem Chand Yadava, Independent Researcher, New Delhi-110067, India

Abstract: This article examines how the Maggi controversy was debated on social media, where a substance, monosodium glutamate (MSG), was found above the permitted level in these noodles in India. Drawing on qualitative content analysis of Twitter discussions, the study explores how risk perceptions were amplified, contested, and reframed in digital spaces. Findings indicate that Social media discourse emphasised MSG as a health hazard and a symbol of corporate negligence rather than discussing scientific evidence. Twitter users simultaneously expressed fear, mobilised boycott calls, circulated humour and memes, and defended Maggi against allegations. These polarised debates show how food safety controversies in India are scientific disputes, sensationalism, and distrust in corporates and regulators. The article highlights the need for transparent, culturally sensitive, and evidence-based science communication strategies to address public concerns in food safety debates.

Keywords: MSG, Maggi, Twitter, food safety, public debate

Introduction

Maggi is one of the most popular noodles in India. However, a controversy arose in 2015 when excessive MSG (Monosodium Glutamate) and Lead in Maggi samples were found, and FSSAI (Food Safety and Standards Authority of India) banned this product from being sold (Desai, 2016). The Maggi Controversy was like a shattering experience for the company and for many consumers. After a food controversy, Nestle decided to recall its Maggi product from the market. This controversy was discussed heavily on social media. However, it is interesting to analyse how users discussed scientific controversy and food safety concerns in social media.

Social media users discussed the Maggi controversy and interacted with and circulated information. Social media is widely used for discussion and deliberation on concerning issues. A digital news report, 2024 by Reuters News found that more than 70 percent of Indians get news online (Newman, et al., 2025). Science and technology content in traditional media is shrinking, and people are going online for information and communication. The emerging digital environment has blurred the boundaries between scientists, communicators and the public. Social media has given people a variety of sources to consume and to create content. This habit also benefits social media because it provides more reliable scientific and technological information (Liang, et al., 2014). Interactive media has given people a chance to interact and engage more and more on those issues (Anderson, Brossard, & Scheufele, 2010). In this context, this paper analyses the discourses that emerged on social media about the Maggi controversy.

The rapid growth of the internet, Wi-Fi, smartphones, Facebook and Twitter enabled people to express themselves freely in this media environment. New media have increased the amount and accessibility of content (Freeman, 2012). Social media gives opportunities to produce, share, upload or link the content and information. Social media do not remain special things, but it has become a daily life routine to be online every time (Dahlgren, 2012). Digital access is the one aspect of the new medium. The new age is a mobile revolution (Brossard, 2013). Users access social media anytime and anywhere to express themselves.

Scientific controversy arises when any research gives contradictory results, and the debate involves the public at the national level. In a general definition, a controversy is defined as a public debate. Common people remain confused about any food controversy about science because of contradictory reports and counterclaims. The reality is that the nutrition controversy lacks disclosure and misinformation in different news media. The growing role of science and technology in society sometimes gives scientific and public controversy over scientific issues. These controversies are of social, economic, and political importance. These scientific issues are confronted by public disagreement among scientists, technical and or medical experts (Martin & Richards, 1995).

History of MSG Controversy and Scientific Evidence

The MSG controversy is not new, and it goes back five decades. In 1968, Dr. Ho Man Kwok discovered the possible cause of Monosodium glutamate. He said that whenever he ate at a Chinese restaurant, he felt a syndrome. He wrote a letter to the New England Journal of Medicine. He describes the syndrome in which he feels numbness in his back, neck and arms after eating at a Chinese restaurant. He said that it is due to the monosodium glutamate (BBC, 2015). After many years, the FDA received a report about the symptoms of a headache and nausea after eating foods containing MSG. However, no scientific study confirms this. In 1990, the FDA asked independent scientific groups to examine the safety of MSG.

The scientists said in a report that MSG is safe, but some people who are sensitive to this substance can cause a headache, numbness, flushing, tingling, palpitations, and drowsiness if they consume 3 grams or more of MSG without food. Most scientists say that MSG can cause sickness. Ohio State University professor Ken Lee states that MSG has no toxic or causative role in food allergies (IGIS, 2017).

Glutamate creates excitement in the nerve cells and brain. For this reason, MSG has been referred to as an excitotoxin. In 1969, injecting large doses of MSG into newborn mice was shown to cause harmful neurological effects (Olney, 1969). The Washington University neurophysiologist tried to get the FDA to ban this substance from children's food. John Olney was not successful in banning glutamate, but at that time, the industry voluntarily stopped using this substance in baby food (Barinaga, 1990).

MSG-Led controversy and Health issues: MSG symptoms are also known as Chinese Restaurant Syndrome. This causes nausea and headaches after eating Chinese food (BBC, 2015). Some studies show that MSG is safe as a flavour enhancer. However, there is a debate about whether being safe and generally recognised as safe (GRAS) are different things. The FDA considers MSG as GARS (IGIS, 2017).

According to the U.S. National Institute, there are no known mechanisms that would explain why some individuals are sensitive to MSG. (IGIS, 2017). Further, there is no consistent evidence as to whether MSG causes a headache. A headache appeared as a symptom in some studies, and only when MSG was consumed without food during fasting. However, the U.S. Food and Drug Administration (FDA) received reports of headaches and nausea from people who ate food containing MSG.

MSG overexcites your cells to the point of damage or death, causing brain damage to varying degrees, and potentially even triggering or worsening learning disabilities. Common adverse effects linked to regular consumption of MSG include: obesity, eye damage, headaches, fatigue and disorientation, depression, rapid heartbeat, tingling and numbness (Mercola, 2009).

MSG regulation in food substance: According to the regulation, the lead content in food substance should be .01ppm whereas it was found to be 17 ppm in the Maggi samples. The FDA requires that foods containing added MSG list it in the ingredient panel on the packaging as monosodium glutamate. There is also a provision that foods with any ingredient that naturally contains MSG cannot claim "No MSG" or "No added MSG" on their packaging (FDA, 2012). In contrast with the FDA, the American neurophysiologists say that people are at risk of this substance. On the basis of some research on rodents and monkeys, he says that any 20-pound child can receive 1000 to 1300 milligrams of MSG if only 6-ounce servings of any of the brands. The rodent studies show that this substance can damage the hypothalamus, and this can lead to obesity and abnormal growth (Barinaga, 1990).

However, there is no fixed level for each and every food substance. For example, FSSAI applied the standards that every part of the packet should have a level of 2.5ppm. However, the European Union, from where our food and safety norms have been derived, says that noodles should be tested together. Maggi said in a statement that MSG has not been added, but naturally, it is present in the food item. The

FSSAI found that the claim of Maggi is misleading; if this harmful substance were found naturally, then it should have been mentioned on the packet (Hindu Businessline, 2015).

Methodology

The study focuses on the online media debating the scientific controversy. This paper analyses the Maggi controversy and tries to analyse how it was debated on social media. This study uses a qualitative content analysis approach to examine how the MSG health controversy was discussed on Twitter and focuses on discourse analysis of discussions.

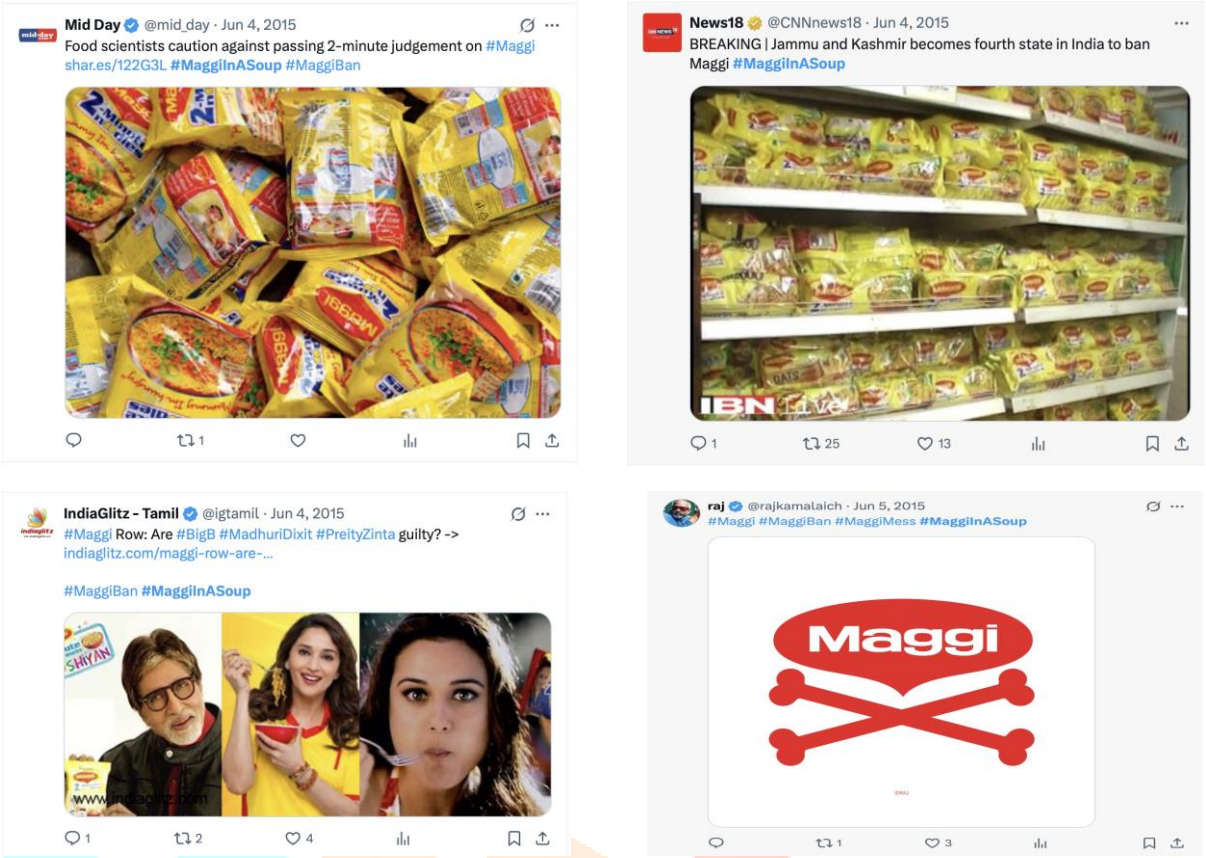
Tweets were collected using advanced search functions and archival tools, focusing on hashtags such as #MaggiBan, #Maggi, #SayNoToMSG, and references to MSG between May and August 2015. Tweets were thematically categorised into risk perception, humour and satire, defence of Maggi, and calls to action. Coding was conducted manually, with multiple codes applied where relevant. Frequency counts were used to identify the relative prominence of themes, while qualitative excerpts illustrated the range of discursive strategies employed by users.

Discussion and Analysis

This study analyses the social media debates about the Maggi controversy in India, in which MSG was found to exceed the permitted level. The Maggi controversy started in March 2014, when the FDA checked Maggi's sample and said that the MSG and Lead found in the samples were eight times more than the permitted limit. The controller sent the notice to Maggi. In July 2014, several months later, Maggi confronted the test result, and samples were sent to the Kolkata laboratory. In May 2015, FSDA filed a case against Maggi. After one year, in July 2015, the Kolkata lab gave the same result as the previous lab. Until June 1, 2015, Nestle India was in a denial mode. Nestle became serious about the harmful substance presence in Maggi when, on June 2, 2015, the Kerala government banned Maggi from the state. After Kerala's ban, the six states in India banned Maggi. Later, Maggi was banned in the whole country.

Analysis of Twitter Messages on the Maggi Controversy

Twitter served as a critical site where public anxieties and humour around MSG and Maggi circulated rapidly. Users expressed scepticism toward corporate claims, amplified health fears, and used satire to question both regulators and the company. The Twitter discussion can be categorised into five types of information propagated by the users: Risk Perception & Health Concerns, Humour, Satire, and Memes, Defence of Maggi/Counter-Narratives, Calls to Action / Consumer Mobilisation, and regulatory/Corporate responses.



Picture 1: Tweets showing the MSG-led Maggi controversy discussion on Twitter.

1. Risk Perception & Health Concerns

On social media, users were debating about health issues. Tweets expressing fear, anxiety, or suspicion regarding MSG's health effects. Users tweeting that Maggi is a poison or causes cancer. A user tweeted, *"feeding poison to children," "unsafe chemical in noodles." Or "poison in kids' food,"* demanding stricter government action. Users were uncertain whether to eat Maggi because of a lack of clarity on the health effects. Tweet discussed that, *"I do not know who to trust now. Maharashtra OKed Maggi, and Delhi and Uttarakhand did not. Different health standards? What even?"* Possible effects on children were the central point of discussion. A user said, *"Young mothers allow their kids to drool on Maggi noodles, pizzas and burgers - all of which create havoc to the child's intellect and body."* Users shared personal experiences that after eating Maggi, they feel symptoms like headaches, diarrhoea, migraines, uneasiness, nausea, or fever. A user commented, *"I avoid these food items because of a heavy headache and diarrhoea"*.

Users also targeted celebrities who were endorsing Maggi. They blamed it on the money that these celebrities are endorsing poison. A user commented, *"Are they not endorsing poison for a hefty price? Are they doing it for free, knowing the consequences?"* Users also shared their thoughts about MSG and the studies and research about MSG. A tweet said, *"I think more studies should be done on this issue because I am tired of being afraid to eat out in a restaurant or never knowing if a salad dressing or soup will make me regret eating it."*

There was uncertainty about the harmful effects of MSG. Twitter users shared a message from the American Chemical Society saying MSG is "generally recognised as a safe (GRAS)." However, the GRAS label for additives does not give an appearance of safety. The GRAS was simply given to those food additives that were in use when the Food Additives Amendment Act of 1958 was established. The video also says that free glutamate is present naturally in some food items. These debates intensified the debate over whether MSG is safe or not.

2. Humour, Satire, and Memes

Tweets using jokes, sarcasm, or cultural references to discuss this controversy. Users were sharing memes and satire. Users were also panicking and sharing humorous content. A user shared, *"First they came for Maggi, next they'll ban samosas".* Alongside fear and outrage, Twitter users also employed humour and memes to diffuse the anxiety. One widely circulated joke reimagined Maggi's "2-Minute Noodles" slogan as a metaphor for health risk: A user commented, *"Maggi in 2 minutes, hospital in 2 years. #MaggiBan", "The two-minute death of India's favourite noodle brand,". "The Indian censor board ordered film makers to add new warnings in films after the Maggi issue" or "We were told Maggi was taking the lead. But it looks like they were just giving us the lead. #MaggiBan".*

3. Defence of Maggi / Counter-Narratives

Some users supported Maggi and questioned the controversy. Their argument was that the media was exaggerating the controversy. They were saying that chemicals are present in all foods, so why only ban Maggi? A user tweeted, "I have eaten Maggi for 20 years, perfectly fine", or *"#MaggiInASoup What about Chowmein, it also has #MSG Or it's just Maggi. Seems something fishy"*

Tweets attempting to share news and science to prove their argument. Users were sharing official statements, such as FSSAI orders or Nestle press releases, to disseminate Maggi's views and support them. A user supported MSG and said, *"side effects of MSG were dismissed by trials many times, even in double blind trials", or "the gluten fear is as ridiculous as the vaccination movement".* Users' discussion defended Maggi, accusing the media of exaggeration and regulators of acting under pressure: *"First they came for Maggi. Next it will be samosas and jalebis. Stop fearmongering!"*

4. Calls to Action/Consumer Mobilisation

Tweets urging boycotts, bans, or collective responses. Boycott hashtags such as *#BanMaggi, #SayNoToMSG* were a top trend on Twitter. Users are tagging these tweets to FSSAI and political leaders. A user tweeted, *"Ban Maggi before it kills more children."* These tweets blame corporations, regulators, or the media. These tweets blame Nestle for hiding facts.

Others framed the debate as an issue of regulatory inefficiency, portraying state agencies as either complicit or negligent. A user tweeted, *"FSSAI wakes up after decades. How many more 'safe' foods are hiding MSG and toxins?"*

These examples illustrate how Twitter debates combined serious accusations and polarised debates. Users were sharing the news of Maggi bans in different states in India: *"All kinds of noodle companies are banned in Tamil Nadu for three months" Maggi has been banned in Kerala by the Kerala government. The food department seized all packets."*

Users tweeting about inaction against Maggi and regulatory failure. A user tweeted, *"If an incident like Maggi happened in North America, by now the factory would have been ordered to be closed down & millions of dollars fine imposed".* Some messages circulated on social media about pig oil being used in Maggi preparation were also circulated. One user on Twitter said, *"Please answer the simple question of whether Maggi contains ingredients that are in any way related to the pig or not. "I have heard that pig fats are used to prepare Maggi Noodles. How much truth is in this?"*

Regulatory/Corporate Responses

Twitter users were suspicious about the reports coming in support of MSG. Claims of corporate lobbying and bribery are labelled against the company. Users were suspicious towards "positive reports" about MSG, assuming industry capture of science and government. A user commented, *"Allowing these harmful substances, two reasons behind this: the first campaign and the second bribe. The campaign gives a huge amount of money to the government. Allows these poisons in our food."*

In response to the controversy, Maggi tweeted, "*We do not add MSG to MAGGI noodles. Some ingredients may contain naturally-occurring Glutamate, which can be mistaken for MSG".* Users were saying that Maggi India's response was also against the FDA regulation because the FDA says that even naturally contained MSG should be mentioned in the ingredient, but Maggi did not mention it.

Discussion

The social media debate around MSG highlighted health risks, consumer vulnerability, and corporate accountability. Social media discussions frequently highlighted the harmful effects of MSG, often without referencing scientific evidence or regulatory findings. Such coverage reinforced public anxieties, positioning MSG as a "hidden danger" within everyday food products. This aligns with previous scholarship showing that health controversies often gain traction through *risk amplification* in media discourse rather than through balanced scientific deliberation (Kasperson et al., 1988; Frewer, Miles, & Marsh, 2002).

Public perception of MSG appeared to be shaped less by nutritional science and more by the symbolic framing of “unsafe food” and “betrayal of consumer trust.” In particular, online debates drew on a language of suspicion toward multinational food companies, linking MSG to broader narratives of profit-driven negligence. This framing fostered what Slovic (1987) describes as the “dread risk” effect, where uncertainties about a substance are magnified into moral panic, regardless of empirical evidence.

Interestingly, the framing of MSG also intersects with cultural understandings of food purity in India. Discussions frequently invoked comparisons between "traditional home-cooked food" and "processed, chemical-laden food," situating MSG as emblematic of modern dietary corruption. This cultural framing enhanced the intensity of public reactions, turning an otherwise technical health debate into a moral discourse on lifestyle, modernity, and trust in institutions (Douglas, 1992; Nair, 2016).

Thus, the media's selective framing of the MSG issue not only intensified public anxieties but also shaped the lens through which consumers understood food safety. Rather than facilitating informed debate, online platforms tended to reinforce polarised views, privileging alarmist narratives over scientific clarity.

Conclusion

This study analyses how social media discussed the MSG-led Maggi controversy. The findings indicate that the online debate on MSG highlighted that not only scientific evidence but also the media shape the risk perception about food. This controversy was focused less on health risk and more on propagating narratives against corporations, regulators, and processed food. The Maggi episode further demonstrated how MSG concerns can escalate into broader crises of consumer confidence, amplified by digital platforms that propagate sensational content (Frewer et al., 2002; Nair, 2016).

This study highlights that food-related health controversies in India are deeply connected with a broader cultural discourse centred around purity, modernity, and moral responsibility. Social media also makes these controversies particularly susceptible to public alarm. The portrayal of MSG as both a health hazard and a cultural symbol reflects what Douglas (1992) referred to as the "moral dimensions of risk." These concerns of food safety extend beyond the technical assessment of safety.

For policymakers, regulators, and science communicators, the findings underscore the need for transparent, timely, and culturally sensitive communication strategies. In a digital environment where misinformation can rapidly shape public opinion, addressing scientific controversies requires not only regulatory clarity but also proactive engagement with the cultural and emotional dimensions of risk perception. Without such efforts, food safety debates are likely to remain dominated by distrust and alarmism rather than informed deliberation.

References

1. Anderson, A., Brossard, D., & Scheufele, D. (2010). The Changing information environment for nanotechnology: Online audiences and content. *Journal of Nanoparticle Research, 12*(4), 1083–1094.
2. Barinaga, M. (1990, January 5). Amino Acids: How Much Excitement is Too Much? *Science, New Series*, 20–22.
3. BBC. (2015, November 10). *Is MSG as bad as it's made out to be?* BBC. Retrieved from: http://www.bbc.com/future/story/20151106-is-msg-as-bad-as-its-made-out-to-be
4. Brossard, D. (2013). New media landscapes and the science information consumer. *Proceedings of the National Academy of Sciences of the United States of America*, 14096–14101.
5. Dahlgren, P. (2012). Public Intellectuals, Online Media, and Public Spheres: Current Realignments. *International Journal of Politics, Culture, and Society, 25*(4), 95-110.
6. Desai, P. (2016). Predicament Management During Product Recall of Maggi. *Journal Of Management and Research, 05*(02), 21-26.
7. Douglas, M. (1992). *Risk and blame: Essays in cultural theory*. Routledge.
8. FDA. (2012, November 19). *Questions and Answers on Monosodium Glutamate (MSG)*. US Food and Drug Administration. Retrieved from: https://www.fda.gov/Food/IngredientsPackagingLabeling/FoodAdditivesIngredients/ucm328728.htm
9. Freeman, B. (2012). New media and tobacco control. *Tobacco control*, *21*(2), 139-144.
10. Frewer, L. J., Miles, S., & Marsh, R. (2002). The media and genetically modified foods: Evidence in support of social amplification of risk. *Risk Analysis, 22*(4), 701–711.
11. Hindu Business Line. (2015, June 17). *Did regulatory overreach land Nestlé in the soup?* The Hindu Business Line. Retrieved from: https://www.thehindubusinessline.com/companies/did-regulatory-overreach-land-nestle-in-the-soup/article7375451.ece
12. IGIS. (2017). *Frequently asked questions about MSG*. International Glutamate Information Service. Retrieved from: http://www.glutamate.org/en/safety/scientific_evaluations.html
13. IGIS. (2017). *MSG Facts vs. Fiction Explained in Recent News Reports*. International Glutamate Information Service. Retrieved from: http://www.glutamate.org/2014/10/msg-facts-vs-fiction-explained.html
14. IGIS. (2017). *MSG has gotten a Bad Rap for "Causing" Allergies*. International Glutamate Information Service. Retrieved from: http://www.glutamate.org/en/safety/scientific_evaluations.html
15. Kasperson, R. E., Renn, O., Slovic, P., Brown, H. S., Emel, J., Goble, R., ... & Ratick, S. (1988). The social amplification of risk: A conceptual framework. *Risk Analysis, 8*(2), 177–187.
16. Liang, X., Su, L. Y. F., Yeo, S. K., Scheufele, D. A., Brossard, D., Xenos, M., ... & Corley, E. A. (2014). Building Buzz: (Scientists) Communicating Science in New Media Environments. *Journalism & mass communication quarterly*, *91*(4), 772-791.

17. Martin, B., & Richards, E. (1995). *Scientific knowledge, controversy, and public decision-making.* Newbury Park, CA: Sage.
18. Mercola, J. (2009, April 21). *MSG: Is This Silent Killer Lurking in Your Kitchen Cabinets*? Mercola. Retrieved from: http://articles.mercola.com/sites/articles/archive/2009/04/21/msg-is-this-silent-killer-lurking-in-your-kitchen-cabinets.aspx
19. Nair, V. (2016). Food safety, purity, and politics: The case of Maggi noodles. *Economic and Political Weekly, 51*(44), 12–15.
20. Newman, N., Ross Arguedas, A., Robertson, C. T., Nielsen, R. K., & Fletcher, R. (2025). *Digital news report 2025*. Reuters Institute for the Study of Journalism.
21. Olney, J. W. (1969). Brain lesions, obesity, and other disturbances in mice treated with monosodium glutamate. *Science, 164*(3880), 719-721.
22. Slovic, P. (1987). Perception of risk. *Science, 236*(4799), 280–285.