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*Dynamics of Protests*  
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Constructor: Dr. Katrin Paula

# Is There a Reporting Bias or Does News Media Just Fuck Up? An Investigation of (Non-)Violent Protests and Their Reports

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Lennart Rösemeier  
Student Number: 1550847  
Email: lroeseme@mail.uni-mannheim.de

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"The best and clearest way that I can phrase it for you is; think of our news cast as a screaming women running down the streets with her throat cut."  
– Nina Romina in the movie Nightcrawler (2014)

## 1 Introduction

Since our everyday life is characterized by news and information of all kinds and they are available to us through the new media, such as internet news, we also receive incidents from other parts of the world. For instance, the rising of the *Black Lives Matter* movement in the USA, the *Arab Spring* in the middle east, the *Euromaiden* movement in the Ukraine, or the protests for awareness of the climate crises around the world. These kinds of protest news are mostly characterized by some violence or a polarized aim. But what if there are many more protest which are not necessarily violent or have a polarized aim?

If this is the case, then the violent protests get a larger presentation area and the aims of those get more attention. Based on this, the goals of such protests could get more enforced and non-violent protests, for example the protests for awareness of the climate crises, could change their protest tactics to more violence to push their goals through. Moreover, certain protests can get a false framing of their protest tactic. For instance, if the media prefers to report the violent scenes of a protest, but these are only a small part of the protests and the largest part protests non-violent, this could create a false public perception. This could result in a change of policing of protests, so that the security engagement will take harder action right from the start because they assume that protests are generally more violent. This in turn could lead protesters to resort to more violence because they assume that the security engagement is more violent which could lead to more violent security engagement. So, this would be a cycle which drives the violence in protests more intense. Moreover, if there a general bias of violent and non-violent protests there would be a bias in the data as well. Because only violent

protests get media attention and the most protest data is collected by media reports, therefore would be a bias in protest data as well as further research which could be an immense problem of protest research.

So, this term paper has the purpose to investigate if there is a general reporting bias of violent and non-violent protests and the research question is "*Which protest form (violent vs. non-violent) get more attention in the news media and why?*"

To answer this question I use the second version of the *Mass Mobilization in Autocracies Database* and the *Dynamics of Collective Action* database. In the following sections the theory of *selection bias*, *situational salience*, and *social significance* will be explained and embedded in the theory of *media salience*. From this theoretical construct hypotheses will be formulated and introduced. In the next section the literature review will follow. In addition, the Data which are used and the method to analyze the data will be presented. It continues with the illustration of the results and, finally, the problems are explained and a conclusion is drawn.

## 2 Theory

Since authorities – like governments, big companies or others – make decisions which violate human/social rights, social order, have a negative impact on common goods, or similar people can protests against those decisions. A protest consists of (self-)organized people to express their disagreement or opposition against those decisions, injustice of social orders or systems, or things that – in the opinion of protesters – are done wrong (Turner, 1969; Hausen, 1977). Moreover, these people are mostly frustrated about aforesaid things and these frustrations can lead to aggression (Gurr, 1970). This would be expressed by looting, property damage, physical harm, and/or violent conflicts between protesters and the executive, the police for example. Non-violent protests are on the other hand protest without any property damage, looting, physical harm

precipitated by violent conflicts, and any kind of violent conflict between protesters, counterprotesters, police or similar. But not all protests proceed violent, because some can be peaceful (for further explanation see Granovetters' threshold model of collective behavior (1978)).

Since media organizations, especially, mass media have the power to control the public opinion they play a significant role in shaping the understanding of the public on certain events (Lee, 2009). So the understanding of the public if protests are more violent or more peaceful shapes the reports of those media organizations. Unfortunately, these reports are biased as the literature shows because some events get overreported and some underreported – the so called *reporting bias* (Baum and Zhukov, 2015). Snyder and Kelly (1977) argue that this bias can be distinguished between the *selection* and the *description bias*. The latter is caused by the fact that the framing of events can be distinguish in different news (Earl et al., 2004). So, the framing of a report on certain protest events can differ between liberal and conservative media. For instance, the protest of the *Black Lives Matter* movement can differ in their notation at the liberal *New York Times* or the conservative news of *The Blaze* (Blake, 2014). But in this term paper the focus is on the *selection bias*. This bias is caused by the fact that media agency prefers only to report certain events (Earl et al., 2004). These events (e.g. homicide, violence, robbery, looting, arson, etc.) are mostly shocking and are called “bad news” (Johnson, 1996; Soroka, 2006). Obviously, violent protests fall into this category of bad news and some research shows also that these categories stay longer in the news (Johnson, 1996; Soroka, 2006).

The bias in the news reports can be explained by the newsworthiness or sensationalism. This is due to the fact that people “are just curious to see what lies in the [...] unknown underside of our society where the rules are broken without regard to [...] authority” (Dmitrieva, 2017, p. 8). So, people are more attract to news reports which contains more shocking events like violence. Furthermore, people are seeking to

sensations which are salient to them. Since media organizations also seek to increase their readership the news are kinds of commercial news but those news only works if they are salient to the consumers. So if a stimulus highlighted out of context and is therefore more accessible to the consciousness one speak of *salience* (Lebherz, 2007). This can easily adapt to situations as well. Obst and White (2005), for instance, show that there is a *situational salience* where certain situations are more salient than other. This depends on the context and framing of those situations. Applied to the situation of reporting protest events; the context is the peaceful daily routine and environment of consumers and the stimulus is the report of a protest. Is the framing of the protest report more violent than peaceful the report is more accessible to the consumers and will stay longer in mind. Moreover, the more deviant and socially significant an event is the more they receive media attention (Shoemaker et al., 1991). But on the other hand not all events are equally salient hence the media organizations likes to report more widely ranged and dramatic events (Hellmeier et al., 2018). Rafail and colleagues (2019) explain that the event coverage of news reports depend on three main reasons: firstly, events with a large or sensationalistic protest which has a higher conflict potential compared to more experienced protest receive more media attention. Secondly, the targets of a protest can influence the newsworthiness as well (Herman and Chomsky, 1988). For example, if the media organization is depended from a certain institution and people protest against this institution the media organization faces a contradiction of interests and could try to minimize the report of these protest events to protect the institution. Thirdly, the location of the protests also influences the newsworthiness. Therefore, if the distance of the protest location is further away from the media organizations' main office, the reports about this protest could be smaller (Myers and Caniglia, 2004; Mueller, 1997). In addition, the decision which event is worth of a news report depends also on other events which are already in the news. Therefore, the newsworthiness of an event does not depend only on objective characteristics (Wouters,

2013). So, for instance, a protest will make it into the news because it is related to the topic of other news reports and not on the basis of importance, conflict potential, institutional targets, distance, or others.

Thus, theoretically speaking, the *selection bias*, *situational salience*, deviance, social significant, or just topic related events of media reports leads to a general reporting bias of violent and peaceful protests. As a result of this, my hypothesis at this term paper is called:

H1: Violent protests get more attention than non-violent (peaceful) protests.

### 3 Literature Review

The topic of media coverage of bad news like violence gets attention by researchers. They have all a look on specific news media, like newspaper (Oliver and Maney, 2000; Baum and Zhukov, 2015), television broadcasts (Johnson, 1996) or social media (Poell and Borra, 2012).

So Johnson (1996) shows that more than half the time of news of four big television broadcasts (WCBS, CNN, CBS, WWOR) in the United States of America reported various forms of violence. Oliver and Maney (2000) have a look on the news coverage of public events on local newspaper in Wisconsin from 1993 until 1996. They argue the protest form is covered less if the legislative is not involved but there is more coverage of protest forms if the legislative provides issues. Also they mentioned that their results “[...] cannot be used to provide exact information about the media coverage of public events in all times and all places” (Oliver and Maney, 2000, p. 494). Furthermore, they argue that political processes effects protest and their news coverage. But on the other hand other public events like ceremonies and speeches get more attention by the media if they are large enough. In addition, Rafail and colleagues (2019) investigate the indicators of the question why certain events of collective action receive more media

attention than others. They show that the effect of violence and size of the social movement decrease over time, the consequences for peace protests, civil rights protests as well as the prominently appearance of a protest at the front page are depended of the executive editor (Rafail et al., 2019). However, they are limited by the fact that only the news reports which appear in the New York Times have been investigated.

An underreporting of protests and non-violent collective action by opponents of the regime in non-democratic states was found by Baum and Zhukov (2015). They have a look on the coverage of the Libyan civil war in 2011 in international newspaper. Also they show that the media coverage depends on the political context in which the media organization is based. Moreover, the non-democratic media have ignored the grievances caused by the government but in return they over reported the atrocities which are caused by the regime opponents. The reporting bias in democratic news media is the other way around. Hellmeier and colleagues (2018) argue that the more global a protest is, or the widely covered it is the more attention it gets by the media. Also they show that social movements which have an agency for news have a dynamic relationship to media attention. The focus of their analysis is the MMAD dataset with anti-regime protests in authoritarian countries between 2003 and 2012. Also they argue that the result seems to disappear if the distance to the reported event increases.

This literature review shows that existing research has not yet analyzed the addressed issue (in this term paper) in a bigger scope but only in small-scale analyses which have little or no generalizability. Furthermore, the other branch of research has focused on the reasons and indicators beyond the issue of the reporting bias so far.

## 4 Research Design and Operationalization

Research Design, Method, and Operationalization To test the hypothesis I use the second version of the *Mass Mobilization in Autocracies Database (MMAD)*. This database



focus on public events from 2003 until 2015 in autocracies<sup>1</sup> with a mass mobilization like “[...] a public gathering of at least 25 people with an expressed political motivation either opposing or supporting [...] government[s], or [...] other non-governmental institution” (Weidmann and Rød, 2019, p. 1). The unit of the data is a protest which was collected by media reports of those protests. The MMAD provided two different databases. On the one hand an event dataset and on the other hand a report dataset. Both dataset have variables which indicate a protests like the correlation of war code variable, the name of the location, geo codes (longitudinal and latitudinal), the date when the event occurs, and if the protest is against or pro the government (hereby, it does not matter on which government level – national, local or regional). But the databases can be distinguished by the aggregation (report database is not aggregated, the event database is pre-aggregated) and some other variables like the number of reports of each protest, the reported participant violence as well as the reported security engagement in the event dataset. On the other hand the report dataset includes variables like violence used by participants, the engagement of security the number of participants and the source of the reports. In this term paper the focus lays on the participant violence, the security engagement, the average number of participants, the number of reports, the maximal reported violence, and the maximal reported security engagement. So, I merge both databases by the date of the event to get all variables in one dataset. As a result of this merge process I get an aggregated dataset which includes the certain event and certain reports of this event. In particular, the dataset includes the following variables: the participant violence, the security engagement, the average number of participants, the number of reports, and the maximal reported violence of the participants as well as the maximal reported engagement of the security. Furthermore, I recode the missings of these variables to the value of zero because if the reported violence, the violence which was used by the participants, and the (reported)

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<sup>1</sup>e.g. Afghanistan, Central African Republic, Egypt, Haiti, Iran, Kuwait, Libya, Madagascar, North Korea, Saudi Arabia, Thailand, Uzbekistan, Venezuela, Yemen, Zimbabwe, and others

security engagement is not shown up in the media reports I assume that there was not such violence or engagement and these protests are non-violent. Furthermore, I included the variables of the reported violence of the protesters and the reported security engagement because they could differ from the actual used violence and security engagement. It could be that those have an impact on the result, especially, on the public perception (see the theoretical framing argument). As a result of this the final dataset of the MMAD contains almost 164,000 observations.

Due to the fact that the MMAD contains just protests which proceed in autocracies I use, additionally, the *Dynamics of Collective Action* (DCA) data. This database contains, therefore, just protests which proceed in the United States of America in the years from 1960 until 1995. This DCA dataset includes variables of the report date, event date, the numbers of articles of an event, certain information about the protest (aim, who, what happened, location, initiating group(s), target of the protest, organizations, and others), and many more – overall, roughly, about 80 variables. I include in my research design just the following eight variables; if there were used violence, which type of violence, property damage, counterdemonstrations as well as how many stories were written about this event, the number participants, and the variable about the engagement of the police. Also here, I have coded the missings to the value of zero because of the mentioned reasons at the MMAD. The final dataset contains about 23,000 observations. Unfortunately, the DCA data is limited by the fact that the source of the protests is only the *New York Times* contrary to the MMAD where the source can be more distinguished by three sources; the *Agence France Presse*, *Associated Press*, and the *BBC Monitoring*. I use the DCA data anyway because these protests occur in a democracy and, therefore, I might also have a clue of what the predicted trend in a democracy might be, not only in autocracies.

## 4.1 Method

A Poisson regression seems necessary for my research since the dependent variable (number of reports) consists of count data. These kinds of data refer to a frequency of specific events within a specific time interval and are thus the realization of nonnegative integers (Wooldridge, 2010). The numbers of reports are such events because either reports occurs or they do not occur, so they do not include negative integer and can theoretically reach an infinite maximum. But with my data, the maximum of the numbers of reports is about 98 at the MMAD and 35 at the DCA data. The time interval of my data is the time in which the data was recorded (MMAD: 2003-2015; DCA: 1960-1995). According to the statistics, count data are concentrated around some discrete values (like the events of the number of reports  $(0, 1, 2, 3, \dots, n)$ ), so they are extremely left-steep (see Figure 1 and Figure 2) and intrinsically heteroscedastic(Wooldridge, 2010).

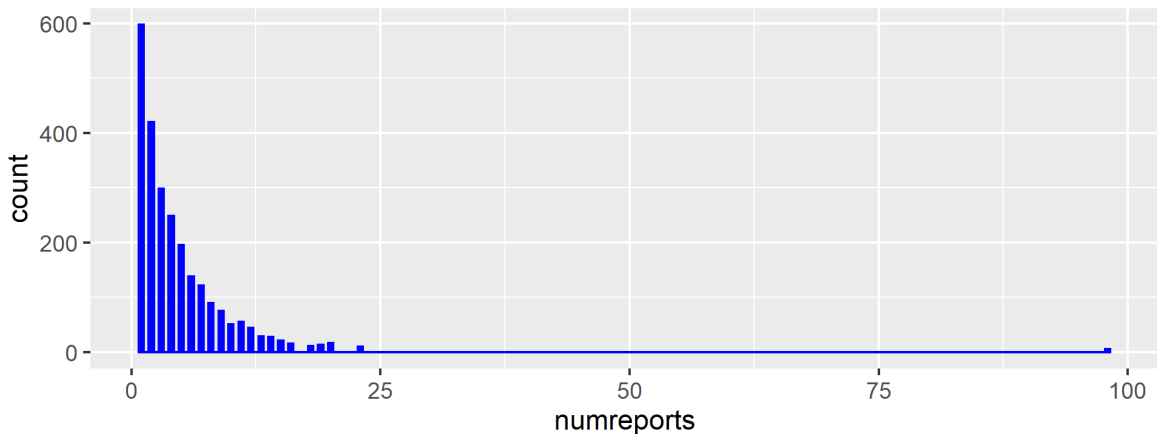


Figure 1: *Mass Mobilization in Autocracies Database*: Count of the number of reports.

As a result of this, the variance increases with the arithmetic mean. Since the linear regression ignores the limited domain of nonnegative integers which will provide biased estimates of the regressors and regressands (Wooldridge, 2010) seems a Poisson regression necessary. This regression describes the probability that a specific event (report) occurs in a defined time interval (emerge of protest). Due to the fact that the MMAD and the DCA database have a distinction in their coding and in their form of

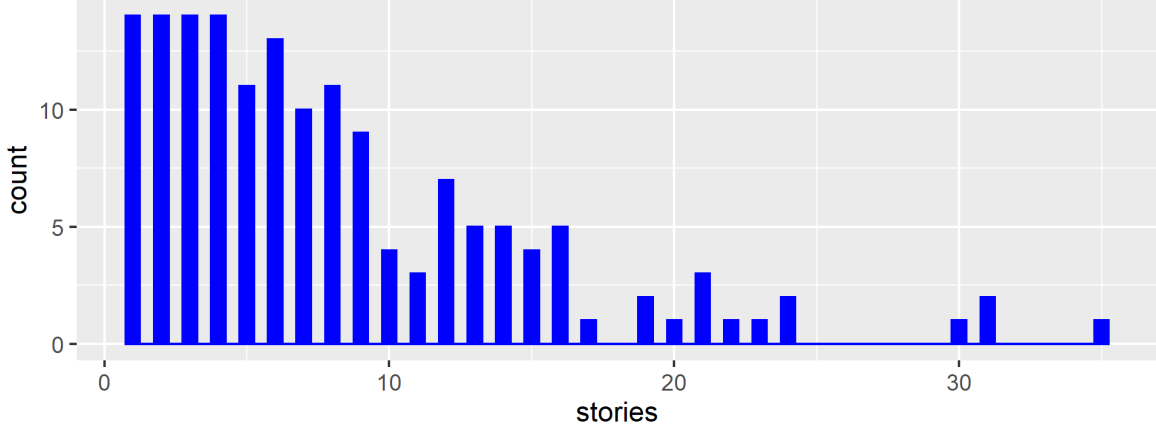


Figure 2: *Dynamics of Collective Action* data: Count of the number of reports.

governments I cannot merge them together, therefore, I run two different Poisson regressions. The depended variable is in both Poisson regressions the number of reports. At the MAAD regression the independent variables are; if the protest proceeds violent or non-violent caused by the protesters as well as the security, the reported violence used by protesters as well as the security, and the average number of protesters. The independent variables at the DCA regression are; if the protest was violent, which type of violent was used<sup>2</sup>, if any property was damaged, in which way the police was engaged (split up to two variables), if any counterdemonstrations occur, and the number of participants. Since Poisson regressions suffer by overdispersion, so the variance is larger than the mean and the equidispersion assumption is violated (Wooldridge, 2010) a test for overdispersion is also necessary. I will use the overdispersion test by Cameron and Trivedi (1990). Here the assumption of equidispersion is simply tested as a null hypothesis and an alternative hypothesis with the following formula:  $Var(Y) = \mu + c * f(\mu)$ . If the constant  $c$  is greater than zero it is overdispersion and if it is smaller than zero it is underdispersion and if  $c$  is a little bit greater or smaller than zero it could be ignored (e.g.  $c = 0.5$  or  $-0.5$ ).  $f(.)$  is often a monoton linear function and sometimes a monoton quadratic function. Therefore, the dispersion test is testing  $H_0 : c = 0$  and  $H_1 : c \neq 0$

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<sup>2</sup>use of weapons, physical violence, or other

with an asymptotically standard normal under null statistic, or simpler a t statistic. Moreover, a goodness-of-fit test seems also necessary to test if the chosen analyze tool is appropriate for the data. Therefore, the residual deviance gets tested by comparing the deviance of an ideal model with the deviance of the actual model. If the residual deviance is small enough the test will not be significant, so it indicates that the model fits the data.

## 5 Results

As mentioned before to test the hypothesis if there is a general bias in media reports of violent or non-violent protests a Poisson regression has been applied to an autocratic and democratic database of protests. Since the Poisson regression is a kind of a logarithm function the estimated report model coefficients were exponentiated to get the multiplicative factors which are odd ratios. So, these are easier to interpret and it can be transformed to a percentage prediction by the following formula:  $\% = (\beta - 1) * 100$ .

	exp(Est.)	Conf. %	Level 2.5%	Level 97.5%	z val.	Pr(> z )
(Intercept)	1.50	50%	1.49	1.50	158.55	0.00
Violence by Protesters	1.00	0%	0.98	1.01	-0.61	0.54
Average Number of Protesters	1.00	0%	1.00	1.00	5.39	0.00
Security Engagement	0.98	-2%	0.98	0.99	-7.99	0.00
Reported Violence by Protesters	1.33	33%	1.32	1.35	74.43	0.00
Reported Security Engagement	1.54	54%	1.52	1.55	90.03	0.00

Table 1: Poisson regression on the *Mass Mobilization in Autocracies Database*

Table 1 shows the results of the regression of the MMAD. Since almost all variables are significant ( $p > 0.001$ ) the assumptions about the effect of the independent variables can be made, except for the variable of the violence usage by protesters. Unfortunately, this variable is not significant and no valid assumption about this effect could be made. As one can see, this variable has an impact of 0% ( $(1 - 1) * 100 = 0\%$ ), especially, no effect on the dependent variable, anyway. The same applies equally to the variable of

the average number of participants because the estimated exponentiated coefficient is 1, i.e. there is a 0% chance of change of the number of reports if the average number of participants changes as well (higher or lower for example). This effect is by contrast significant ( $p > 0.001$ ). As a result of this, protests have the same chance of a report by the media if they have a lower or a higher amount of participants, so the effect of the number of reports is not explained by the amount of participants. The variable which contains the engagement of the security during a protest has a negative impact by 2% on the number of reports in autocratic states. So, if the security at protests uses more violent tactics the chance of a decrease of number of reports are with 2%. For example, if the security is just present and then due to some reasons they interfere physical or lethal the reports of this protest will decrease. The embedding of the media in government structures might be a major role to this effect. Baum and Zhukov (2015) explained that autocratic governments like to control the media to stable their power. Since the public perception about the engagement of the executive at a protest change negatively the public perception of the whole government can change negatively and it might be that more protests against the government could occur. Indeed, the reported violence usage by protesters and the engagement of the security have both a positively effect on the number of reports. The reported violence has a chance of 33% and the security engagement has a chance of 54% to increase the number of protests. This result partially supports my hypothesis because violence is shown up in reports and therefore there is a high probability that violence is used at the protests. So, the number of reports will increase by 33% and 54% if violence was used. But on the other hand, this could also support the theoretical argument of the newsflow; if violent protests are in the news, than other protests seem to fit in that news and some kind of news bubble emerge. In this bubble only the same kind of news survive like violent protests (see Wouters, 2013). In addition, this database is appropriate for the chosen analyze tool. This is the result of the goodness-of-fit test because the distinction of the

variance between the actual Poisson regression and the ideal Poisson model is small enough to be not significant ( $p > 0.1$ , 0.05, or 0.001). Since Poisson regressions suffer by overdispersion I have tested this as well. The result of overdispersion test is not equally zero but small enough to ignore (0.64).

	exp(Est.)	%	Conf. 2.5%	Level 97.5%	z val.	Pr(> z )
(Intercept)	1.13	13%	1.12	1.15	14.90	0.00
Violence Usage	0.97	-3%	0.92	1.02	-1.10	0.27
Violent Types	1.04	4%	1.02	1.06	4.89	0.00
Participants	1.02	2%	1.01	1.02	4.56	0.00
Property Damage	1.18	18%	1.12	1.24	6.29	0.00
Police Engagement 1	1.18	18%	1.12	1.23	6.77	0.00
Police Engagement 2	1.30	30%	1.22	1.39	7.87	0.00
Counterdemonstration	1.22	22%	1.17	1.28	8.38	0.00

Table 2: Poisson regression on the *Dynamics of Collective Action* database

The same applies equally to the Poisson regression of the DCA database. Due to the fact that the goodness-of-fit test is not significant and the overdispersion test is almost zero and can also be ignored ( $-0.16$ ) it is confirmed that this analyze tool is also appropriate for the DCA data. Table 2 shows the exponentiated estimated regression coefficients and their level of significance. As one can see, also here are almost all independent variables significant ( $p < 0.001$ ) except the variable of the violence usage by protesters. Nevertheless, this variable can have a negatively effect of 3% on the number or reports of protests. Based on this, the reports could decrease if protesters chose violence during the protest but since this variable is not significant the assumption of the effect is not valid. Also at the DCA data the number of participants has not such a big influence – the chance of an increase of the reports is just with 2%. However, the other variables which describe violence by protesters as well as by the police are significant and they all have a positive effect of the number of reports. For instance, if property was damaged as well as if the police use physical force against protesters there is a chance to increase the number of reports by 18%. Furthermore, if

the protesters change their violent behavior to a mixture of violent behavior<sup>3</sup> the chance of an increasing number of reports is with 4%. If the police use any violent tactics, include weapons for example, the chance of an increase of the number of reports is with 30% and thus the highest. This result shows that violent protests get more media attention than non-violent, at least in the USA, thus support my hypothesis. The theoretical argument of sensationalism could be supported by the result of the effect by the counterdemonstration variable because these have a chance of 22% to increase the number of reports about a protest.

## 6 Discussion

As this research term paper shows there is a bias in reporting violent and non-violent protests so far in selected autocracies and the United States of America. This result is not shown by a simple violence/non-violence prediction but by other, more differentiated indicators of the violence usage. In general, those are property damage, violent security engagement, and different tactics of violence. For instance, the change of violent security engagement shows that the more violent the intervention of the security, like the police, is the higher the chance of an increase of the reports about a protest. The same applies equally to the violence usage by protesters; the more violent the protesters are the higher the chance of an increase of the number of reports.

Therefore, this empirical research supports my hypothesis and violent protests get more attention than non-violent protests. Unfortunately, this research faces limitations because the aim of this term paper is to investigate if there is a general bias in (non-)violent protest reports but the data I use are limited to some selected autocracies and the United States of America. Furthermore, these data are probably already biased due to the limitation of the sources. The number of reports about protests was collected by only four media agencies; the *New York Times*, the *Agence France Presse*, the *Associated*

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<sup>3</sup>like from the use of weapons to the use of weapons + physical violence



*Press*, and the *BBC Monitoring*. In addition, the question then raises whether all protests are reported at all or only the larger ones, with more impact, sensationalism, or a subjective important aim. Based on this, the result of this term paper can be partially generalized to the period from 1960 to 1995 in the USA to the reports of the *New York Times* and from 2003 to 2015 in some autocracies to the reports of the *Agence France Presse*, the *Associated Press*, and the *BBC Monitoring*. Additionally, it is also not possible to say exactly whether there is any bias of the protest reports or not, because it is not possible to be sure that protests are missing or not in the data. So, if all protests are included in the data there is an overreporting of violent protests but no bias in the data.

To investigate if there is a bias in the data future research should scrape media reports of protests of all media (newspaper, online, TV, and so on) and compare them to all existing protests. Unfortunately, this seems impossible because nobody knows information about every protest. For instance, if one person protests in silent and for themselves against a company nobody will know and if this even a protest but this is more a philosophically question. Furthermore, the question arises if non-violent protests get the same media attention than violent protests? If they do not, are violent and non-violent protests unequal distributed? But if violent and non-violent protests are evenly distributed, is the data perhaps biased after all?

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