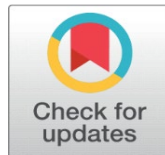


A STUDY ON THE EMERGING TRENDS OF DATA JOURNALISM AND ENVIRONMENT IN INDIA

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ABSTRACT

There is a belief that Data journalism is relatively a new term for environmental practices, but in fact, the relation of environment and data goes way long back than one can think. Now more advanced and visual methods have replaced the older one and due to which the relation between the two variables is more visible. Environment and data were always related. But with the advances in computer-based reporting, the use of data in environmental reporting has excelled.

With the increasing population and human penetration in nature, has resulted in many issues that for which mankind can be blamed. Now whenever any environment is affected the numbers of casualties are huge. Not only casualties but everything it touches is huge, be the damage, the geography it covered, anything. It becomes a huge task for the journalist to compile that whole data and show it in understandable manner. Because, until and unless the proper message is conveyed, people won't be able to understand the gravity of the disaster. And to combat this problem of dealing huge chunk of data is data journalism. In this chapter we will see how data journalism was used to show the environmental issues.

Keywords: Data Journalism, Environment, Disasters, Web Data, Reporting, Twitter, Social Media

1. INTRODUCTION

When talking about data, several websites are operating and maintaining a huge chunk of data. Few climates portals have the data collection from the early 19's. Nowadays, it is hard to imagine news without data, be it political or environmental. The reason behind that is the credibility as by using data in a report, the news gets more authentic.

With the recent onslaught of news related to hurricanes, Tsunami and Maria, scientists were presented with a huge chunk of data, ranging from patients and geography to impact. To properly analyze and present the data, journalists used different tools of data journalism to make it in an understandable form.

The environment is one of the data pools which are yet to be exploited. Data helps a lot while presenting an environment report. Proper usage of data can transform a report into a masterpiece or a poorly conceived one will also result in disaster.

It is not like that data journalism is a niche domain, every other news that we see now contains the traces of data journalism in it. We are living in the era of 4g and 5g is on the verge of coming. Most of the youths now prefer twitter over newspaper or relies on mobile apps for their news feeds. In the era of where there is a limitation of words and thousands of other options are on table for the audience it is a dire need to provide maximum in the minimum. Thus, the need of processing heavy chunk of data into those limited words was a necessity, because data make the report authentic and info graphics helps in better understanding.

(Lewis & Usher, 2013) The major challenge that is faced by journalist and reporter while covering specific beats is not the scarcity of data but to find a way to properly process the abundant data. The speed at which data is produced is way faster than that data is processed. (Knight, 2015) Rise of information related to geography and its related matter followed by computer assisted reporting let the journalist to go deeper and present a better and an understandable report. (Permissions et al., n.d.) We are living in an era where Google maps is present in every cell phone not only cell phones but even cars.

We are living in the age where data is more accessible than before. We are living in the world of open data. (Singh, 2019) While talking about a country like India data revolution came post right to information act 2005 similarly in other nations as well. (Coddington, 2015) Because of open, more and more data was in public, and the accessibility has also increased at a rapid pace.

Data Journalism: Data journalism in the present context has penetrated almost all the sectors of information. (Green, 2018) believes that in present era even the educators are putting the data on priority to prepare the new journalist with the industry standards. (Zhu & Du, 2018) compared the students of journalism stream and science stream and found that both showed different merits in terms of data perception. The study focused on the importance to combine the merits of both the stream.

2. LITERATURE REVIEW

(Francesca Morini. 2023) The escalating environmental crisis and the recent climate emergency have compelled news outlets to establish dedicated editorial brands for these subjects. To distinguish itself in a field increasingly dominated by global media, La Nación (Argentina) has pioneered "Proyecto Naturaleza," an editorial brand focusing on environmental data journalism. Employing data and collaborative journalism approaches, this review employs participant observation and in-depth interviews to fathom La Nación's practices. The findings underscore three core pillars: climate change, biodiversity, and audience engagement. Aligning with annual events, the team crafts a schedule of activities, including data stories and crowdsourcing. Collaborative interactions with diverse sectors further enrich content, while involving audiences transforms their role from passive recipients to active contributors

(David B. Sachsman et al 2022) The landscape of environmental news coverage underwent a profound shift from the late 1960s, becoming a standard feature by the 1970s. Correspondingly, the count of environment reporters grew alongside the economic prosperity of print and television industries, culminating in a "golden age" of environmental journalism during the early 21st century. This era saw specialized environmental reporters employed by 534 US daily newspapers (36.5%) and 86 television stations (10%). However, the subsequent decade witnessed the financial downturn of newspapers and a parallel decline in television, resulting in job losses for experienced environment reporters. The emergence of a thriving online environmental media realm was catalyzed by the internet's ascent. As we look ahead, a greater portion of environmental reporting is expected to transition to the online domain, potentially thriving through renewed advertising revenue via innovative economic models, paving the way for another potential "golden age" in environmental journalism.

(Nisbet, 2019) The main challenges for covering the climate and environmental issues are of showing the story from all the possible angles. This thing will not solve any problem but will prepare us for future. Here in doing so, Nisbet believes that in doing so journalists have a vital role to play. Nisbet believes that journalism has to now challenge the old going style of reporting and now move toward an alternate vision.

(Painter, 2019) In the essay the Painter analyzed four studies related to environment and journalism and on the basis of those studies, he drew a conclusion. He believes that journalists now will be focusing on a complete new economic system to deal with the issue of climate problem. He also believes that there is a tremendous scope for video

producer who take the advantage of technology and develop a participative opportunity that will present the climate change in a different way.

(Takahashi et al., 2015) In the study found that most of the time people and individual rely heavily on social media to disseminate information. This information relies on many factors such locality and time. Study also finds that at the time of crisis users values the traditional media more than social media. It is believed that social media need more functions and new technology to create larger collection of information.

(Knight, 2015) While referring to one the report related to climate change, the paper discussed the possible solution of how it supposed to be analyzed by using the tools of visualizations and data interpretation. The researchers says that 'The Great Green Con report on climate change contained complex graphs, spread and covered most of the pages, the story was big and was given space but not enough justice was done.

(Kirilenko & Stepchenkova, 2014) The aim of the study was to go through the tweets on climate through a certain period. In the study it was found that twitter in itself cannot solve the sampling problem as there were challenges related to data management. Study also says that the proliferation of GPS enabled devices has led to better data generation. As in the case of twitter only 1% of tweets were geofenced so extraction and analysis for specific climate study was not possible and there was a need for better algorithm in future for better study.

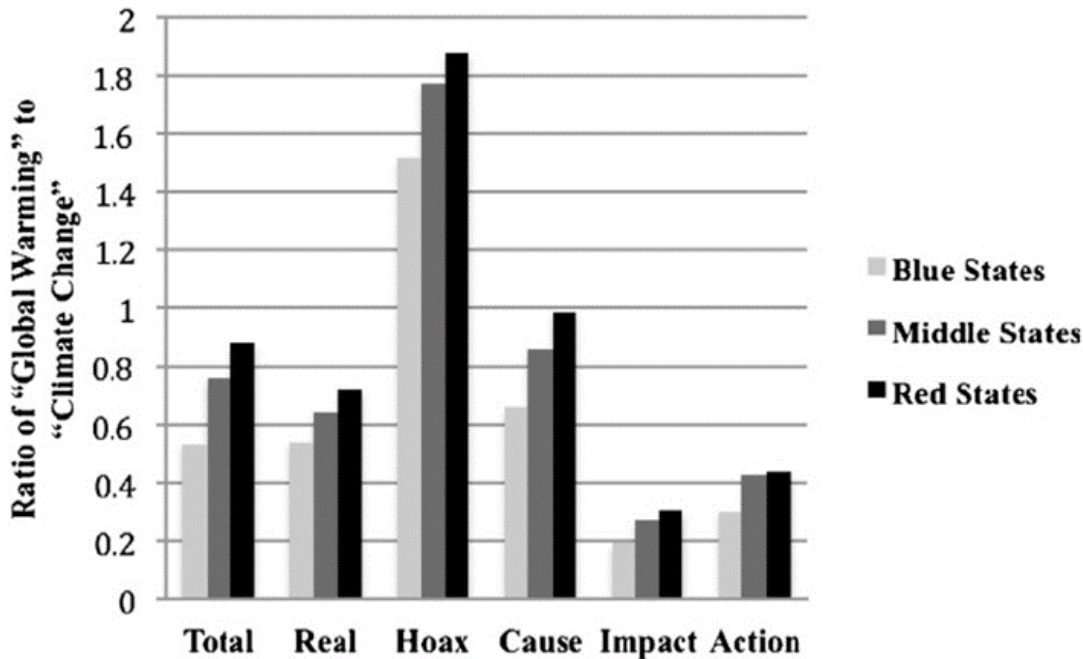
(Maria Teresa 2013) Media serves a pivotal role in shaping social perceptions and, consequently, comprehending media content is vital for discerning societal stances on critical matters like climate change. The premise here posits that improved or increased information cultivates a clearer ecological grasp, heightening environmental consciousness, and influencing shifts in values, attitudes, and conduct. Although limited attention is given by scholars to journalism's role in conveying climate change in Latin American nations, their significance in global negotiations is pronounced due to abundant natural resources pivotal in the "post-Kyoto" era. Hence, Argentina is selected as this study's focal point.

The paper also discussed the news that were on twitter along with their content and for this a table was also prepare which shows the ten most discussed news event of that year on twitter, as one can see most of them had the affiliation to climate.

Ten most discussed 2012 news events on Twitter.

Cir. date	Resource	Name	Content
29/1	Daily Mail	Forget global warming – it's Cycle 25 we need to worry about (and if NASA scientists are right the Thames will be freezing over again)	From 1997, there was no discernible rise in aggregate global temperatures; mini-ice age may be coming
17/3	Forbes	Scientists Call For Stronger Global Governance To Address Climate Change	The paper in Science signed by 32 scientists
3/4	credoaction.com	Tell the EPA: We want stronger rules to fight climate change	Online petition to the US EPA
18/6	endfossilfuelsubsidies.org	Twitterstorm	Petition to the Rio Earth Summit to stop fossil fuel subsidies
20/6	Greenpeace	Petition "Global Sanctuary in the Arctic"	A call to sign the petition
28/6	ThinkProgress	Bombshell: Koch-Funded Study Finds 'Global Warming Is Real', 'On The High End' And 'Essentially All' Due To Carbon Pollution	The BEST publication and BEST director Richard Muller's conversion from climate change denial
19/7	Rolling Stone	Global Warming's Terrifying New Math	US warmest spring on record
3/8	Washington Post	Climate change is here—and worse than we thought	Op-ed by Director of NASA GISS J. Hansen
13/10	Daily Mail	Global Warming Stopped 16 Years Ago, Reveals Met Office Report Quietly Released. . . And Here Is The Chart To Prove It	From 1997, there was no discernible rise in aggregate global temperatures
1/11	Businessweek	It's Global Warming, Stupid	Hurricane Sandy aftermath

(Jang & Hart, 2015) while studying the twitter data of UK and USA derived the results for the study. For this researcher did content analysis of the tweets of the users. On the basis of those tweets, it was found that UK users were more attentive towards the issues related to climate than US users. They also compared the Hoax, real issues, and other variables just by tweets, as shown in the fig. This study addresses the data analysis just by observing tweets of different users.

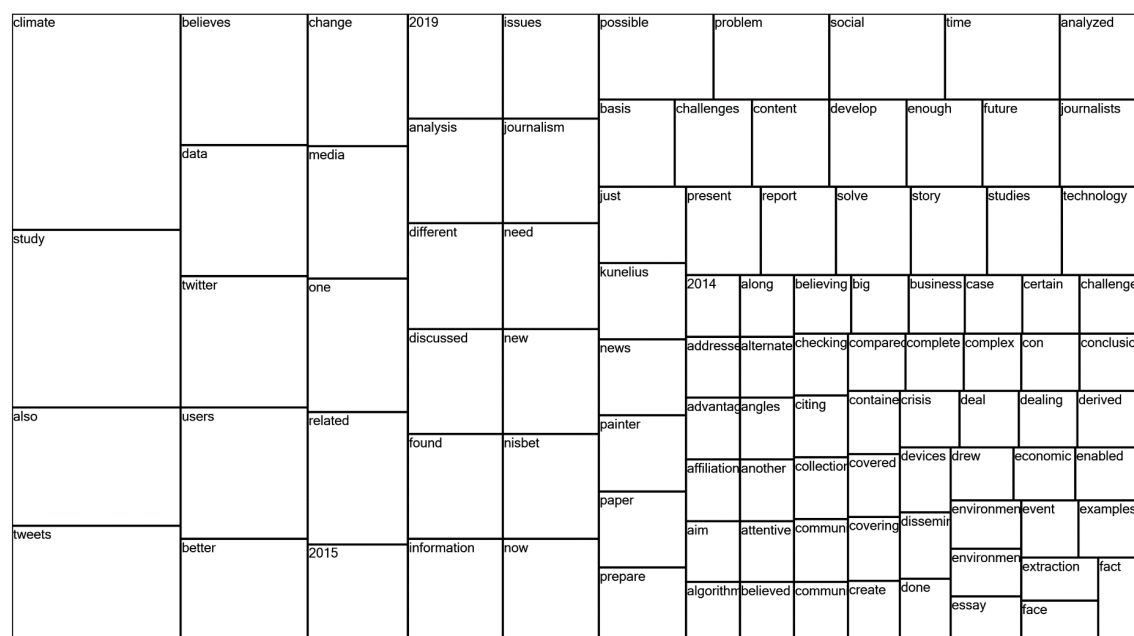


3. ANALYZING THE LITERATURE



By looking at the word cloud of the literature made by using the Nvivo software following points can be taken into consideration:

Recurrence of words such as data, study, climate, and tweet are the most as they are highlighted in orange. That suggests the usage of these words were highest in the literature. But still we can see a larger gap between the outer most circle words such as environment and data, this suggests that still there is much gap that needs to be covered.



In the tree map above, it can be seen that the first tier includes keywords like climate and study but keywords such as data and twitter come up in the second tier. This tree map shows that, yes, there is a difference between the words, but it is decreasing. Though it is still going to take a bit more time when we will see the data and environment making the maximum use of each other. The gap is in decline but still there is a gap. There is no doubt that when the data and the environment will be used to convey the information the way environment reporting is done will change dramatically.

4. CONCLUSION

There is no denying that what we are seeing today, the penetration of data journalism in environment-related issues is increasing day by day. Previously when reports were limited to newspapers, one had the liberty to get the in-depth news. But now with the advent of new technology when everyone wants to see the information is just one then visualization, info graphics and such tools are coming handy.

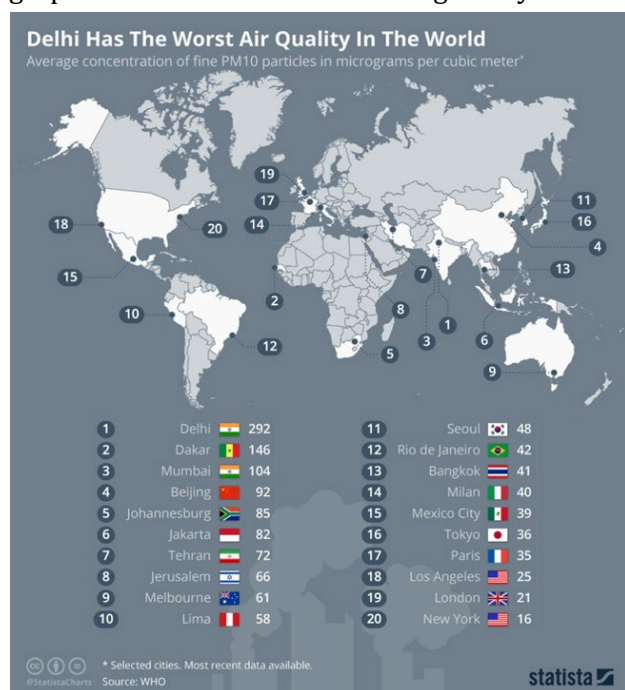


Image that is given by (Niall McCarthy, 2018) states the pollution data of Delhi. If this was presented in a separate manner, then it would have pages long report. But by using the tools of Data journalism the whole report is in single image. Moreover, with the hyperlink technology and embedded link, it is very easy to navigate to find any certain information related to any of the given data.

The existing studies shows that indeed there is a scope but not much have been done to find a proper linkage between the two variables. We are seeing the news and media houses incorporating different tools to use data but still we are lacking when it comes to professional help. In the recent case of Australian fire BBC (BBC, 2020) used an interactive service to track the data; this info graphic showed the advancement by using figures that happened in Australian fire, This link is still active and can be accessed through reference.



Though data journalism has a very important role to play when it comes to environment but its branches are yet to be discovered. We are entering in open data era and we need such tool to analyze that data into understandable form.

CONFLICT OF INTERESTS

None.

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