Making Sense of Data Journalism: A Study from Pakistani Perspective

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Abstract
In recent times, data journalism has brought about a change in our way of life, including the manner in which we communicate, the choices that we make, and the way that we sense the world around us. In the process of measuring anything, you are changing your essence. As a consequence of computational thinking, the conventional logic that exists within the media industry has been transformed. In addition to this, the sequential plot was improved upon even more. When we have access to knowledge, it makes it easier for us to comprehend, explain, and communicate the reality that we experience. In both the developed world and the developing world, there has been progress made in the field of data journalism. In Pakistan's perspective, there has been no action done in response to the situation. The issues that are associated with the use or misuse of data, the talent that is necessary to do so, the platforms and technologies that are used in data journalism and the future advancements in newsrooms are all key questions that need to be answered. In light of the growing significance of data as a basis for reporting and storytelling, it is of equal importance to discover solutions to the problems that have been identified. A reaction is provided in this article, which is written from the point of view of Pakistan. Before the concepts of Big Data and data journalism can be deemed conceptually advanced, the facts must first be gathered, extracted, characterized, analyzed, and remarked upon.

Keywords: Data Driven Journalism, Data Stories, Data Science, Digital Media

Introduction
The advancement of information and communication technologies has altered the ways in which we comprehend, appreciate, and investigate our globe. Scientific information is always being presented to individuals on a daily basis. The use of data-processing technologies is becoming more important in journalism all around the globe. Journalism organizations and journalists need to have an understanding of how data and computational journalism may change the norms, methods, and organizations of the news industry in order to adapt to the ever-changing content, connectivity, and media ecology. Data journalism is quantitative, as was previously said. It is a subject that is now trending in the field of media and journalism studies, and it is attracting the attention of academics and technical reporters. The term "data journalism" is currently published in a number of publications and academic journals. In every book, both developed and emerging countries are taken into consideration. From Pakistan's point of view, there has been no positive results. Increasing the number of scholarly articles, discussions, theorization, and methods towards data journalism raises a number of issues. In the event that data is used more often in reporting and narrative, what skills will be required more than ever? What are the plans for the data? Why have newsrooms evolved over time? Where can I find the necessary platforms and tools? Not an exception can be made for Pakistan's news media business (Sato A, 2014). The significance of data as a basis for reporting and storytelling is growing, and as a result, it is essential to find solutions to the difficulties that surround its use or misuse, the talent that is required to do so, the platforms and technologies that are used in data journalism, and the advances that will occur in the future in newsrooms. Based on Pakistan's perspective, this article provides a response. Big Data and data journalism are the subjects of this study, which investigates the conceptual twists and turns that occur while attempting to capture and retrieve the truth as well as describe, perceive, and show it (Herzog D, 2015).

Research Questions
1. What is the status of Data Journalism in Pakistan?
2. What measures have been taken by government for promoting data journalism in Pakistan?
3. At what stages are media utilizing data journalism in Pakistan?
4. What expertise is required to use data journalism on daily base work practice?

Data and Big Data Stories
The English word "data," originates from the Latin word datum, which means "information." Within the scope of this discussion, the term "included" refers to a conceptualization of everything that is capable of being recorded, analyzed, and recalled. The sky is the limit since it is feasible to integrate anything that may be deemed a detail; consequently, the possibilities are endless. When referring to something that has been analyzed or organized by a computer, the word "knowledge" is used. To use this concept in a more general meaning, the term "information" may be used to refer to any

collection of numbers that can be found on a spreadsheet. Big data is a collection of data that satisfies the following conditions: it must have a very large length, a very high velocity, a very diversified scope, and it must accurately represent reality. The phrase "big data" refers to a collection of data that fits these criteria Hilbert M (2015).

The fact that is at the centre of each of the four V`s may be seen, analysed, and reflected upon in a variety of different ways, which opens up new horizons of possibilities. Instead of just collecting huge amounts of data, the major emphasis of big data is on identifying patterns in the progression of behaviour, issues, events, and other social structures. This is in contrast to the goal of big data, which is only to store information. Such a process is referred to as "pattern discovery." Creating connections between the actions of other people and the outcomes of those actions, as well as establishing connections and relationships with those who are in our immediate surroundings, is the focus of this endeavor. Despite the fact that individuals have a variety of political perspectives, it is an inherent characteristic of human nature that they will behave in a specific manner to a certain extent. Additionally, it is concerned with the behavior of both employees and customers, in addition to the chance of a new business being established (Bhadani A, Jothimani D, 2016).

It is possible that a significant amount of information may be obtained from the content that individuals post on Facebook, search for on Google, and update on Twitter. Additionally, credit card punches and location data from mobile phones can also be used to gather information. As a direct consequence of this, it is starting to demonstrate a greater interest in the actual activities that individuals take part in. It is possible for a scientist to gain a significant amount of knowledge about the topic of their study simply seeing the results of their experiments. They are the ones who will decide whether or not the person is capable of repaying bank loans, harming others, or committing crimes. They are able to do this because the fundamental element that influences their feelings, attitudes, and behaviour is the social history that they have participated in. Take for example that you have a strong comprehension of one facet of a person's behaviour for a brief period of time. After studying the participants in their social ties and drawing parallels to them, it could be possible to make predictions about the behavior of other individuals in a scenario that is comparable to the one that is now being discussed. Individuals are so deeply ingrained in the social fabric of their surroundings that the social fabric influences the behaviours that individuals consider to be typical as well as the habits that they may pick up from one another (Dumbill E, 2013). Through the examination of enormous amounts of data, we are able to get an understanding of the causal connections that are responsible for these catastrophes. It is possible that we may get a more comprehensive understanding of the reliable operation of both human and computer-based systems as a result of the wealth of data that is already accessible.

As a result of the development of information and communication technology, there has been a shift in the manner in which we live our lives, communicate with one another, make choices, and perceive the world around us. The most fundamental component of living has been revolutionised as a result of the inclusion of a quantitative layer, and the concept of big data has evolved to put a greater emphasis on watching and comprehending the interactions that take place inside and between the many pieces of information. Business, research, healthcare, economics, education, and finance are just few of the areas that are experiencing a revolution as a result of the production of big data. Other areas of culture, such as the arts and other aspects of culture, are also experiencing this revolution. At the same time, there is a revolutionary transformation occurring in the dynamics of corporations, the economy, and cultural institutions. The dissemination of big data around the world is accomplished via the utilization of a large number of servers, and it is well-known for exhibiting a great deal of unexpected patterns and being in a state of perpetual turbulence (Pentland A.S, 2014).

Considering the reason that the statistics are accurate, it is possible to make a comprehensive selection from among the information that is provided. In the event that you provide sufficient information, the results of the calculation will need no more explanation. The interpretation of data that is accurate has the potential to increase our knowledge of the possibility of pandemics, natural disasters, and terrorist acts, as well as our capacity to predict when these events will take place. Because of this, it is possible that they will be able to assist in preventing the outbreak of illnesses, the exhaustion of resources, and the loss of lives. In the present moment, we are still in the ratification phase of the process. One of the most obvious distinctions between advanced civilizations and modern civilizations is that the latter are more adept at storing and retaining information than the former (Shmueli G, 2016). It is estimated that the quantity of data that is being stored is growing at a pace that is four times faster than the growth rate of the global gross domestic product. Our reading habits have made it possible for Amazon to recommend books to us based on the novels that we have previously read, and Facebook is now aware of the preferences that we have, as well. Google is able to provide us with information on the most popular websites, and Linkedin is able to tell us who we are connected to. For example, there are currently more than 4.2 billion people using the internet all over the globe, Google processes 3.9 billion search queries every single day, and Facebook has more than one billion users. Facebook users share 1.7 billion posts every day; on Snapchat, users upload 602,672 pictures; on YouTube, users watch 5,102,222 videos; on (X) Twitter, users exchange 498,222 messages; on Instagram, users share 51,022 images per minute; and on Twitter, users exchange 498,222 messages (Zwilling M, 2018).

Scope of Data Journalism

The meaning that is intended to be communicated by the word "data journalism" in the context of traditional journalism is precisely the meaning that the name itself denotes: data journalism. When defining a narrative, the mainstream journalistic style relies on three pillars: authenticity, importance, and relevance. These three pillars are the foundation upon which the style is built. This is not a narrative that has been made up in any manner. An technique of seeing, analyzing, and making sense of the world that is now in use is known as data journalism. This approach needs the thorough examination of enormous amounts of data. It is a modern method, despite the fact that the concept of data journalism has been around for quite some time. The meaning of this statement is that it refers to the use of facts as a method for getting closer to the truth about what is occurring in the world. By bridging the gap between statisticians and wordsmiths, which comprises a broad range of professions such as journalists, computer scientists, statisticians, and graphic designers, amongst others, it is all about interaction and bridging the gap between the two groups. Journalism, in contrast to other means of communication, is mainly concerned with the conventional gathering of information, facts, points of view, quotations, and statistics in order to express the importance of world events and the context in which they happened in order to build a story (Baez S, García A, Ibáñez A, 2018). This is done in order to construct a narrative. In order to fabricate a narrative, this is put into action.

In the meanwhile, the phrase "data journalism" refers to the process of developing new types of reporting by combining computer tools, a broad variety of data sources, and insights that are driven by data. It is possible to acquire the information by using mathematical calculations, quantitative analysis, and algorithmic processes in a methodical manner. With the assistance of data journalism principles, it is feasible to acquire or create data sets that are organized. This strategy involves providing readers with access to raw data in addition to the narrative, addressing the source of the data or data in a written work, and using organized data sets for the purpose of narrative analysis. The process of determining how to get the data, how to evaluate it, and how to comprehend the tale is very necessary in this scenario. It is important to note that there is a substantial difference between what makes "proof" and what defines a "plan." The actual data itself is a source of knowledge that might be valuable in certain situations (Sinclair TM, 2015).

When it comes to the process of gathering information, journalists often go through a comprehensive procedure that begins with the elimination of troublesome file types and concludes with the reorganization and reorganization of the data until it is ready to be represented graphically. It is essential to have a solid understanding of the fact that the story is a kind of communication that is immersive, meaning that it incorporates information into an experience that can be analysed, recalled, discussed, and shared with other people. A wide variety of tools, including virtual visualisation, infographics, vast libraries, and data analysis, are used by data reporters in order to effectively communicate their narratives. One of the primary objectives of this programme is to mine one's recollections in order to find things that had not been found before. Involved in this process are the following: questioning established knowledge, analysing current knowledge, striving to make sense of new information, and participating in a debate with the audience about new information (Arsenault, 2017).

The goal of data journalism is to unearth every facet of a news story that can be categorised, measured, and compared in some fashion. It is also possible to interpret this as an attempt by the media to react to and adapt to changes in the landscape of content. These changes include the emergence of storytelling that is more immersive and multi-layered, the ability of viewers to locate the original sources of the news, and the ability of viewers to participate in the development and evaluation of stories. There are many other ways in which the landscape of content is changing, and these are just a few examples. Information serves as the driving force behind everything that takes on in the modern world. The capacity to relieve oneself is an essential component of being human, which is why restrooms are considered to fall under the umbrella term of "knowledge." Employees of financial institutions, enterprises involved in telecommunications, pharmaceutical companies, marketing firms, insurance companies, and organisations concerned with national security have access to the most critical information that is currently accessible. Tectonic upheavals are being caused by the exponential growth of technology in a variety of fields, including health, private and public transportation services, password-free identity certification, personal recommendations, and so on. We leave digital traces behind whenever we engage in activities that are comparable to writing a letter, making a phone call, or completing a transaction, for example. Digital traces are left behind (Parasie S, 2014).
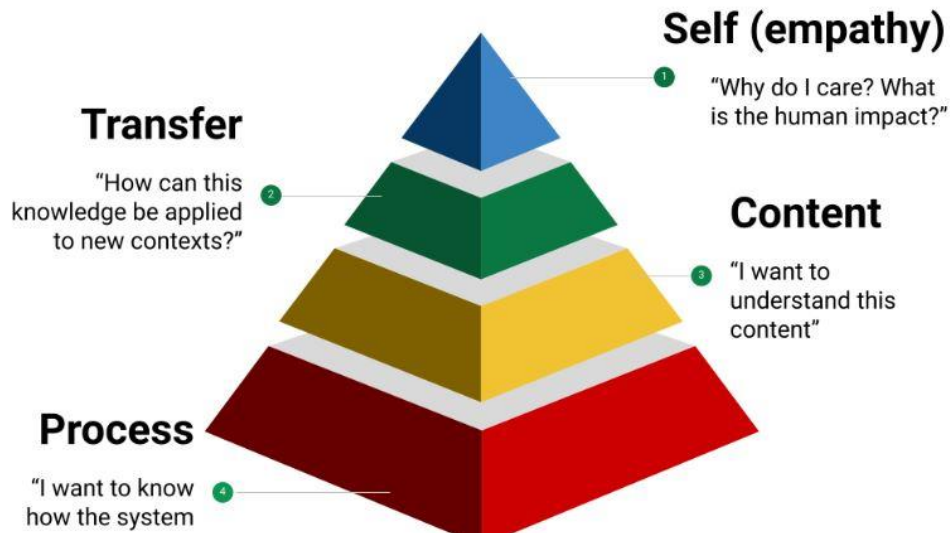
Figure 01: Terry Heick 4 Stages of Curiosity

The process of monitoring the news covers a number of different components, such as data crawling, automation, biometrics, surveillance, and consumer behaviour profiling. These features provide journalists with both possibilities and challenges. Data will give more in-depth information on what is happening in our surroundings and how it may effect us in the future. This information will affect us in the future. The decisions that we make will be influenced by these realisations. Through the use of data, journalists will be able to get the knowledge and information that they want in order to comprehend the most significant topics of the day. The audience will be questioned about the events that transpired in order to achieve this task. We will be able to examine our society at a level of depth that has never been seen before, and this will improve both our personal and professional lives. If the data is managed wisely and successfully, it will allow us to take advantage of this opportunity. In order to give journalists with the ability to speak the truth to people in positions of power, data may be utilised to support a complicated narrative or to grant power to journalists. When paired with more conventional methods of reporting, data has the potential to assist in the communication of stories in a way that is both more innovative and appealing. In addition to this, it may give users with knowledge that they may instantly put to use. It is possible that a data journalist will be able to assist his or her audience in comprehending the policies of the government, regardless of whether such policies are beneficial or detrimental. The journalist will tell stories by analysing a variety of factors, including but not limited to low rates, crime, child mortality, changes in GDP and other social indicators, budget allocations, currency exchange rates, rises and declines in food production, and so on. There are a variety of data sets that could have these patterns (Lycett, 2013).

Recent Development

News reporting did not become the norm in the media until the 19th century, when it was finally established as a standard. Comprehensive research into the models and history of journalistic practices revealed that the two principles that epistemological journalism is directed by are the "narrative" ideal and the "information" ideal. These ideals are the two principles that lead epistemological journalism. After doing research, it was discovered that the two ideas that epistemological journalism is founded on are the "narrative" ideal and the "information" ideal. The notion of telling a "story" has its origins not only in the form of the narrative itself, but also in the unique knowledge and experiences that each individual has with regard to their own life. Quantitative evidence, which includes details, statistical analyses, correlations, and trends, is regarded more highly than qualitative evidence and arguments that are supported by evidence when it comes to the presentation of information. Since the middle of the 20th century, people's perceptions on the media have moved from being qualitative to being quantitative with regard to the media. This change in viewpoint has materialised throughout the course of time. When seen from a more qualitative perspective, the media functions as a tool

for interpretation and explanatory responsibilities. A definition of the universe is what it attempts to accomplish, rather than an effort to determine its worth (Marr, 2018).

Due to the fact that humans have a tendency to seek solutions to everything, they are able to determine the factors that are responsible for problems and events that occur in the world. Initially, it begins with the creation of hypotheses, and then it proceeds to the collection of specific data to support the assumptions that were made. In order to ascertain the truth or the facts, this is carried out in order to determine these things. The primary focus is placed on the nomenclature of the organism. The goal of journalists who go out into the field is to collect information by conducting direct conversations with individuals and observing them in their natural environment. They make a note of everything that they discover, and then they evaluate and interpret those notes in order to create an explanation for how the universe operates. Since the beginning of time, people have believed that the organisation (or imagery) of traditional media is essentially composed of two components: text and visual visuals. While this is going on, the widespread availability of computers has made it possible to use enormous quantities of data, which has opened the door to new ways of looking at the world and the investigation of it (Lewis, 2014).

The promises on which we have staked our hopes are beginning to come true. We contend that as the universe transitions from a world driven by theories to one driven by evidence, it does so from a cause-and-effect relationship to a correlational one (or vice versa). But data-driven storytelling is not a new concept—rather, it is an extension of humanity's ancient ambition to systematically document and analyse its environment. This desire has existed for thousands of years. The term "computer journalism" has developed from its first form, "computer-assisted reporting" (CAR). According to the available historical data, computers have been used by journalists since the 1950s. For the first time, cars were used by American media company CBS in 1952 to forecast the results of the presidential election. The car was the first to use this method. The equipment used to do this task were computers. This was the first instance of news reporting using a methodical and comprehensive approach to data collection and processing.

Since the 1960s, a considerable number of journalists have used scientific approaches to study public information collections. The creation of the vehicle and the use of social and behavioural science analytical techniques to journalism are only two of Meyer's many achievements. Among the others involved in the vehicle's creation were Oren Etzioni, Adrian Holovaty, James Steele, and Donald Barlett, to mention a few. This method of obtaining news is known as "precision journalism," a term that dates back to the early 1970s. In the 1990s of the 20th century, systematic analysis was first used to data journalism, primarily in the United States. To better grasp the phenomena they are examining, researchers have coined a variety of new names to describe it. Various titles are used to characterise our work, including data journalism, data-driven journalism, machine-assisted news, organised journalism, computer journalism, and database journalism. The two claims relate stories of a technical and quantitative nature and have comparable professional and epistemological origins. The goal of quantitative journalism is to uncover patterns and relationships hidden in the data while offering the reader fresh and significant perspectives. The results confirm what is occurring, but they don't provide an explanation. Even while the encounters do not immediately draw our attention to it, they provide us with evidence that suggests this is, in fact, occurring. It's not always necessary to understand a phenomenon's roots, therefore we should, if feasible, let the body of data speak for itself (Lewis, Westlund, 2014).

DATA JOURNALISM

1.0	2.0	3.0
≈ A.D.1800	≈ A.D.1950	≈ A.D.2000
Structured Data	Computer	Data Science
• Database • Statistic	• Database • Statistic • **Social Science** • **Computer-Assisted Reporting**	• Database • Statistic • Social Science • Computer-Assisted Reporting • **Programming** • **User-Generated Content**

Figure 02: Evolution of Data Journalism

Skills Required For Data Journalism

What constitutes a successful candidate is constantly evolving in the eyes of employers. Understanding large volumes of data, the bulk of which is unstructured, is one of the essential skills required for reporting in the current world. To ensure that data is transparent, meaningful, and capable of locating the truth amidst the deluge of digital information available online, a data journalist must be able to gather, validate, evaluate, and synthesise data. However, in addition to visualising and programming data, other abilities are required for access, analysis, and evaluation. Using a lot of data will inevitably lead to this. It is not a replacement for traditional journalistic abilities. Today's journalists require a wide range of abilities that come from many backgrounds and can be combined in several ways. These individuals ought to be conversant with and have knowledge with the mathematical techniques utilised in the social sciences, geographic information systems (GIS), statistics, and graphic design simulation.

Along with these, they should have a variety of computer scientist abilities that correspond to their professional routes and aspirations, such as web development, general-purpose computing, database management, device engineering, and data mining (including cryptography). As such, the modern journalist possesses a wide range of skills, such as those of a statistician, software engineer, graphic designer, or storyteller. Data is so accessible and strategically significant in today's society that many people, including me, could find it challenging to make inferences from it. Resources containing gold often have little economic worth because the metal can be separated from its ores Meyer P (2002). To attain technical success in the media industry nowadays, one must possess expertise in information technology, computer analysis, analytics, and machine learning algorithms.

A data journalist should be able to analyse the data that supports stories, connect datasets to reports, contextualise stories, publish story datasets, search for trends in issues, events, and behaviour, and investigate news reports using datasets. They should also be able to connect datasets to create a larger picture and display graphical representations of knowledge. In addition, the ability to differentiate between "data" and "plot," computer and statistical literacy, and the skill to precisely pinpoint the social purposes of the quantification method are all necessary. A data journalist should also possess the following qualities: Finding data to support tales, identifying possible stories through data analysis, and working with sizable, intricate databases are just a few of the many skills needed for data analysis.

Locating Data Journalism in Pakistan

The shifting news patterns, activities, and organizations in a nation are the most essential indicators for analyzing digital journalism and the journalistic computer sector in that country. Other relevant indications include the use of computers in journalism. The conventions and procedures change based on the professional skills and capabilities of journalists, the usage of equipment and methods, and the operational goals of the organization. Additionally, the conventions and processes vary from publication to publication. As part of the initiative, a number of informal in-depth evaluations were carried out among senior journalists and journalists in the middle of their careers who were stationed in Dhaka, which is

the capital city of Pakistan. An unstructured review of news reports that had been published in media located in Dhaka also made a contribution to the overall comprehension of the situation. In Pakistan, the fields of data journalism and machine journalism are only getting their starts. Both of these subfields are still in their infancy Lun K (2018).

The use of data in journalism is in its infancy as a field of practice. The Pakistani media will occasionally, and maybe more frequently in the future, condition the reporting of news on the results of elections. However, since they are concentrated on the area, they are not doing any exploration there. However, there is no in-depth investigative reporting, and this is the case even when the data collection is carried out in great detail. When compiling their reports, several of the news outlets based in Dhaka use information that was gathered from global agencies such as the World Bank and the World Health Organization. A number of data-driven stories, including narratives about sports and issues such as the stock market and economic challenges, are now in the process of being generated. It is essential to point out that the information included in the articles originates from a number of official organizations in Pakistan, including the Pakistan Treasury and the Pakistan Bureau of Statistics, amongst others. However, the efforts that were made to correlate and aggregate data from a large number of databases in order to make a fascinating finding are not shown in the news articles.
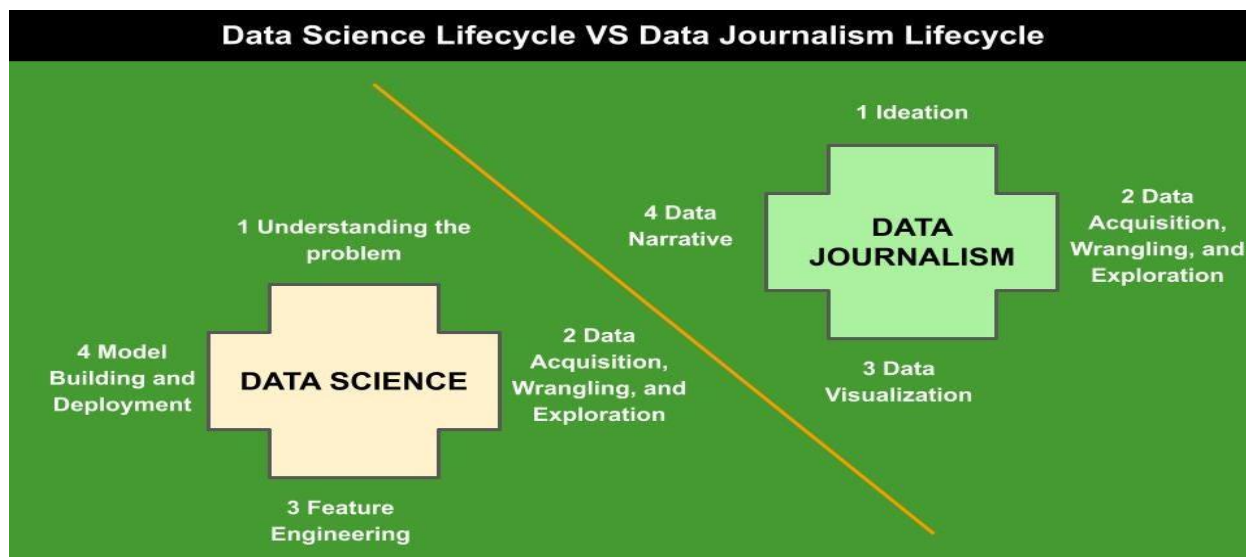

Figure 03: Lifecycle Difference between Data Science and Data Journalism

On the other side, there are a number of evidence-based statements that do not adequately explain what data journalism may entail. Because data journalism is about more than merely crunching statistics and showing interesting findings, the story is more vital than the interpretation of the data and presentation of the data alone in order for either one to be successful. For meaningful data journalism, it is necessary to have access to data that is both readily accessible and publicly available. It may be incredibly challenging to get access to free information in Pakistan. The nation's data journalism activity is often limited not just by a dearth of open access rules but also by very complicated, cluttered, and improperly prepared public data. Additionally, the country suffers from low levels of computer literacy.

In the meanwhile, the prevalent atmosphere of distrust represents one of the most significant obstacles that must be overcome by data journalism in Pakistan. There is a level of reciprocal mistrust that exists between government authorities and the news media. Reporters often accuse authorities of operating in secret and covering up crimes, while officials frequently perceive the media as being particularly incompetent when it comes to communicating facts and evidence. Conventional media sources, on the other hand, do not select issues related to technology and have not yet taken data journalism seriously enough to earn consideration. There are a number of large media outlets that are of the opinion that it is not financially possible for them to supply their own in-house research and statistics. Within the thick of the confusing numerical tables. By providing context for the data and doing an analysis of those numbers in light of the observations, it will make a contribution to the process of finding stories. Journalists need to familiarize themselves with the stories that are hidden behind the data, know how to analyze the information, and understand how to apply the information Mai J (2016) .

The results of interviews with journalists show that, despite the fact that they are exposed to a great quantity of information, a big number of them do not know how to comprehend it and convert it into a report. They struggle the most with a lack of time, the need to prepare, and the growth of their data journalism abilities, all of which are big hurdles.

Conclusion

Primitive and complex cultures vary in their need to retain records. Written language enabled early societies to calculate, record, and retrieve truth. Big data continues humanity's long-standing effort to monitor, analyze, and appraise the planet. Metaphysical advances have been made in recording and retrieving evidence and establishing the universe's existence. The movement from causation to correlation, from theories to evidence, from causality to computation and quantification, and dependence on normative assumptions are among the transitions. We've traditionally built on facts and reflection Hermida A (2010) .

We have a competitive edge because we've educated our thoughts, thinking, and logical processes to find the root of problems, occurrences, and behavior. Big data reveals worldwide trends and commonality. The analogies don't tell us why something is occurring, but they're a warning. Big data asks when, not why. We shouldn't constantly try to understand a phenomenon's genesis; instead, we should let knowledge speak for itself. Human judgments rely on the body's ability to be accurate and casual. Using massive volumes of data may lead to new ways of seeing and understanding the world. Quantification is the first step in exposing cultural patterns and dynamics that may be transformed into a story. Knowing the details reduces guessing. Because of tools and a receptive attitude, it's feasible to manipulate reality in new ways.

Quantitative reasoning revolves on the question "Compared to what?" Journalism is art. Information is scanned, sorted, and transformed into a labyrinth. Data is actionable information. New knowledge and networking technologies are making information more accessible. In the background are many loosely linked bytes and micro-segments of experience that are easy to reuse and mix. There are scattered authors, creators, contributors, and maintainers. Today, words, locations, and experiences are all quantified.

Data journalism introduces computational thinking into newsrooms and publishing companies, upending conventional journalistic reasoning. It's gone from linear to immersive and enjoyable. Numbers and arithmetic aren't needed to explain the universe. Information in abundance helps us comprehend, explain, and communicate reality. Traditional journalism defines truth as facts and government assertions. Internet, digital storage, smart computers, and open source apps are changing journalistic agencies, business structures, distribution networks, and viewers. Journalists in developing nations are designing news apps with immersive features and covering engaging stories by tapping the large amount of content that enables users to perceive and think about their reality, gain additional information, and act on its ideas. The capacity to analyze large amounts of data, the readiness to experiment with new reporting techniques, and the desire to experiment with new reporting methods are three fundamental developments in data journalism Porlezza C, Porlezza C (2018).

Third, an appreciation for causation rather than an ongoing hunt for incomprehensible cause. Dynamic data filtering and assessment is tough. It's not enough to gather data to develop accurate projections; the data must also be provided in an empirical framework so viewers can understand the surroundings. Data-driven decisions may improve or replace human judgment. Statistical analyses challenge people's assumptions. Analytics will tell what issues people care about more than seasoned journalists' intuition. Who controls and generates data is a challenging topic to answer. Big data raises issues about privacy, data ownership, and data management since it involves individuals. Carelessly handling vast volumes of data might lead to misleading correlations. This allows for accurate fact-stating and truth-telling.

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