Media Bias in News Coverage of Hong Kong Protest: A Comparative Study of Online Newspapers with Different Political Orientations

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Abstract

This research aims to find out whether and how media agenda, political orientation, and media bias were associated during the 2019 Hong Kong protest. The research adopted the content analysis of the news coverage collected from three Hong Kong mainstream online news media -- Wenweipo, Apple Daily, and Mingpao. A total of 450 online news articles were quantitatively coded based on media agenda, media bias, emotion in media agenda, and political orientation. Descriptive analyses indicate that Apple Daily and Wenweipo mostly contained low diversity agendas whereas Mingpao contained moderate diversity agendas. Apple Daily's news reports were slightly emotional, Wenweipo's reports ranged from slightly and highly emotional whereas Mingpao's reports were emotionless. In terms of political orientation, Apple Daily was libertarian, Mingpao was centrist while Wenweipo was authoritarian. Apple Daily and Wenweipo mostly contained contents with bias by commission and bias by story selection whereas Mingpao mostly contained unbiased contents. Due to the results of Chi-Square Analysis, the relationship between media agendas and media bias (HP#1) and the relationship between emotion in media agendas and political orientation (HP#2) were partially supported while the relationship between political orientation and media bias (HP#3) was significantly supported. In summary, the agenda-setting patterns of news media not only revealed their political orientation but also triggered different types of media bias. News media with polarized political orientation tended to be more emotional in their news reports. The findings confirm the universal existence of media bias, remind the general public of the tendency to be misled by media agenda setting; and, most importantly, increase a mutual understanding between social groups with different political orientations.

Keywords: *Online news media, Hong Kong protest, Media bias, Agenda setting, Emotions in media agenda, Political orientations*

1. Introduction

Since March 31, 2019, a large-scale outbreak of social movements began in Hong Kong. Traditional media, news media, social media all joined the covering of this protest. The events were reported along with rumors spread on the internet. Different media with biased reporting and extremely emotional terms took the attention of the society and stimulate bigger disputes among the protesters in Hong Kong.

Mainstream news media reports had different ways of presenting this protest. Sina News online questioned that some Hong Kong news media only covered the actions of the police and incited public sentiment (Qu, 2019). On the contrary, the journalist of Stand News Fucha Linger (2019) said that "Between eggs and wall, we choose eggs." As this event escalated, the words that appeared in Hong Kong's newspapers were becoming more and more aggressive and emotional. Every Hong Kong news media got involved in this political crisis, voluntarily or unwillingly. Eventually, all news media showed their political views and reflected their political orientations.

Due to the involvement of the news media and the most important roles they are playing, many news media in Hong Kong had been insulted physically during the demonstrations. On the night of August 13th, Fu Guohao, a reporter from the Global Times, was tied up by the protesters at Hong Kong airport and was once beaten and kicked (Iris, 2019). Why the public are becoming more and more emotional and violent? Why the news media were under constant attack during the protest? Does their report accurately portray the facts, do the facts need to be spoken out, or are the facts concealed by journalistic bias? These questions are what this study intends to answer.

Media cannot escape from politics, and politics exist in media. The political orientations, preferences, and tendentiousness of the research targets' agenda setting patterns were analyzed. From their

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agenda-setting patterns, the hint of media bias was discovered. Also, emotion as a dimension of effective agenda-setting has been playing an important role during this crisis. The Chinese language has this feature of using emotion of words as a rhetorical power to display emotional influence. The emotion display in Hong Kong news media's agenda is a powerful tool from which Chinese media are taking advantage.

This study aims to achieve the following three research objectives: 1) To compare the agenda-setting in the news coverage of Hong Kong protest in 2019 by major online news media and to identify if there is significant media bias in that the news coverage of Hong Kong protest in 2019, 2) To find out if emotions in the news coverage of online news media change when they affiliate different political orientations, and 3) To figure out how online news media's political orientations are correlated with the media bias in their news agendas. Thus, this research proposed three research hypotheses:

HP#1: The media agenda of news articles in the target newspapers are associated with their media bias.

HP#2: Emotions in the media agenda of news articles in the target newspapers are associated with the political orientations of the target newspapers.

HP#3: Political orientation of news articles in the target newspapers is associated with their media bias.

2. Literature Review

The Agenda-setting theory is the foundation of this research. Media bias is a highly possible outcome of newspapers' agenda-setting patterns. News media are likely to cover the same event with different agendas to support different political orientations. The commendatory, derogatory, and neutral emotion colors system in Chinese lexical semantics corresponding with the emotional affective agenda has been playing a very important role in news media. Agenda-setting, media bias, and political orientation do not exist in isolation. They affect each other, influence each other, correspond with each other, finally made into a complex circulation.

2.1 Agenda-Setting Theory

Agenda-setting theory has focused mostly on the transfer of the salience of topics covered in the media to the priorities people place on those topics (McCombs & Shaw, 1972). The news reports make it in a way that when some particular news reports are given importance and attention than other news, the audience will automatically perceive it as the most important news and information given to them. Media agenda diversity can be conceptualized as the distribution of attention among a given set of discrete object categories in a news discourse (Tan and Weaver, 2013). Emotions are crucial in having people pay attention to politics and helping shape their political views (Marcus, Neuman, & MacKuen, 2000).

2.2 Media Bias Theory

In 1994, Brent Baker, Vice President of Research and Publications at the Media Research Center (America's Media Watchdog), published his book 'How to Identify, Expose & Correct Liberal Media Bias,' which offers detailed explanations and suggestions for what the average citizen can do about media bias (Baker, Graham & Kaminsky,1994). After 10 years of journalist practice and theoretical development, Dr. Steven Allen (2015), a journalist with 45 years of experience, proposes a theory and divides media bias into 8 major categories: 1) Bias by commission, 2) Bias by omission, 3) Bias by story selection, 4) Bias by placement, 5) Bias by the selection of "experts," 6) Bias by spin, 7) Bias by the labeling, and 8) Bias by policy recommendation.

2.3 Political Orientation and Nolan Chart

Nolan Chart is an expository device that neatly explains how the political view can be assessed. Nolan Chart reasons that virtually all human political action can be divided into two general dimensions; economic and personal freedom. It graphs out two kinds of rights; 1) social rights that refer to freedom of expression, religion, and personal autonomy and 2) economic rights that refer to freedom to own and exchange property. Economic freedom and personal freedom represent five different political orientations

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(Bell, 2013) -- 1) Authoritarian disregards all rights but their own, 2) Libertarian respects both social and economic rights, 3) Conservative relatively tends to disregard social and economic rights, 4) Liberal relatively tends to respect social and economic rights, and 5) Centrist holds no opinions or neutral opinion regarding social and economic rights.

2.4 Chinese Trisected Symmetrical Structure

In Chinese lexical semantics, when expressing different feelings, different terms were selected. Generally, words in a standard synonym set of trisected symmetrical structure form a triple, which respectively describes the positive, neutral, and negative aspects of the same concept. The emotional color is the semantic reflection of some certain human emotions in language, which indicates our aesthetic, ethical, or moral judgment of the world (Ji & Xiao, 2013).

3. Methodology

This research adopts a quantitative content analysis methodology to analyze this communication phenomenon. The target population of this research is the entire online news media of Hong Kong. The study examined protest reports from March 31, 2019, (the day Hong Kong protest broke out) to the last day of 2019. The target research materials of this research are words, sentences, topics, votes, images, and videos that appeared in the reporting of the online news media of Hong Kong. There are a total of 30 most important landmark protest events.

After considering the reputation, political affiliation, website traffic statistics, and social influences, Apple Daily, Mingpao, and Wenweipo were chosen as the research representatives. With the use of purposive and judgmental sampling technique, every five front-page articles that appeared in the headline edition of the three targeted online news media, on the next day of the 30 landmark events, was selected as the samples of this research. The research materials including words, topics, pictures, audios, videos, quotes, and votes were collected from a total of 450 articles selected from the target online media. Media agenda, media bias, political orientation, and emotions in the media agenda of the samples were coded to identify a relationship between them. The coding scheme of these concepts is provided in Table 1 – Table 4.

Table 1 Coding Scheme of Media Agenda

Media Agenda	
Main Topics	**Related Issues during HK protest**
Protesters	The demonstration and demands of the protesters and other related issues
Police	The police crackdown on the protest, maintaining social order and other related issues
Laws	The laws that are under deliberation or promulgated by the government, including the extradition amendment law and anti-mask law
Governments	The policy, action, press conference of different governments including Hong Kong government, Central government, USA government, UK government, and others
Journalists	Field journalists who cover the issues
Political Party	The political parties represented in the Legislative and District Councils of Hong Kong
Social group	The declarations, advises, discusses, and actions of social groups
Scholars	Opinions and comments from scholars and think tanks all over the world
Tourists	Tourists, travelers, and flight transfer passengers
Other	Other related social groups or participants

Table 2 Coding Scheme of Media Bias

	Media Bias Types	Embodiment in Agendas
Type 1	Bias by commission	Only present the good behaviors or bad behaviors of the police or the protesters
Type 2	Bias by omission	Omit the fact of the protesters' violence Omit the fact of the police's violence
Type 3	Bias by story selection	Highlight pro-protesters stories Highlight pro-government stories
Type 4	Bias by placement	Only irrelevant topics appeared on the landmark days
Type 5	Bias by the selection of "experts"	Quotes and Interviews of "Experts," "Councillor," "Social opinion leaders," "USA /UK government," and "Central government"
Type 6	Bias by spin	"Extradition Law harms HK" VS "Extradition Law is good for HK"
Type 7	Bias by labeling	Label polices as "dirty cops;" Label protesters as "thugs;" Label Extradition Law and Anti-Mask Law as "evil law"
Type 8	Bias by a policy recommendation	Pro-protesters groups call for "Five demands" VS Pro-government groups demand "Stop riot, stop the chaos."

Table 3 Coding Scheme of Political Orientation

	Political Orientation Spectrum by the Nolan Chart				
	Libertarian	**Liberal**	**Centrist**	**Conservative**	**Authoritarian**
	Highly respect personal and economic freedom	**Somewhat respect personal and economic freedom**	**No or neutral opinions regarding freedom**	**Somewhat disregard personal and economic freedom**	**Highly disregard personal and economic freedom**
Personal Freedom	Morality is an important personal and religious matter that should not be defined by the government.				
	Only behavior which endangers or causes physical or financial harm to other people should be illegal.				
	Adult drug and alcohol use are private matters unless they endanger or harm non-participants.				
	A first-trimester abortion is a matter of personal choice.				
	The government should not be authorized to incarcerate almost all non-violent offenders now in prison.				
Economic Freedom	Generally, society prospers more if money is spent by people rather than by the government.				
	The only business activities that should be illegal including theft, fraud, and physical or financial harm.				
	You should not be forced to pay taxes that only benefit special social groups such as foreign aid and corporate welfare.				
	Reduced consumer prices and increased prosperity offset almost all negative economic impacts of globalization.				
	Wealthy groups do not have an obligation to assist the people in need.				

Table 4 Coding Scheme of Emotions in Media Agenda.

Chinese Trisected Symmetrical Structure	Emotion Colors of Agenda		
	Negative aspects of the same concept	Neutral aspects of the same concept	Positive aspects of the same concept
	Derogatory	Neutral	Commendatory
Describe the Hong Kong policeman	1. Dirty Cops 2. Crazy police 3. Violent police	1. Policeman 2. Riot police	1. Support HK police 2. Good HK police
Describe the law that allows criminals been extradited	1. Evil Law 2. Deliver to Central Evil Law	1. Extradition Law 2. Fugitive Amendment Law	1. Support Extradition Law
Describe the law prohibit protesters	1. Prohibition of Mask	1. Prohibition of Mask	

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wear masks	Evil Law	Law	
Describe the Hong Kong government	1. Tyranny 2. Authoritative rule	1. Government 2. Chief Executive	1. Good governance 2. Strongly support Chief Executive
Describe right-wing supporters	1. White terror	1. White suit people	
Describe the 2019 Hong Kong protest	1. Color revolution		1. HK recovery
Describe the protesters of the demonstration activities	1. Terrorists 2. Thugs 3. Riot 4. Radicals 5. Black suit devils	1. Protesters 2. People 3. Citizen 4. Black suit people	1. Peaceful protesters
Describe the news reports and interventions outside Hong Kong	1. External interference powers	1. Foreign media 2. Foreign experts	1. Foreign aids

According to the coding schemes stated above, this research developed a series of categories to code the main variables of interest, and lead to the development of the coding sheet accordingly.

Table 5 Coding Sheet

Media Agenda	Emotions in Agenda	Media Bias	Political Orientation
The media agenda describes the diversity level of the topics that are presented in the news reports on the HK protest. It was coded into 4 categories:	According to the frequency and amount of emotional terms in news reports, the level of the agenda's emotions was coded into 4 categories:	According to media bias theory, news reports were coded into 9 categories of media bias:	Political orientation, originally proposed by Nolan Chart, was adjusted into 5 categories:
1 = Zero diversity: no related topic	1 = Emotionless: only emotional neutral terms	1 = Type 1: Bias by commission	1 = Libertarian: overall agree with 5-8 kinds of freedom
2 = Low diversity: 1-3 related topics	2 = Slightly emotional: 1-2 derogatory or commendatory terms	2 = Type 2: Bias by omission	2 = Liberal: overall agree with 2-4 kinds of freedom
3 = Moderate diversity: 4-6 related topics	3 = Moderately emotional: 3-5 derogatory or commendatory terms	3 = Type 3: Bias by story selection	3 = Centrist: overall agree or disagree with less than 1 kind of freedom
4 = High diversity: more than 7 related topics	4 = Highly emotional: more than 6 derogatory or commendatory terms	4 = Type 4: Bias by placement	4 = Conservative: overall disagree with 2-4 kinds of freedom
		5 = Type 5: Bias by a selection of "experts"	5 = Authoritarian: overall disagree with 5-8 kinds of freedom
		6 = Type 6: Bias by spin	
		7 = Type 7: Bias by labeling	
		8 = Type 8: Bias by policy recommendation	
		9 = Unbiased	

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4. Results

The Crosstabulation analysis output from SPSS showed the equal distribution of the selected articles from the target newspapers including Apple Daily (33.3%), Mingpao (33.3%), and Wenweipo (33.3%).

Based on Table 6, the majority of the sampled news articles use low diversity agendas (50.9%), followed by moderate diversity agendas (36.7%), zero diversity agendas (6.9%), and high diversity agendas (5.6%). When comparing the three newspapers, the majority of the news articles in Apple Daily (60.7%) and Wenweipo (80.7%) contained low diversity agendas whereas those in Mingpao contained moderate diversity agendas (67.3%).

Table 6 Frequencies and Percentages of Media Agendas among the Selected News Articles

Media Agendas	Apple Daily	Mingpao	Wenweipo	Total Articles
Zero diversity	5 (3.3%)	13 (8.7%)	13 (8.7%)	31 (6.9%)
Low diversity	91 (60.7%)	17 (11.3%)	121 (80.7%)	229 (50.9%)
Moderate diversity	52 (34.7%)	101 (67.3%)	12 (8.0%)	165 (36.7%)
High diversity	2 (1.3%)	19 (12.7%)	4 (2.7%)	25 (5.6%)
Total	150 (100%)	150 (100%)	150 (100%)	450 (100%)

Based on Table 7, the majority of the sampled news articles are slightly emotional (38.7%) and emotionless (37.1%). Moderately emotional (15.6%) and highly emotional (8.7%) sampled news articles made up the minority. When comparing the three newspapers, the majority of the news articles in Apple Daily are slightly emotional (82.7%) whereas those in Wenweipo ranged between slightly and highly emotional and those in Mingpao are emotionless (90.0%).

Table 7 Frequencies and Percentages of Emotions in Media Agendas among the Selected News Articles

Emotions in Agendas	Apple Daily	Mingpao	Wenweipo	Total Articles
Emotionless	12 (8.0%)	135 (90.0%)	20 (13.3%)	167 (37.1%)
Slightly emotional	124 (82.7%)	15 (10%)	35 (23.3%)	174 (38.7%)
Moderately emotional	12 (8.0%)	0 (0.0%)	58 (38.7%)	70 (15.6%)
Highly emotional	2 (1.3%)	0 (0.0%)	37 (24.7%)	39 (8.7%)
Total	150 (100%)	150 (100%)	150 (100%)	450 (100%)

Based on Table 8, the majority of the sampled news articles are centrist (34.4%), followed by authoritarian (30.0%), libertarian (23.3%), liberal (10.4%), and conservative (1.8%). When comparing between the three newspapers, the majority of the news articles in Apple Daily are libertarian (70.0%), those in Mingpao are centrist (95.3%), while those in Wenweipo are authoritarian (90.0%).

Table 8 Frequencies and Percentages of Political Orientation among the Selected News Articles

Political Orientation	Apple Daily	Mingpao	Wenweipo	Total Articles
Libertarian	105 (70.0%)	0 (0.0%)	0 (0.0%)	105 (23.3%)
Liberal	40 (26.7%)	7 (4.7%)	0 (0.0%)	47 (10.4%)
Centrist	5 (3.3%)	143 (95.3%)	7 (4.7%)	155 (34.4%)
Conservative	0 (0.0%)	0 (0.0%)	8 (5.3%)	8 (1.8%)
Authoritarian	0 (0.0%)	0 (0.0%)	135 (90.0%)	135 (30.0%)
Total	150 (100%)	150 (100%)	150 (100%)	450 (100%)

Based on Table 9, the majority of the sampled data have bias by commission (22.8%), followed by unbiased (21.3%), bias by story selection (20.6%), bias by labeling (11.5%), bias by omission (9.6%), bias by selection of "experts" (5.9%), bias by policy recommendation (3.4%), bias by spin (2.4%), and bias by placement (1.6%). When comparing the three newspapers, the majority of the news articles in Apple Daily

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mostly contained contents with bias by commission (28.1%) and bias by story selection (25.8%). Similarly, the majority of the news articles in Wenweipo also contained contents with bias by commission (27.8%), bias by story selection (24.1%), and bias by labeling (21.8%). Lastly, Mingpao mostly contained unbiased content (95.3%).

Table 9 Frequencies and Percentages of Media Bias among the Selected News Articles

Media Bias	Apple Daily	Mingpao	Wenweipo	Total Articles
Type 1	85 (28.1%)	1 (0.7%)	97 (27.8%)	183 (22.8%)
Type 2	47 (15.6%)	2 (1.3%)	28 (8.0%)	77 (9.6%)
Type 3	78 (25.8%)	3 (2.0%)	84 (24.1%)	165 (20.6%)
Type 4	0 (0.0%)	0 (0.0%)	13 (3.7%)	13 (1.6%)
Type 5	23 (7.6%)	1 (0.7%)	23 (6.6%)	47 (5.9%)
Type 6	11 (3.6%)	0 (0.0%)	8 (2.3%)	19 (2.4%)
Type 7	16 (5.3%)	0 (0.0%)	76 (21.8%)	92 (11.5%)
Type 8	19 (6.3%)	0 (0.0%)	8 (2.3%)	27 (3.4%)
Unbiased	23 (7.6%)	143 (95.3%)	12 (3.4%)	171 (21.3%)
Total	302 (100%)	150 (100%)	349 (100%)	801 (100%)

Chi-square analyses were performed to test the proposed three research hypotheses regarding the association between media agendas, emotion in agendas, political orientation, and media bias. The test results were demonstrated as follows.

4.1 HP#1: The media agendas of the target newspapers are associated with their media bias

The analysis results are demonstrated in Table 10.

The relations between media agendas and bias by the following types were significant; by commission (Type 1) where X^2 (3, N = 450) = 97.53, $p < .001$, by omission (Type 2) where X^2 (3, N = 450) = 34.11, $p < .001$, by story selection (Type 3) where X^2 (3, N = 450) = 77.28, $p < .001$, by placement (Type 4) where X^2 (3, N = 450) = 126.37, $p < .001$, by spin (Type 6) where X^2 (3, N = 450) = 12.24, $p < .001$, by labeling (Type 7) where X^2 (3, N = 450) = 64.48, $p < .001$. Besides, the relation between media agendas and unbiased was also significant where X^2 (3, N = 450) = 127.32, $p < .001$. However, the relation between media agendas and bias by selection of "expert" (Type 5) and by policy recommendation (Type 8) were not significant; where X^2 (3, N = 450) = 5.54, $p > .05$ and X^2 (3, N = 450) = 4.54, $p > .05$, respectively.

According to the above results, HP #1 is partially supported, media agendas of the target newspapers are partially associated with their media bias.

Table 10 Frequencies, Percentages, and Chi-Square Statistics showing a relationship between Media agendas and Media bias

Media Bias	Media Agendas				
	Zero	Low	Moderate	High	Chi-Square
Type 1	0 (0.0%)	143 (62.4%)	37 (22.4%)	3 (12.0%)	97.534***
Type 2	0 (0.0%)	62 (27.1%)	14 (8.5%)	1 (4.0%)	34.113***
Type 3	0 (0.0%)	127 (55.5%)	36 (21.8%)	2 (8.0%)	77.283***
Type 4	11 (35.5%)	2 (0.9%)	0 (0.0%)	0 (0.0%)	126.367***
Type 5	0 (0.0%)	28 (12.2%)	18 (10.9%)	1 (4.0%)	5.541
Type 6	0 (0.0%)	5 (2.2%)	14 (8.5%)	0 (0.0%)	12.236***
Type 7	0 (0.0%)	81 (35.4%)	10 (6.1%)	1 (4.0%)	64.482***
Type 8	0 (0.0%)	11 (4.8%)	14 (8.5%)	2 (8.0%)	4.544
Unbiased	20 (64.5%)	33 (14.4%)	104 (63.0%)	21(84.0%)	127.321***

Note. *$p < .05$, **$p < .01$, ***$p < .001$

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4.2 HP#2: Emotions in the media agendas of the target newspapers are associated with the political orientation of the target newspapers

The analysis results are demonstrated in Table 11. The relations between emotions in media agendas and libertarian, liberal, centrist, and authoritarian orientations were significant, where X^2 (3, N = 450) = 112.09, $p < .001$; X^2 (3, N = 450) = 27.92, $p < .001$; X^2 (3, N = 450) = 244.97, $p < .001$; and X^2 (3, N = 450) = 227.91, $p < .001$, respectively. However, the relation between emotions in media agendas and conservative orientation was not significant, where X^2 (3, N = 450) = 3.20, $p > .05$. Based on these results, HP #2 is partially supported, emotions in media agendas are partially associated with the political orientation of the target newspapers.

Table 11 Frequencies, Percentages, and Chi-Square Statistics showing a relationship between Emotion in Agendas and Political orientation

Political Orientation	Emotion in Agendas				
	Emotionless	Slightly emotional	Moderately emotional	Highly emotional	Chi-Square
Libertarian	6 (3.6%)	86 (49.4%)	11 (15.7%)	2 (5.1%)	112.094***
Liberal	12 (7.2%)	34 (19.5%)	1(1.4%)	0 (0.0%)	27.918***
Centrist	133 (79.6%)	22 (12.6%)	0 (0.0%)	0 (0.0%)	244.970***
Conservative	3 (1.8%)	5 (2.9%)	0 (0.0%)	0 (0.0%)	3.170
Authoritarian	1 3(7.8%)	27 (15.5%)	58 (82.9%)	37 (94.9%)	227.911***

Note. *$p < .05$, **$p < .01$, ***$p < .001$

4.3 HP#3: Political orientation of the target newspapers is associated with their media bias

The analysis results are demonstrated in Table 12. The relations between political orientation and bias by commission (Type 1), by omission (Type 2), by story selection (Type 3), by placement (Type 4), by a selection of "expert" (Type 5), by spin (Type 6), by labeling (Type 7), and by policy recommendation (Type 8) were significant, where X^2 (4, N = 450) = 177.91, $p < .001$; X^2 (4, N = 450) = 56.18, $p < .001$; X^2 (4, N = 450) = 131.18, $p < .001$; X^2 (4, N = 450) = 29.09, $p < .001$; X^2 (4, N = 450) = 28.91, $p < .001$; X^2 (4, N = 450) = 18.93, $p < .001$; X^2 (4, N = 450) = 152.46, $p < .001$; and X^2 (4, N = 450) = 22.46, $p < .001$, respectively. Besides, the relation between political orientation and unbiased was also significant, where X^2 (4, N = 450) = 329.93, $p < .001$. As a result, HP #3 is supported, the political orientation of the target newspapers is significantly associated with their media bias.

Table 12 Frequencies, Percentages, and Chi-Square Statistics showing a relationship between the Political Orientation and Media Bias

Media Bias	Political Orientation					
	Libertarian	Liberal	Centrist	Conservative	Authoritarian	Chi-Square
Type 1	66 (62.9%)	20 (42.6%)	0 (0.0%)	2 (25.0%)	95 (70.4%)	177.912***
Type 2	37 (35.2%)	11 (23.4%)	1 (0.6%)	1 (12.5%)	27 (20.0%)	56.182***
Type 3	60 (57.1%)	18 (38.3%)	3 (1.9%)	3 (37.5%)	81 (60.0%)	131.178***
Type 4	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (12.5%)	12 (8.9%)	29.090***
Type 5	17 (16.2%)	6 (12.8%)	1 (0.6%)	3 (37.5%)	20 (14.8%)	28.907***
Type 6	8 (7.6%)	3 (6.4%)	0 (0.0%)	2 (25.0%)	6 (4.4%)	18.928***
Type 7	9 (8.6%)	7 (14.9%)	0 (0.0%)	1 (12.5%)	75 (55.6%)	152.458***
Type 8	14 (13.3%)	5 (10.6%)	0 (0.0%)	1 (12.5%)	7 (5.2%)	22.456***
Unbiased	12 (11.4%)	11 (23.4%)	150 (96.8%)	0 (0.0%)	5 (3.7%)	329.930***

Note. *$p < .05$, **$p < .01$, ***$p < .001$

4.4 Conclusion

By all frequencies, percentages, and chi-square statistics demonstrated above, several important conclusions can be found from the findings of this research.

Media agenda is partially associated with media bias such that low diversity media agendas are associated with four media bias types: bias by commission (type 1 bias), bias by omission (type 2 bias), bias by story selection (type 3 bias), and bias by labeling (type 7 bias). The moderate diversity media agendas are associated with only one media bias type: bias by spin (type 6 bias). Besides, zero diversity media agendas, moderate diversity media agendas, and high diversity media agendas are more expected to be unbiased. Meanwhile, bias by selection of "experts" (type 5 bias) and bias by policy recommendation (type 8 bias) are not associated with the media agendas.

Emotions in media agendas are partially associated with the political orientation of the news media such that slightly emotional media agendas are associated with two political orientations: Libertarian and Liberal. The moderately emotional media agendas and highly emotional media agendas are associated with Authoritarian. Meanwhile, emotionless media agendas are associated with only one political orientation: Centrist. Besides, Conservative political orientation is not associated with emotions in media agendas.

The political orientation of the news articles is associated with media bias such that Libertarian news articles are associated with six media bias types: bias by commission (type 1 bias), bias by omission (type 2 bias), bias by story selection (type 3 bias), bias by selection of "experts" (type 5 bias), bias by spin (type 6 bias), and bias by policy recommendation (type 8 bias). Liberal news articles are associated with three media bias types: bias by commission (type 1 bias), bias by omission (type 2 bias), and bias by story selection (type 3 bias). Conservative news articles are associated with five media bias types: bias by story selection (type 3 bias), bias by placement (type 4 bias), bias by selection of "experts" (type 5 bias), bias by spin (type 6 bias), and bias by labeling (type 7 bias). Authoritarian news articles are associated with seven media bias types: bias by commission (type 1 bias), bias by omission (type 2 bias), bias by story selection (type 3 bias), bias by placement (type 4 bias), bias by selection of "experts" (type 5 bias), bias by spin (type 6 bias), and bias by labeling (type 7 bias). Lastly, Centrist news articles are associated with unbiased media agendas.

5. Discussions

First of all, the data analysis results indicate that local Hong Kong online news media set different agendas when they covered Hong Kong protests. Among three sampled online news media in Hong Kong – Apple Daily, Mingpao, and Wenweipo, the diversity level of media agendas and emotion in their protest coverage are significantly different. Most of the news articles of Apply Daily contained lowly diverse agendas and were slightly emotional. Similarly, news articles of Wenweipo also mainly contained lowly diverse agendas but were moderately or highly emotional. In contrast, the news articles of Mingpao mostly contained moderately diverse agendas and were emotionless.

Secondly, among five types of political orientation, Centrist was found the most, followed by Authoritarian and Libertarian. Meanwhile, Liberal and Conservative were found the least. When comparing the three sampled online newspapers, it was found that most of the news articles of Apple Daily were affiliated with Libertarian and Liberal, by which its articles highly praise and esteem both personal and economic freedom, several news articles were affiliated with Centrist, and there was no article affiliated with Conservative or Authoritarian. On the contrary, the news articles of Mingpao were mostly affiliated with Centrist, its articles tended to avoid opinions towards freedom, and few of them were affiliated with Liberal or Conservative. Most of the news articles of Wenweipo were considered Authoritarian and Conservative, its articles were more willing to accept government management and the crackdown on ordinary criminals, only a few of their articles were affiliated with Centrist, and there was no article affiliated with Libertarian or Liberal.

Thirdly, media bias is a universal phenomenon that exists in news media. Among eight types of media bias, "Bias by commission," "bias by omission," "bias by story selection" and "bias by labeling" were very common in media agenda; "bias by selection of experts", "spin", "bias by policy

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recommendation" were frequently seen in media agenda; meanwhile "bias by placement" was relatively rare. Among all the selected news articles, seven bias types were detected in Apple Daily, unbiased news articles only made up a small part of its news reports. All eight types of media bias were detected from Wenweipo, only a very small number of its news reports were unbiased. On the contrary, Mingpao was only committed to four types of media bias -- "bias by commission," "bias by omission," "bias by story selection" and "bias by selection of experts", and the majority of its news articles were unbiased.

Fourthly, agenda-setting is the fundamental function of news media. The diversity level and emotion are two common agenda-setting patterns such that these agenda patterns of news media revealed their political orientation, and the political orientation is the guidance of news media and determines their news coverage direction. The existential value of news media can all be summarized as political value or marketing value. These values inevitably lead to defending the interests of certain social groups, subsequently involving media bias.

All in all, politics as one of the most serious social topics requires professional journalists and trustworthy news teams. As these characteristics are what other social media do not possess, the newspapers are playing a more and more important role in politics. Hong Kong protests reflected the conflict and correlation between politics and communication. Politics is directional and partisan, which is similar to communication. The confrontation or cooperation between them is bound to affect the perception of public audiences on both emotional and cognitive levels. The information distortions in the political communication process cause media bias, which eventually brought Hong Kong into an extremely critical situation.

6. Recommendations

For news media organizations, we can see that independent watchdogs are urgently needed in Hong Kong. The watchdogs not only gather information about the wrongdoings of people in power, but also, monitor the news agendas of local Hong Kong news media, provide the public reports of journalistic bias lurking in news media, try to communicate and connect every political group of the society, and hopefully avoid more misunderstanding between social groups with different political orientation.

For the government and policymakers, how to communicate to the audiences during a political event or public crisis or political crisis is now becoming a challenge. The voice of pro-left groups is louder than the voice of pro-rights groups. The policymakers may hear more unpleasant voices from the newspaper. However, they should realize that protests are normal in a modern democratic society, media bias is a universal existence in news reports. When public policies were made, they could be more careful with their governance and reduce misjudge of the situation.

For communication scholars, this research provides a new perspective of the relationship between media and politics. This research yields additional empirical evidence to identify and measure media bias. Other scholars can duplicate this study and apply to their own country, then find out if they share the same findings.

For the media practitioners, they can revise their news reports, and become more objective. Biased news reports might bring their producers' short-term benefits. Nevertheless, the fact that unbiased news coverage is the fundamental professional code of ethics for every journalist should be reinforced, and the findings of this study will eventually stimulate this multi-billion industry to be more conscious of their role in reporting facts and promoting good understanding among social groups with different political orientations.

Finally, the findings of this study can be beneficial to the general public. In this information era, all kinds of media have their power to influence and manipulate the general public's cognition, mental, and emotion. For ordinary news audiences, distinguishing misleading information can be very difficult. This research indicated that the general public should not be passive or ignorant by reading more and thinking more. Their correct discernment may not only protect them but also enhance social development.

A single study is limited and insufficient, may this humble research invoke a larger scale of attention to media bias and the severe political situation in Hong Kong, and finally provides the public a solution to make our society more peaceful.

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