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The digital reporter as a one-man-band: Disaster reporting in the age of backpack and multimedia journalism

A 60-credit Journalism Project presented in partial fulfilment of the requirements for the degree of Master of Journalism at Massey University

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13047383

Abstract

Guided by a technological deterministic framework and using disaster reporting of Typhoon Haiyan in the Philippines as a case study, this paper offers an analysis of digital technologies' implications on journalism from the backpack newsgathering using lightweight digital equipment (information-gathering convergence) to the multimedia content production utilising the emerging online journalistic tools and applications (storytelling convergence). The paper's empirical evidence supports that despite the technical issues, stress-related problems, focus on technology rather than content and other criticisms associated with backpack journalism, the practice offers desirable features ranging from faster and costeffective production to more reflective and personal interviews. The use of casual, informal and less intimidating personal equipment also appears to be advantageous in humanising a disaster story. On the other hand, the digital tools and emerging software applications available online enhance the content of disaster reporting by allowing journalists to transform raw information and complex data into interactive and visual content. Contemporary digital audience can benefit from multimedia storytelling by offering them the authenticity and visual appeal of still and moving images, the deeper analysis and details of text, and the interactivity and context of data journalism.

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1. Introduction

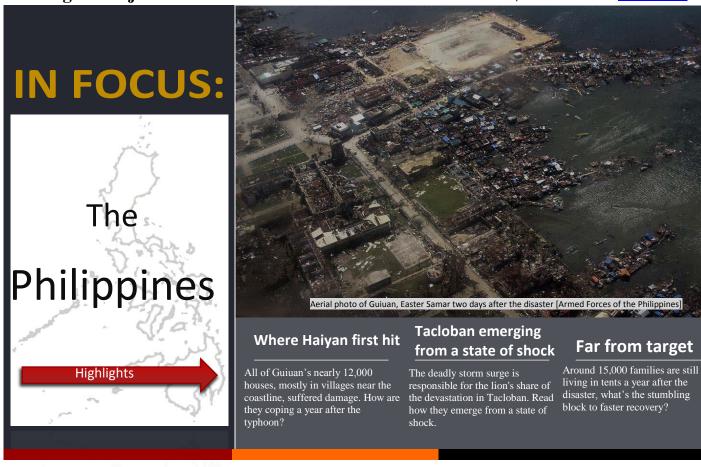
Since the turn of the millennium, the term 'convergence' has been a part of the vocabulary of contemporary journalism practice, training and research as evidenced by a number of academic journals, textbooks and professional literatures talking about the buzzword (Deuze, 2004). Journalism has been predicted to be entering a new era with the increasing integration or convergence of news organisations designed to deliver multimedia content. This meeting point between previously distinct media technologies and formerly disconnected traditional platforms such as radio, print and television, mirrors what convergence looked like in its early days – the cooperation and collaboration between separation newsrooms (Quandt & Singer, 2009; Deuze, 2004; Quinn, 2005). But convergence soon entered a major turning point as the content and the practice of newsgathering and delivery changed to encapsulate the rapid growth of digital technologies. The boundaries between formerly medium-specific news have been blurred allowing the mixture of the sound and imagery of broadcasting, the depth and details of print and interactivity of online media in presenting the news in digital format (Wenger & Potter, 2012). The convergence of technologies eventually unlocked the emergence of multi-skilled journalists who are capable of producing content for different news outlets and multimedia package for a single story (Domingo, et al., 2011; Cottle & Ashton, 2009; Saltzis & Dickinson, 2008). All these convergence milestones highlight our entry to a new era of convergence – the turn to the digital, the interactive and the multimedia type of storytelling and the independent, multiskilled and technology-empowered backpack newsgathering.

From a standpoint of a journalism practitioner, this paper examines convergence as a practice and model of the emerging digital and multimedia style of journalism. It traces how journalism convergence metamorphosed from the early notions of newsrooms physically converging to deliver content across platforms to the convergence practice of news

organisations adapting to the multimedia trend. The focus of this paper is the implications of this convergence to the work practices of individual multimedia journalists. And with the scarcity of literature on solo journalism, this paper also responds to the call for research that analyses the effect of technology on news workers and news content (Martyn, 2009). The critical question of this paper is: how does the new style of journalism using digital technologies modify the workflow patterns of backpack and multimedia journalists? In other words, how do we describe the relationship between multimedia practice and the emerging digital tools and applications used in digital journalism? A major source of data for analysis in this paper is the author's long-form multimedia package titled *A long recovery: Rebuilding after a super storm.* The report, presented online and in the next chapter, tackles the post-disaster recovery of the Philippines after the deadly Supertyphoon Haiyan in 2013. The analysis of the implications of technology is even more important given the physically and mentally demanding field of disaster reporting.

This paper is underpinned by a technological deterministic framework and analyses how digital technologies extend and amplify previous ways of doing journalism (Deuze, 2008). Two layers of analysis are covered: the backpack newsgathering process using lightweight digital equipment and the multimedia storytelling using emerging digital software and online applications. This paper argues that new technologies modify both the newsgathering practices and content of contemporary journalism. Backpack journalists gain more personal narratives from survivors of a disaster who feel less intimated by their informal equipment while open-source digital software transform raw materials and complex data into interactive and visually appealing digital content.

The next chapter shows a text-only replica of the long-form journalism. To see the entire embedded multimedia package with video and interactive content, please go the website haiyanreview.wordpress.com. Once you've seen this link, you may skip to page 15, the chapter on literature review.



November marks one year since the killer Supertyphoon Haiyan devastated the Philippines for 16 hours, leaving four million homeless and more than 6000 dead.

Filipino journalist Norman Zafra, who has been based in Wellington for the past two years, returns home to report on the rebuild.

A long recovery: Rebuilding after a super storm

By Norman Zafra



he Philippines marks the first anniversary of one of the most fatal disasters that ever struck the archipelago. Over 16 hours on November 8, 2013, Haiyan battered the

Philippines.

The number of displaced people was huge – equivalent to almost the entire population of New Zealand. The death toll reached 6,300 – equivalent to a size of an entire town. More than a thousand individuals are still missing. The country was paralysed, with people starving and grief-stricken.

A year later, the Philippines is facing the most ambitious resettlement project in recent history – relocating more than 200,000 families to safer ground.

In the typhoon's aftermath, almost \$2 billion in aid has been pledged by at least 64 foreign governments, seven multilateral organisations and individual donors. The New Zealand Government has also contributed \$10 million for relief and recovery efforts.

But money is not enough to solve the problem.

A majority of the homeless families

have returned and rebuilt their makeshift homes in coastal areas declared as 'no-build' zones while an estimated 15,000 Filipinos are still living in tents and temporary shelters

With President Benigno Aquino's recent approval of the \$4 billion recovery master plan, the resettlement question in the Philippines is no longer *how* but *where* to build permanent houses.

To access the full multimedia report, visit http://bit.ly/1ulnYsd.



Journey back

About this time last year, my eyes were glued to the internet learning about the devastation.

For days my social media newsfeed was bombarded with images and footage of shattered houses, grieving family members, bodies in cadaver bags, and people escaping towns and cities.

My heart was broken. Eight thousand kilometres away in New Zealand, I deeply felt the sorrow and grief of my homeland and countrymen.

A year later, I returned home to report on the recovery of the Philippines. But as a Filipino myself who feels directly connected with the subject, it felt like the journey going home also became personal.

Where Haiyan first hit

This was my first time in Guiuan, located in the southern tip of Eastern Samar, the coastal town that experienced Haiyan's first landfall. All of its nearly 12,000 houses, mostly in villages near the coastline, suffered damage.

The small and quiet fishing town of almost 50,000 people lies in what is known as the "eastern gateway" to the Philippines, facing the Pacific Ocean.

The people knew Haiyan was a strong typhoon but no one foresaw the disaster that would unfold.

On my first morning in Guiuan, I approached Aljonpaul Sabas, 19, while watching the flow of people and vehicle traffic from the upper floor window of the pension house where I stayed. He was taking a break from his housekeeping job.

Sabas is about 5'6 tall, thin and softspoken, but seems mature despite his young age. He recalls Haiyan as a horrifying experience. The strong wind ripped roofs off the houses – flying around his village like thin papers in the air.

White clouds enveloped his town and their ears hurt due to low pressure. "We tied ourselves together so if we die during that time, our relatives will be able to find us all easily," he says in Filipino. "I used the wire, extension wire."

He says 15 people in his village alone died as a result of the disaster. He and his grandparents survived, but their house was washed away.

Water and telecommunication services in Guiuan were down and fallen trees blocked its major highways, causing the delay of the much-needed aid. It took three days before relief reached the residents.

"We went inside the damaged grocery stores in town but everything had been looted," he says. "We first ate coconut, then bananas. Then we saw some chickens, pigs and cows that were washed in by the floods. We butchered and cooked them right away so we can have food."

Nine days after landfall, Sabas escaped on a C130 cargo plane flown in by the army. When he returned two months later, the scene of devastation appeared almost untouched.

As I walked further into town, I saw signs of normalcy. Some of the businesses had reopened, classes were open at public schools and the town was slowly coming back to life.

But there are only a few visible signs of reconstruction.

66 We tied ourselves together so if we die during that time, our relatives will be able to find us all easily.







Left (from top)

- -View of the devastated church from the main carved door
- -Church façade
- -Catholics celebrating their regular Sunday mass in makeshift chapel

Right (from top)
View of the church from
main entrance-

Church façade-

Gold-designed altar and retablos and statutes-







Before and after photos of Guiuan's four-century-old church

Ruined church; resilient faith

My walk through the town centre took me to notice Catholics who were celebrating their regular Sunday mass in a makeshift chapel just outside the rubbles of their 400-year-old Our Lady of the Immaculate Conception Church.

It is by far Haiyan's most priceless structural target.

Built during the Spanish era, the church is one of the 37 National Cultural Treasures of the Philippines so named because of their outstanding cultural significance and distinctively historical and unique architecture.

Before the typhoon, it was even considered for inclusion on the UNESCO World Heritage List.

The stone church had maintained its style and exquisiteness and remained strong despite its age. But surviving for four centuries didn't prepare the elegant cultural icon for Haiyan's angry rampage.

It was an incredibly sad sight - its

original gold-designed altars collapsed, *retablos*, and beautifully carved doors broken, the seashell-decorated interior crumpled, and the pieces of historical artifacts that date back to Hispanic times were shattered in just a matter of hours.

The collapse of their church is a heartwrenching sight for Guiuan residents as it is not merely a place for worship but also a cultural symbol of their town's colonial past.

Guiuan played an important role in the country's history as it was in the island of Homonhon where the Portuguese navigator Ferdinand Magellan landed in 1521. This could explain the existence of a colonial church and the Catholic faith that was largely embraced by its inhabitants.

A year on, the evidence of the devastation still haunted the survivors: abandoned houses, deformed buildings, damaged walls, shattered cars.

Hundreds of families are still living in Guiuan tents – an image repeated in other regions. Many people are asking why.

Homeless, roofless, hopeless?

With an average of 20 tropical cyclones each year that hit the country, Filipinos have practiced the art of resilience to natural calamities.

In the aftermath of Haiyan, homemade signboards bearing the phrase "homeless but not hopeless" were hung in the midst of devastated villages. People were determined to survive and rise once again.

But after living in a donated tent in the so called 'tent city', Rosemarie dela Cruz, 39, says hope also diminishes at times.

Her 'tent city', a temporary relocation site for more than 100 families, was built two weeks after the typhoon struck Guiuan.

The tents are situated in an open lot adjacent to a state university a few kilometres from downtown.

To survive, tent dwellers had to endure the heat during sunny days or leaking roofs during wet season.

"The most difficult time is whenever it rains, the water would come inside the tents. Our stuff becomes wet and it feels like we're lying on waterbeds," she says in Filipino.

Aside from this, it is also difficult to dry out the bedding during the three-month rainy season.

Not all displaced families in Guiuan are living in temporary shelters; others have opted to reconstruct their makeshift homes along the coastline, closer to their fishing livelihood.

"We do think of returning back to our village but we don't have money to fix our damaged house," dela Cruz says. "It is so difficult, I'm losing hope and it's draining our strength."

As early as April this year, Guiuan has received funding assistance from various donors to build transitional shelters. But even though local authorities would want to immediately begin construction, the absence of land ready for development delayed the relocation process.

Twelve months later, a transitional housing for Guiuan tent-dwellers was completed and handed over to typhoon survivors.



Typhoon survivor Rosemarie dela Cruz smiles as she shows her family's newly-built temporary house in Guiuan's tent city.

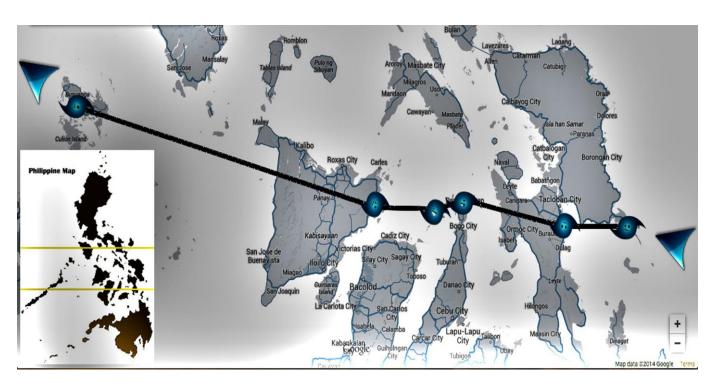
"The challenge is the acquisition of lots," says Guiuan Yolanda Response Coordinator Rectito Melquiades.

Informal settlement, especially along the coastline, has been a concern for local authorities in Guiuan even prior to the disaster.

These houses were built using light and non-durable materials and so the devastation seems to be unsurprising.

In less than a day of destruction, Typhoon Haiyan magnified the settlement issues in the Philippines that have been ongoing for years as well as the absence of appropriate housing project in Guiuan.

Most affected regions in the country face the same problem of relocation. One hundred and forty kilometers west of Guiuan, the city of Tacloban is facing a more challenging situation.



Path of wrath: Haiyan made 6 landfalls in Central Philippines [Norman Zafra]

Sidebar

Anatomy of aid funds

The Philippines was overwhelmed with the worldwide sympathy and financial support it gained for the recovery and rehabilitation of typhoon-affected provinces in the Visayas. In the aftermath of the typhoon, \$342.5 million worth of donations in kind and in cash from international donors were poured in to the Philippines. The amount of foreign pledges was also record high - \$1.6 billion. This amount is reported in the Foreign Aid Transparency Hub (FAiTH), created by the government ten days after Haiyan.

FAiTH is an online portal of financial information on the traffic of Haiyan aid funds donated and pledged by various countries, international groups and private individuals around the world. It is an effort to provide transparency and accountability in the use of aid funds and is managed by representatives from eleven government agencies.

The New Zealand government has also allocated a total of NZD 4.8 million worth of humanitarian relief. It also fulfilled its NZD 5 million pledge to assist in the recovery.

Many of the cash donations channelled through the government in the aftermath of the typhoon were used for humanitarian assistance, disaster relief and early rehabilitation and "not for reconstruction and temporary shelters," says National Economic and Development Authority Regional Director Bonifacio Uy.

FAiTH reports that aid funds are also not necessarily directed to the Philippine government. Some are channelled through local and international non-government organisations. Likewise, pledges do not automatically convert to cash donations, others remained as mere receivables.

But there's one thing unclear in the online portal, it only gives an overview of the sources of donations and pledges but it does not track how these funds were exactly utilised.

A senate committee report highlights, "there was no single agency in the government that has possession and knowledge of the total amount of local and foreign donations for the victims of Super Typhoon Yolanda (Haiyan)."

The Philippine Senate through its Committee on Finance has already requested a special audit of donated funds.

Tacloban emerging from a state of shock

Tacloban suffered more than 2000 deaths from the typhoon and had the worst damage to infrastructure of the nine regions struck. In the days after the storm, mass graves and disposal sites were kept full one day after another. Bloated and often faceless corpses were everywhere, piling up on streets and local morgues.

The struggle to find food and shelter was physically exhausting and yet the pain of people searching for their missing loved ones was far more emotionally draining.

Peace and order in town was in chaos as incidents of looting were rampant.

One Taclobanon even remarked, "we almost thought Tacloban will never recover."

Apart from the traces of damaged buildings and abandoned houses and the narratives of misery that echo wherever you go, Tacloban City's centre is gradually getting back on its feet.

The streets were cleaned up. The

roads were roaring with the honks and beeps of vehicles — cars, tricycles, jeepneys and multi-cabs. Traffic was heavy approaching the rush hour and pedestrians got easily crowded. I felt every blast of warm air as I walked the pavement. Some stores and local malls had

On the corners, fast food chains and local carinderia (eatery) were jam-packed with patrons.

reopened.

Hotel prices have also doubled, mostly taking advantage of the arrivals of aid workers from overseas.

The downtown – especially at night – was alive with restaurants and bars filled with people who were destressing after day's work.



Tacloban's pop-up bar is popular among foreign aid workers looking for a place to relax and socialise.

On Padre Burgos St, foreign aid workers, volunteers and locals alike found a hang out place when a mobile bar called Na Ning appeared in the street just two months after the disaster.

Some refer to it as Tacloban's "pop-up bar". It serves local and foreign drinks using a mobile truck. In a way, it started the post-disaster nightlife in city.

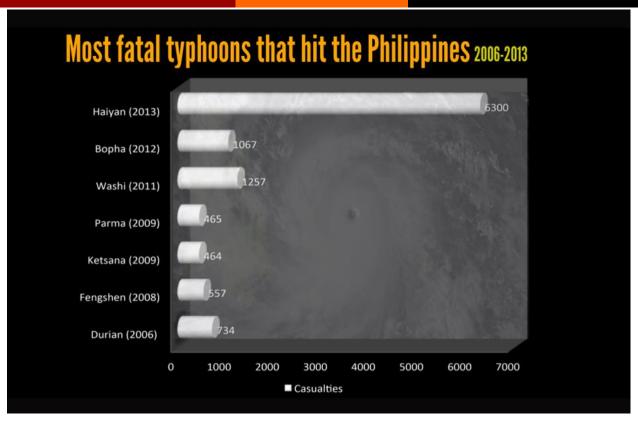
It is the portrait of recovery that is easy to describe, the city of restoration captured not only through physical but also emotional recovery.

But the face of post-disaster Philippines is always two-fold, one that highlights the economic divide between the upper class survivors who are able to recuperate by themselves and the homeless who rely on aid to recover.



orman Za

The busy corner of Romualdez and del Pilar streets in downtown Tacloban City



Infographic: Typhoon Haiyan's death toll is highest in recent years [Norman Zafra]

In transition

From downtown Tacloban, I took a 30-minute tricycle ride to reach one of the transitional housing sites where displaced Haiyan survivors temporarily dwell.

So-called transitional shelters, these houses, each about 18 square meters in size, are used as a temporary resettlement for Haiyan evacuees before they move in to a permanent housing.

The houses are identical nipa huts built out of bamboo matting and coconut lumber. Most occupants came from villages along the coast mostly destroyed by the storm surge.

The massive destruction of coastal neighbourhood in Tacloban was blamed on the storm surge - the abnormal rise of seawater due to the typhoon similar to a tsunami.

Resident of one of the transitional shelters is Jennifer Vasquez, 34, who warmly welcomed me to her housing unit and offered me a homemade coconut candy she sells. She and her five children were in a neighboring Samar province when the storm surge hit their coastal village.

Vasquez is thankful her husband and two other children survived the surge but she came back homeless and their possessions were swept away. "I returned to Tacloban with my child on November 12. Dead bodies were still piled in the streets. I could not stand the smell," she says in Filipino. That time, Vasquez was also searching for her mother who had gone missing since the storm surge. They never found the body and she says it left the family in persistent grief.

"I keep thinking that she will soon return to us. But then I

said, if she survived (the storm surge), she must have showed up already," she says teary-eyed. "It is difficult to lose a mother."

Apart from being relocated away from their fishing livelihood, Vasquez is fortunate for getting a unit in the transitional site. In Tacloban alone, 353 families are still living in tents.

Residents from coastal village Sandy Beach who are still living in a tent city say there were supposed to transfer last September to a transitional housing project north of Tacloban, but the construction has been moving in slow pace.

The traffic of aid activities has been concentrated in Tacloban City and so the people are expecting faster construction of settlement.

"We do not fully understand why the (resettlement) process is slow, as the government has received enough donations from non-government organisations," says Sandy Beach area coordinator Nora Palermo.



Jennifer Vasquez and her daughter in their transitional house in New Kawayan, Tacloban City

Far from target

Temporary accommodations in the form of transitional and bunk houses are just interim solutions to internal displacement due to typhoon. The more pressing concern among most local governments is finding a suitable space where they can build stable permanent houses away from unsafe areas.

On a 5 hectare block of land near Vasquez's transitional house, I walked through an ongoing construction of permanent resettlement donated by a non-government organisation.

From a distance, I heard the roar of trucks transporting cements and heavy metals, hammers pounding in nails and shovels scraping against concrete.

It was a busy working day. I learned that most of these builders are not only construction workers but also household heads whose families would soon occupy some units. It is a tangible solution to the post-disaster settlement problem in Tacloban. However, this housing project is only good for 400 families. The city government estimates it needs to build more than 14,000 permanent houses.

Early this month, the National Housing Authority awarded housing contracts to 14 private developers in Tacloban to build more than 11,000 houses. The city 66 It is not just shelter that you are building but a whole new township.



Tacloban Vice Mayor Jerry Yaokasin

housing office also reports an ongoing project targeting 1781 permanent shelters.

But Vice Mayor Jerry Yaokasin admits it could take years before they reach their target.

"It is always never fast enough, it is a massive relocation and you are moving from one end to the other end of the city," says Yaokasin. "It is not just shelter that you are building but a whole new township."

The availability of land is a major stumbling block. They need 144 hectares of land for permanent resettlement but less than 30 hectares are currently available.

"We face a lot of obstacles really in acquiring land. There's one land that we wanted to expropriate now but we found out that many are claiming that piece of land," Yaokasin adds.

All title disputes in the Philippines have to be resolved through the courts. Ownership issues take years to finish which further trap the site development and house construction in a long bureaucratic process.

Architect and urban planner Amillah Rodil says although a disaster illuminates the housing issues in the country, it also opens an opportunity for redevelopment.

But preparation is key. Land inventory and acquisition is a kind of work that local government units in the country must do as part of their regular functions.

"Imagine you have donors offering you 10,000 units of housing. If a local government was able to land bank, and you have a site ready for development, it speeds up the process," says Rodil who also served as consultant in Tacloban for UN-Habitat.



Transitional houses serve as a temporary relocation for typhoon survivors before they transfer to their permanent homes.

Philippines' permanent housing requirements Source: Office of the Presidential Assistant for Rehabilitation and Recovery Target Housing Units 205,128 Ongoing land development & Completed & Gap &

Infographic:
The Philippines' post-disaster housing needs







Photos (from top left)
(1) More than 300
Taclobanon families still live in tents, a year after Haiyan
(2) One of the donated permanent shelters on the outskirts of Tacloban
(3) Household heads help in the construction

of their homes

developments. The proposed law could ease out land issues in housing projects, as it aims to establish a centralised paradigm for classifying land according to use. But NLUMA has been pending in the Philippine Congress since it was filed 20 years ago.

Apart from outdated land laws, cadastral survey is also inadequate in the country, causing the inability of many local government units to provide information on land ownership, boundaries and actual use, a report by Food and Agriculture Organisation states.

It creates a domino effect – no land, no housing project.

"Land ownership in the Philippines is driven by private interest so it is difficult to use a land for public project," Rodil says. "We have to recognise that it takes time; in the meantime, they have to meet the humanitarian needs of the people."

dollars of aid can't fast track the solution? **Deep-rooted problem**The difficulty of finding suitable land

Who would guess the billions of

The difficulty of finding suitable land for public housing projects in the Philippines is not just a consequence of a major disaster but is deep-rooted. Every disaster that results to internal displacement reiterates the same root problem – insecurity of land tenure.

"Land tenure system in the Philippines is something that dates back not just a couple of years but back to colonial times," says Oxfam Country Director Justin Morgan.

Solving it is never easy.

There are currently 19 agencies involved in land administration but their functions and operations overlap and are not properly coordinated.

Many organisations urge the Philippine Congress to enact the proposed National Land Use and Management Act (NLUMA) that seeks to establish a framework in categorising land resources Particularly those for settlement

The author during his field work in Tacloban, Philippines

Norman is a Filipino journalist and documentary maker. He loves the dynamism of working with a TV news crew but also enjoys the independent spirit and creative process of backpack journalism.

Master plan released

August this year, an 8,000-page, eight-volume Comprehensive Rehabilitation and Recovery Plan for typhoon-affected regions in the country was submitted by rehabilitation czar Panfilo Lacson.

Lacson is heading the Office of the Presidential Assistant for Rehabilitation and Recovery (OPARR), the unit in charge of coordinating recovery and rehabilitation of Haiyan-affected regions.

The master plan is the much-awaited document that hopes to push the recovery process faster.

Almost \$4 billion is required to finance the master plan. Funding will be obtained from both loans and aid grants from international development banks and agencies.

The plan is divided into five clusters, with resettlement having the biggest budget chunk.

OPARR reports that on a national level, out of the 205,128 target permanent houses, 7,377 are undergoing land development and construction but only 1,252 units have been completed.

3. Literature review

This chapter examines the metamorphosis of the term 'convergence' tracing in detail how it evolved over the years from the notion of integrated news outlets (organisationally-oriented research) to the backpack and multimedia journalism practices of contemporary newsrooms (technologically-oriented research). The existing literature that tackles the impact of technology on news work and content is also reviewed and analysed through a discussion of the key concepts of information-gathering and storytelling convergence.

3.1 The buzzword: Convergence

Over the years, 'convergence' has become synonymous to the changes and rapid developments in media technologies and journalism (Kaltenbrunner & Meier, 2013). While it is true that many researchers have a general understanding of the meaning and implications of convergence, it is still an ambiguous term even after two decades or so when it was first introduced. Scholars and media practitioners argue that a single definition does not matter and may be difficult to achieve because convergence is defined by the "media market place, and the marketplace conditions are different from one location to another" (Quinn, 2005b, p. 8). A popular and common notion of the term is the blurring of boundaries between and among different media and communication platforms (Quandt & Singer, 2009). It has been defined in a number of ways such as: "the combination of technologies, products, staffs and geography among the previously distinct provinces of print, television and online media" (Singer, 2004, p. 286); the cooperation between print and broadcast media for the delivery of multimedia content through the use of computers and the internet (Lawson-Border, 2006); and the process that symbolises the changes in terms of storytelling strategies and techniques of the formerly regarded medium-specific platforms (Zelizer & Allan, 2010). In the past, a newspaper company produces content solely for print publication and a radio or television network airs broadcast content only. But in the 21st century journalism, boundaries between

media channels are blurred and journalists are increasingly expected to produce multimedia or converged content and deliver news across platforms.

It is also interesting to note that the origin of the word convergence as applied to communication industries has been a point of discussion among media researchers. But many scholars cite Ithiel de Sola Pool's popular 1983 book, *Technologies of Freedom*, as a proof of early discussions on convergence (Gordon, 2003). Pool, who was later referred to as the prophet of media convergence by media scholar Henry Jenkins, was credited as one of the first authors who wrote on the concept of convergence of modes.

"A process called the 'convergence of modes' is blurring the lines between media, even between point-to-point communications, such as the post, telephone and telegraph, and mass communications, such as the press, radio, and television. A single physical means—be it wires, cables or airwaves—may carry services that in the past were provided in separate ways" (Pool, 1983, p. 23).

The practice of convergence began in the mid-1990s when companies around the world started some forms of cross-media synergy and interaction (Deuze, 2007). An example is the partnership between a television station and a newspaper owned by at least two separate companies. The convergence comes in the form of a business arrangement, in which one media cross promotes another (Quinn, 2005). Although earlier discourses on convergence associated the term as a dangerous word due to its perceived nature as inevitable and necessary (Silverstone, 1995), the media industry was quick to embrace convergence, albeit at different styles. In fact, there is no single model of convergence among media organisations. Convergence journalism takes place in a "variety of newsrooms, in a variety of manners" (Kolodzy, 2006, p 10). Thus, there is no absolute template to implement convergence in journalism since different cultures, companies and countries may exercise diverse forms and layers of convergence (Boczkowski & Ferris, 2005; Quinn, 2005).

Subject to a person's frame of reference, the convergence that takes place in the media industry can be associated with at least five processes: technological or the flow of digital content from one platform to another; economic or the integration of media outfits; cultural which is associated with activities such as participatory culture, transmedia storytelling and production of multimedia content; social or the multitasking strategies of a consumer navigating a new technological and information environment; and global process which is manifested by the international circulation of media products, creating a sense of McLuhan's concept of "global village" (Jenkins, 2006, 2001).

The journalism-oriented convergence, on the other hand, appears in five forms: ownership or the multiple ownership of news media outlets similar to Jenkins' economic convergence; tactical or the collaboration between different news media entities through content, marketing and revenue enhancement; structural or the sharing of news resources between two converged delivery platforms; information gathering or the use of new technologies in news gathering; and the storytelling or the presentation of news using new technologies such as interactive content and multimedia packages (Gordon, 2003).

The first two forms of convergence (ownership and tactical) do not necessarily require changes in newsroom structure or the way journalists do their job. The last three forms of convergence (structural, information-gathering and storytelling) normally do change the newsroom structure and journalists' routines (Gordon, 2003). For example, as a result of structural convergence, newsrooms create new positions such as multimedia producers and editors who coordinate, oversee and manage story collaborations between platforms (Quinn, 2005). The storytelling and information gathering forms of convergence, on the other hand, create converged journalists who do not only collect information on the ground but also produce multimedia content.

3.2 Inside the converging newsroom

What has been labelled as full convergence in its early days is the physical movement of news outlets, owned by the same company, into a single roof that could enable efficient news production across platforms. This convergence model has drawn a number of academic researches focusing on the changes happening within fully combined newsrooms. Two major strands of research on newsroom convergence emerged (Erdal, 2009). The first is the organisationally-oriented branch concerned in analysing how convergence introduces changes in the organisational structures and routines of the newsrooms (e.g. Zhang, 2012; Erdal, 2009; Dupagne & Garrison, 2006; Klinenberg, 2005; Bhuiyan, 2009; Singer, 2004; Duhe, Mortimer & Chow, 2004; Larrondo, Larrañaga, Meso, & Agirreazkuenaga, 2012). Examples of these converged newsrooms are multimedia desks in Tampa headquarters in Florida and the World Company in Kansas, USA (Colon, 2000; Gage, 2006), Turun Sanomat Group in Finland, NordJyske in Denmark, Ming Pao Group in Hong Kong, and the Guardian Media Group in the United Kingdom (Quinn, 2005). In the convergence continuum model of Dailey, Demo and Spillman (2005), these examples are classified as fully converged newsrooms wherein partners cooperate not only in the newsgathering stage but also in the dissemination of news.

The second research strand is the technologically-oriented branch concentrated on examining the impact of digital communication technologies on the individual routines and practices of converged journalists (e.g. Robinson, 2011; Huang, Rademakers, Fayemiwo, & Dunlap, 2004; Pavlik, 2000; Wallace, 2013; Reich, 2011). Quandt and Singer (2009) also identified the audience contribution in the form of user-generated content as another branch of scholarly research in the field, however, this chapter will only review the first two research paradigms.

3.2.1 Organisationally-oriented research

Much of the published literature on organisationally-oriented branch of journalism convergence has focused on how the convergence phenomenon has changed or affected the structure and systems of integrated newsrooms, also known as 'combined newsrooms' (Pavlik, 2000), 'convergent newsrooms' (Friend & Singer, 2007), 'multimedia newsrooms' (Deuze, 2004), and 'new newsrooms' (Klinenberg, 2005). A recurring point of interest among scholars is to examine the impact of convergence on the quality of news production. For instance, Huang, Rademakers, Fayemiwo, and Dunlap (2004) studied the impact of convergence on the quality of journalism of the newspaper The Tampa Tribune, one of the three media outfits owned by Media General Incorporated based in Virginia, USA. The newspaper converged with WFLA-TV and TBO.com to form The News Center in 2000. It has attracted a significant attention not only among media owners and practitioners but also among academics who are interested in exploring the pros and cons of full convergence. Using content analysis and in-depth interviews, they found out that convergence of the three news outfits sustained the quality of journalism at The Tampa Tribune. Journalists at The News Center also welcomed convergence because it opens an avenue for sharing of newsgathering resources, something that never existed prior to convergence (Dupagne & Garrison, 2007). Apart from this, convergence also changed the concept of news competition and target market and enhanced communication within the organisation (Dupagne & Garrison, 2007). This is the reason that despite the differences in organisational and newsroom cultures (e.g. print versus broadcast), convergence has been perceived as a career boost among journalists and even an important component of public service journalism (Singer, 2004, 2004a, 2006).

However, other studies highlight contradictory findings – revealing the difficulty of most newsrooms to cope up with convergence's challenging impact. Specifically, it is argued

that convergence creates a drastic change in the culture of traditional newsrooms - breaking the walls of competition among newspaper, broadcast and online journalists (Bhuiyan, 2009). This change entails adjusting to a new media environment such as the requirement for journalists to learn each other's technical language and as well as to understand the differences in newsgathering processes. In fact, a consistent finding from a number of studies on newsroom convergence is the considerable trepidation among news workers in converged media (Singer & Quandt, 2009). Compared to news directors and general managers, reporters and producers are likely to show negative perceptions about convergence citing its undesirable impact to news quality, the difficulties in producing convergent content, and conflicting attitudes on news values (Smith, Tanner & Duhe, 2007). These findings confirm earlier research that homogenisation of news, bi-media packaging and versioning of a story for different platforms reduces news quality and journalists' time for in-depth reporting (Cottle & Ashton, 1999). These opposing views on convergence reflect Quinn's (2005a) fundamental question whether news managers are embracing convergence for better profit or better journalism.

Although the integration of newsrooms owned under a parent company is taking place in newsrooms in different parts of the world, it is important to note that is not a universal phenomenon. Some variations exist, mostly because of the differences in media ownership regulations in various countries (Quinn, 2005). In Australia, for instance, a barrier to convergence is the law that prohibits a company from owning both television and newspaper in the same market (Quinn, 2004). New Zealand, however, has no cross-media ownership regulations (Rosenberg, 2008) but despite having concentrated media structure, convergence is still at infancy. This is evident by the country's lack of newspaper-web-television kind of integration (Walker, 2009). In recent years, however, we have seen the increasing willingness

of news organisations to tap the online platform in presenting multimedia content (e.g. data journalism at stuff.co.nz/data).

Other countries have different perceptions of convergence. In Canada, for instance, the Newspaper Guild fears that convergence could dilute journalists' work (Quinn, 2004) while Slovenian print media has been perceived with a "lack of vision in furthering the evolution of online production organisation and news formats" (Vobič, 2011, p. 946). While the concept of multimedia journalism has been working well in several parts of the world, other converged newsrooms opted to reverse the process and deconverge such as the case of the Dutch newspaper *de Volkskrant*. The lack of a solid business model and cultural resistance from news workers triggered *de Volkskrant*'s decision to separate again the newspaper and online newsrooms, diminishing the task of producing multimedia content (Tameling & Broersma, 2013).

3.2.2 Technology-oriented research

The technologically-oriented branch of studies on convergence is still a young but fast emerging field of scholarly inquiry. Ethnographic studies have been the common research approach, together with cross-media content analysis and in-depth interviews (Quandt & Singer, 2009). This research strand focuses more on how digital technologies enhance and modify the news outputs and routines of converged journalists. Rather than studying the physical convergence of newsrooms, the field of technological convergence is exploring the online and multimedia adaptation of news organisations, such as utilising the web as an additional news platform. Most scholarships in this field argue that "technological developments generate editorial effects" (Boczkowski, 2004, p. 207) and that content is transformed due to technological changes (Pavlik, 2000). It relates to Moe and Syvertsen's (2007) notion of the third stage of media institution research, focusing on the impact of digitisation among media entities such as news organisations venturing into the internet and

interactive products. Both the storytelling and information-gathering forms of convergence fit this branch of research, which describe how technology modifies the practice of gathering and presenting the news (Gordon, 2003). These are elaborated further in the succeeding sections.

3.3 Information-gathering convergence

Information-gathering convergence occurs when a technology-equipped and multiskilled individual journalist gathers content for multiple platforms (Gordon, 2003). Multiskilling comes in three categories. The first is a media multiskilled journalist who is capable of filing news reports for multiple media outlets or creating multimedia content for a single story. The second is a technical multiskilled journalist who performs technical duties in addition to his reporting jobs. And the last is an issue multiskilled journalist who is able to report on various subject or topic areas (Domingo et al., 2011). Among Spanish newsrooms, for instance, media multiskilling is mostly to occur among integrated newsrooms but only a few media companies have adopted all three forms (Domingo et al., 2011). It is argued that companies adopt multiskilling mostly to improve cost-effectiveness or in some case, to reorganise the newsroom (Avilés, León, Sanders, & Harrison, 2004).

Although multiskilling is highly advantageous among multimedia news organisations, not all journalists embrace the practice. Converged journalists working for BBC regional newsrooms assert that multiskilling can lead to higher stress levels for news workers (Wallace, 2013). Other studies have highlighted the negative perception of multiskilling such as the increased work pressure for journalists, specialists reassigned as generalist reporters and criticisms that it provides less value for news workers (Deuze, 2008). Likewise, Avilés, León, Sanders, and Harrison (2004) caution that multiskilling might be too much focused on speed, leaving less time for traditional journalistic practices such as cross checking of sources

and finding contextual information. Consequently, it should be seen as a refinement of an existing method only and not a replacement of established news gathering practices (Kennedy, 2010).

Multiskilling in the form of solo journalism, also called 'one-man-band' and inspector gadgets (Quinn, 2005b) long existed in documentary filmmaking with young reporters from smaller markets shooting, writing and editing their film with the goal of eventually landing a career in bigger markets (Bock, 2012). The so-called "single-authored news production" also gained greater acceptance in recent years and was institutionalised as a practice in traditional newsrooms. In television, the practice is credited to the personal digital production experiment of Michael Rosenblum, a former CBS news producer turned media consultant who conducted multiskill training for journalists at the BBC (Hemmingway, 2005; 2008, p. 79). Rosenblum's model of "single-authored-news production" is similar to the concept of "backpack journalism" wherein the demarcated roles within the news production are blurred and assumed by a single person (Hemmingway, 2008). Some news organisations prefer calling this breed of news staffers as VJs or video journalists, MMJs or multimedia journalists, OMBs or one-man bands, MJs or mobile journalists, Do Platypus, SoJo or solo journalists and APJ or all platform journalists (Tompkins, 2012; Smith, 2011). These types of journalists have been perceived to be "jack of all trades and master of none" (Huang et al., 2006) because of the perception that they lack specialised skills (Erdal, 2009). But practicing backpack journalists highlight instead the benefits of solo reporting. During fieldwork, for instance, it has been argued that "the cloak of invisibility" allows backpack journalists to be unnoticeable in the field (Cyndy Green, cited in Kennedy, 2010, p.3). Apart from the creative freedom, there is also the advantage of "looking like a tourist with a small consumer-sized camera who blends into the crowd" (Tompkins, 2012, p. 157).

Undoubtedly, technology reduces the need for large crews (Kumar, 2011) and changes the job descriptions of news workers (Bock, 2012). Because tools and equipment used in journalism are becoming lighter and more portable, the backpack reporter is able to move around easily in the field than with a crew carrying numerous pieces of equipment (Quinn, 2004), although at the "price of newsroom collaboration and camaraderie" (Bock, 2012, p. 33). In newspapers, photojournalists are no longer still-image shooters, they must be proficient as well with digital software and tools (e.g. Photoshop, PhotoMechanic, Final Cut Pro) in order to produce multimedia content (Wesley, 2013). More importantly, backpack journalists need to perform both journalistic and technical jobs such as interviewing, shooting video, taking photos, writing up the news story as well as post-production roles. This is the reason why solo journalists are referred to as the embodiment of convergence; they utilise converged technology, work in a converged environment and fulfil convergent roles (Boczkowksi, 2004a; Deuze, 2004). Not only does technology allow a person to multitask, it also gives birth to storytelling convergence or the creation of multimedia content that alters today's presentation of news.

3.4 Storytelling convergence

The storytelling convergence focuses on the presentation aspect of digital news. Prior to the online trend, this convergence has been mainly attributed to the emergence of three new digital presentation platforms: desktop computers, portable devices and interactive television (Gordon, 2003). These platforms offer the potential for unlimited space and time, immediate publishing, audience interaction and contribution, multimedia content delivery options and user's greater control over content. In contemporary journalism practice, storytelling has gone up to a higher level. Digital technologies now "allow journalists to share data (audio, video and text) in order to elaborate content for the various platforms with increasing versatility" (Avilés, Meier, Kaltenbrunner, Carvajal, & Kraus, 2009, p. 286). In

fact, many multimedia news organisations have also mastered several key features of the online platform apart from multimedia such as hypertextuality, interactivity, nonlinearity, and customisation and personalisation. Despite having a number of emerging tools to enhance the news, the challenge is still the same - to produce relevant news for the audience. It is argued that in order to produce high quality multimedia reports, journalists need to become versatile writers across different platforms and to practice critical thinking in both texts and visuals (Huang et al., 2006).

In addition, studies related to storytelling convergence explore mostly the characteristics of multimedia content published by newspapers with strong online presence. For instance, Jacobson (2010) content analysed the multimedia packages of the *New York Times* to find out how multimedia are presented and utilised by an online newspaper. She found out an increasing number of multimedia content published on the website since 2000, mostly in the form of video and slide shows and appearing more in feature stories than in straight news. Multimedia packages are also increasingly becoming sophisticated incorporating elements such as hypertextual links, interactivity, which are borrowed from digital games and social media (Jacobson 2012).

Similar to the challenges faced by integrated newsrooms, not all news organisations are able to catch up with the multimedia trend and produce sophisticated and interactive storytelling. A qualitative study of three selected online newsrooms shows that journalists had difficulty in adjusting to technologies as well as responding to the demand to produce multimedia content (Brannon, 2008). Reasons vary ranging from lack of trained personnel to market and organisational challenges (Brannon, 2008). In addition, the differences in organisational structures, work practices, and representation of the users are also highlighted as factors why multimedia content is adopted differently across newsrooms (Boczkowski,

2004). It is argued that in cases where there are more technically savvy consumers, multimedia content are high and interactivity is low; but when there are more technically limited audience producers or contributors, interactivity is high but multimedia content are low (Boczkowski, 2004). But in British newsrooms, text is still the "cornerstone for news websites" although a number of online news sites are increasingly adopting multimedia in their news reporting (Thurman & Lupton, 2008, p. 446). The limited multimedia and interactive content is often perceived to be an economically and socially sensible choice among news managers (Quandt & Singer, 2009).

3.5 The multimedia trend

As mentioned earlier, the buzzword convergence has been multidimensional and has undergone major redefinition over the years (Kolodzy, Grant, De Mars, & Wilkinson, 2014; Stevens, 2002). It metamorphosed from the early notion of integrated newsrooms producing news in multiplatforms to mono-media organisations that produce multimedia stories. In fact, it is cited that concepts "convergence" and "multimedia" are to a great extent synonymous (Infotendencias Group, 2012, p. 25). The term convergence does not mean to say that journalist occupy the same space under the same roof in order to produce multimedia content. The key to this transformation is the online medium. It revolutionised the convergence framework by allowing any traditional media organisations to tap the multimedia opportunities offered by the web (Huang et al., 2006). The factor that pushes multimedia in journalism is the changing behaviour and lifestyle of contemporary digital consumers. The information-seeking attitude of the audience has been changing and so news organisations need to respond and to transform (Quinn, 2004). Thus, many newsrooms have turned to the web not only to improve their online presence but also to extend their reporting across platforms. In fact, the World Wide Web serves as the centre of cross-media strategies and operations of contemporary journalism (Kaltenbrunner & Klaus, 2013). But the presentation

of news online has been greeted initially with much pessimism as traditional journalists were trained to think that good journalism requires printed papers (Achtenhagen & Raviola, 2009). In fact, the online medium was perceived as a black hole without credibility which further fuels the resistance of journalists to adapt to the new media trend (Achtenhagen & Raviola, 2009). Anthony De Rosa, Reuters' social media editor, also argues that online stories need to resemble and take advantage of the web and not merely repurpose print articles for online publication (cited in Goldenberg, 2012). Many contemporary newsrooms are now exploiting multimedia potential, hypertextuality and interactivity of online media (Steensen, 2010).

Although the terms online, web, and multimedia journalism are sometimes discussed in the same paper; they are separate. The web did not necessarily cause the birth of multimedia, although it is a "major accelerator and amplifier" (Deuze, 2004, p.143). Multimedia is also different from online journalism because "digital storytelling using multiple media can be seen as a potential but not a necessary element of added value to an online journalistic presentation" (p. 141). Therefore, online journalism's intention is not necessarily driven by multimedia. The online medium plays the role of the "convergent platform" that unites formerly separated media entities into a single channel (Kaltenbrunner & Klaus, 2013, p. 292). In this paper, multimedia and converged journalism are used alternately and are considered one and the same.

Converged or multimedia reporting appears in at least three levels: (1) at the level of information-gathering wherein journalists cover a story and file it for different platforms; (2) at the level of news production and aggregation wherein journalists from different platforms collaborate to repackage a story in multimedia; and (3) at the level of content contribution wherein a single company distributes content in two different channels (Avilés & Carvajal, 2008). Technological advancement plays a role in all of these levels in a way that it extends and amplifies the previous ways of doing journalism. As Deuze (2008) has argued:

"The success of journalism in reporting news across all media has always been influenced if not determined by technological advances: from manual typesetting to desktop publishing, from bulky cameras to handheld devices, from analogue recording to digital editing, from single-medium to multimedia" (p.10).

In addition, historical assessments reveal how technology changes the nature of news content. One interesting transformation is how the "immersive and interactive multimedia news reports" on the web are supplanting the once-basic inverted pyramid news style (Pavlik, 2000, p. 232). This phenomenon has continually progressed creating enormous changes in the way stories are presented online. In the last couple of years, multimedia and online journalism have grown exponentially and there emerged different types of multimedia storytelling tools used by converged journalists. Some of the most popular multimedia packages include linear, non-linear, embedded, comprehensive and immersive story packages that incorporate multimedia content in a myriad of ways (Grabowicz, Rue & Hernandez, 2014). It is argued that multimedia reporting should be presented in a non-linear format and with elements complementing and not repeating each other (Stevens, 2002). To be comprehensive also means providing unfiltered and greater volume of information, enduring background information, drilling down on a specific aspect of the story, interactivity and reporting in multimedia (Craig, 2011, p. 58).

Part of the innovations in multimedia is data journalism, also called computer-assisted reporting (Doig, 2013). The term denotes the transformation of huge data into visuals to convey a story (Rogers, 2014). Data could be presented in the forms of information graphics and other data visualisation cues, providing rich news context (Craig, 2011). It combines the traditional nose for news and storytelling through a large range of digital information (Gray, Bounegru & Chambers, 2012) The creation of this 'born digital' content has transformed the online medium from being a mere repository of traditional media content to its state as a brand new medium with original web features (Thornton & Keith, 2009).

3.6 Research goal

A majority of the literatures surveyed for this paper show convergence as the process that results in the integration of newsrooms (early convergence) and a process that results in multiskilling of journalists and multimedia type of storytelling (contemporary convergence). An aspect that needs further emphasis is examining what convergence really means for journalists who practice both the backpack and multimedia reporting. Most scholarly works related to backpack and multimedia journalism examine mainly the emergence of individual mobile journalists or mojos who cover news events using mobile phones (e.g. Martyn, 2009; Quinn, 2011) and multiskilling among media organisations (e.g. Wallace, 2009; Wallace, 2013; Avilés, León, Sanders, & Harrison, 2004; Domingo et al., 2011). Disaster reporting research, meanwhile, is focused mainly on examining the impact of traumatic events among journalists who cover them (e.g. Dworznik, 2006; Keats & Bukanan, 2012; Cottle, 2013); ethical issues involved in disaster coverage (e.g. Hollings, 2005) and disaster stories as a global crisis (e.g. Cottle, 2009).

In addition, the phenomenon of backpack journalists covering a disaster story is rarely tackled in the academic research. There are, however, a number of journalism textbooks that discuss the use of digital technologies in covering disaster. For instance, digital journalist Steve Buttry suggests using a number of tools such as interactive maps, live webcams, social media, databases and audio and video, in disaster coverage (cited in Scanlan & Craig, 2014). The transformation of raw disaster data into meaningful digital and interactive content using emerging journalistic applications and tools are not very much explored in scholarly literature. Thus, a research that offers an examination of digital technologies' impact on reporting disaster, from newsgathering to storytelling, would contribute to existing knowledge on convergence.

4. Research context and methodology

Guided by a technological deterministic framework, this paper provides concrete evidences of how journalistic practices and content are technologically-influenced. The author's experience of backpack and multimedia reporting of Typhoon Haiyan in the Philippines, using digital technologies, serves as an important source of first-hand data for analysis. Although many scholarly works dealing with the relationship between technology and journalism reject the technological deterministic framework in favour of a more nuanced stance that embeds technology in its political, economic, cultural and social contexts (e.g. Deuze, 2007; Dooley, 2007), the sources of data in this paper and being primarily an analysis of the author's pragmatic journalism experience, suit the use of technological determinism as a theoretical base of analysis. Many journalism practitioners use technological determinism in explaining the changes in their work because technology is a visible and tangible component of their routines and also because of the deep historical roots that examine the relationship between technology and reporting (Örnebring, 2010).

Specifically, this paper analyses the principles of information-gathering convergence by examining the role of new technologies in backpack field production. The author's field production in post-disaster communities in the Philippines provides basis to understand the pros and cons of backpack reporting. In addition, this paper also examines storytelling convergence by analysing the multimedia elements created by the author, using emerging and publicly available digital tools and open-source software applications.

To illustrate the framework of analysis, a model is presented to show the relationship between information-gathering and storytelling forms of convergence (see figure 1). This model situates the two forms of convergence as two distinct, but related processes. It shows that backpack journalism is parallel to information or newsgathering convergence while the

multimedia content creation is equivalent to storytelling or news production convergence.

This paper argues that both the backpack and multimedia journalism practices are largely influenced by the advancement in new technologies. The last stage in the model is the publishing of the multimedia package, which the author labels as "optimised convergence".

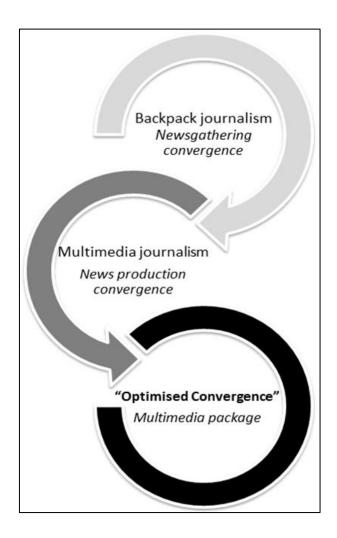


Figure 1. Relationship between backpack journalism and multimedia journalism

5. Discussion

This chapter answers the critical question: how do new technologies alter the content and work routines of contemporary backpack and multimedia journalists? To do that, I examine first the efficiencies and downside of the digital tools that I used during my field work in the Philippines. Afterwards, I move on to analyse the process of creating my embedded multimedia package and online storytelling. The implications of the software, applications and online journalistic tools available for converged journalists are discussed further in this chapter.

5.1 Technologies of backpack journalism

The capacity of one person to multitask is mainly driven, if not determined by technological developments. The popularity of the so-called "one-man bands" capable of producing multimedia content is also made possible by the availability and affordability of new technologies. As Bock (2012) has argued, journalists are required not only to think creatively, visually and narratively from newsgathering to presentation, but also to "think technically" (p.5). To illustrate the impact of digital and lightweight equipment on newsgathering, I distinguish backpack journalism from reporting with a news team. My backpack reporting of Typhoon Haiyan is unique among all the news production I have done over the past seven years with Philippine broadcast company GMA Network. My routine as a producer is to work with a television crew since solo reporting is not a common practice among broadcast stations back home. This puts me in a good position to compare the two forms of newsgathering. My backpack reporting basic toolkit is comprised of the following:

- A digital SLR (single-lens reflex) Nikon D5100 with an 18-55 mm lens capable of taking quality photographs and high-definition videos
- A mini personal tripod to create professional looking moving and still images

- Lavalier or wireless lapel microphone as a primary sound device
- Charger and extra batteries
- iPod for back-up audio recording
- Macbook computer installed with photo and editing software
- Traditional notebook and pen

An important consideration for me was the selection of equipment to use in my field work. Because I know very well what stories to cover, interviews to conduct and places to visit; it works to think backward and determine ahead what equipment will be necessary for my news production. The results of my story consultation with my research supervisor as well as my experience doing field work as a documentary maker and television producer helped me in a lot of ways in determining the equipment to carry. I highlight that the list above is not a textbook-based backpack reporting toolkit but rather a product of both my production knowledge and anticipation of the environment that I will cover. I considered several issues such as the length of international travel from New Zealand to the Philippines, domestic travels within my destination country and as well as the availability of public transport in the Philippines.

These pieces of gadgetry have a huge impact on my own backpack journalism routine. I highlight three aspects that distinguish my preference of lightweight equipment over the big bulky camera and accessories carried by a large television crew. First, field work is quicker. Moving around the typhoon-affected areas became much easier because the equipment is very handy so I was able to move freely and frame the shots effortlessly. Even my choice of using a personal and mini tripod instead of a bigger-although-steadier one, is proven advantageous in many instances such as carrying less weight when travelling and being unnoticeable when filming in public places. My coverage of two places in the Philippines,

the coastal town of Guiuan where the typhoon made its first landfall and the most heavily destructed city of Tacloban was smoothly completed partly because of the portability of my newsgathering tools. I also gained local insights while taking public transport, which added value to my field work. All of these observations confirm that one-man-band reporting is cost-effective and also a flexible option for news coverage (Avilés, León, Sanders & Harrison, 2004).

Second, there is autonomy and artistic freedom in backpack journalism. Because I was doing the field work alone, I enjoyed the liberty of deciding merely for myself and not for a news crew. It is convenient in many instances such as deciding the schedule to begin and end the production. There is also no conflict of ideas that could arise as I can easily decide on the changes on the story outline based on my personal judgment. An important aspect to note here is my ability to run an editing sequence in my mind and film natural video transitions during production, which accelerated my video editing process. Thus, despite working independently, backpack journalists are able to exercise creativity and greater control of production

Third, the use of small equipment is unobtrusive and not attention-seeking. This reminds me of how veteran journalist Cyndy Green states the advantage of "the cloak of invisibility" in backpack journalism (cited in Kennedy, 2010, p.3). In comparison with big cameras that attract attention when filming in public places, the use of smaller equipment does the contrary. As Tompkins (2012) has argued, there is the benefit of blending with the crowd using a small consumer-sized camera. The newsgathering toolkit that I used in reporting also creates a feeling of familiarity among my interviewees who feel less intimidated by a digital SLR than professional cameras used for broadcast. Rosemarie dela Cruz, one of the typhoon survivors featured in my documentary, told me that most typhoon survivors feel the fatigue of answering the same type of questions from media and other

lightweight equipment, however, appear to be an advantage in soliciting fresh story angle, personal narratives and getting closer with subjects. As a matter of fact, my experience in television shows that the presence of a documentary crew composed, for instance, of a director, a producer, a television host and a videographer, sometimes overwhelms and intimidates the subject and elicits the tendency of a person to act tensed and unnatural in front of a camera. In contrast, I was able to create a comfortable atmosphere during the sit-down interviews and banters with my subjects. In fact, my interview with Jennifer, one of the survivors in a transitional housing site in Tacloban City, has become more of a personal and free-flowing retelling of her story rather than a rigid recorded interview. While interviewing, she felt casual enough to clip her child's fingernails as we chatted and filmed. These observations illustrate how backpack journalism redefines the nature of source-journalist relationship. However, I would like to clarify that I do not attribute the success of my fieldwork to consumer-size digital technologies alone. The fact that I am a Filipino and I can speak the local language also influenced the results of my field work.

Fourth and most importantly, these new technologies allow the creation of multimedia content and offer a new narrative style. This is where backpack journalism meets converged or multimedia reporting clarifying the relationship between the two. The digital technologies of backpack journalists allow the faster and efficient creation of multimedia contents such as audio, video and still photo (during newsgathering stage) and interactive content and data visualisation (during storytelling stage). As Boczkowski (2004a) and Deuze (2004) argue, backpack journalists are the embodiment of convergence as they do not only utilise converged technologies, but they also work in an actual converged environment and complete convergent news roles.

In my field work in the Philippines, I was able to produce multimedia contents such as a seven-minute documentary about the country's post-disaster recovery, still photos, and a long-form article. In addition, the huge volume of data such as the aid contributions from foreign governments has been transformed into an interactive story map while the background of the story was presented through an infographic and an interactive timeline. The combination of these elements into a single story published online does not necessarily result to a comprehensive multimedia journalism. An important consideration I learned while doing my report is how to present complementing and not repetitive multimedia content (Stevens, 2002). This is a crucial task that entails a careful pre-planning and storyboarding. Apart from targeting an audience, I also ensured a proper combination of multimedia formats as a key to comprehensiveness (Craig, 2011). In addition, personalising the story is also an effective reporting style in multimedia reporting, which I used in my long-form article. One important instance to highlight here is when the editor of *The Wireless* asked me to repackage my story and inject more of first-person narratives in my feature. The product was an article that presents not only the views of the people I interviewed but also my personal insights and observations as a journalist returning home.

5.2 Downside of backpack reporting

Although I have illuminated the advantages of technologies used by backpack journalists, it is equally important to note that it should be seen as a refinement of an existing method only and not a replacement of established newsgathering practices (Kennedy, 2010). Backpack journalism still has its major pitfalls.

5.2.1 Technical issues and limitations

The availability of DSLR cameras compatible with external microphones such as the case of Nikon D5100 is a major tool in my backpack reporting. However, not all camera

brands allow the user to monitor the audio while it is being captured. It is open to technical issues which is sometimes unnoticeable while in the middle of production. For instance, while interviewing a local official in Tacloban, the lavalier microphone failed to function properly because of poor batteries. Also, the specific camera brand that I used has no earphone plug which further limits my ability to monitor the audio. These technical problems are less likely to happen with a news crew complete with video and audio accessories. I argue that technical errors add another layer of work for a backpack journalist who after all needs to sync the audio and the video interview during post-production. I have known these limitations prior to production and so I used an iPod as a back-up audio recording device throughout my field work. A back-up device is essential when conducting sit-down interviews and is highly efficient device to review the interviews during spare time such as in between travel.

Furthermore, compared to television crews mostly equipped with ample lighting equipment, my field work has been largely dependent on the use of natural light. Interviews are preferably done outside where there is a good amount of light. This means that when a necessity arises that an event or activity should be filmed during night time or inside a room with dim light, it is likely that videos might appear unclear, poorly-lighted and unprofessionally made. This limitation requires additional time for a journalist to survey the location and choose an appropriate interview venue that contains enough light. On the other hand, it could also be argued that the use of natural light is a factor that differentiates backpack from television documentary.

5.2.2 Focus on technology

Another downside of backpack reporting is the fact that during the field work, the reporter pays more attention to technology rather than content. This is why Avilés, León,

Sanders, and Harrison (2004) caution news workers that reporting solo might leave less time for traditional journalistic practices such as cross checking of sources and finding contextual information. I recognise the validity of this argument after reflecting on my fieldwork experience in the Philippines. In fact, multitasking usually includes a number of technical jobs, often done simultaneously:

- setting up the tripod;
- framing interview background;
- connecting cables; inserting memory cards;
- audio-video recording;
- audio checking;
- and even pausing the camera recording momentarily to avoid overheating

Thus, regardless of prior training in production, my experience demonstrates that multitasking adds to increased work pressure (Deuze, 2008) and leads to higher stress levels among journalists (Wallace, 2013). This is especially true in a more demanding disaster reporting wherein a reporter gets a one-shot chance in filming and interviews. I also need to remind myself in the field that I was dealing with sensitive and vulnerable subjects who lost their loved ones during the typhoon and need to be treated gently. Apart from that, I was working in a physically difficult terrain with less tourist infrastructures.

It is true that technical skills and familiarity of gadgets could be learned over time, but I concur with Wallace (2013) that fulfilling several tasks at a time is a stressful part of backpack journalism especially that the demand to complete multiple tasks at the same time is real and serious. However, I assert that the focus on technology will only remain a problem when a journalist goes out in the field without advanced technical training and adequate field production experience.

5.2.3 Independence versus collaboration

It is likely possible that a news organisation would deploy a backpack journalist to cover a story because it is a more efficient, cost-saving and flexible option among news managers (Avilés, León, Sanders, & Harrison, 2004). However, as Bock (2012) argues, this decision is done at the expense of newsroom collaboration and camaraderie. This means that backpack reporting, although saves time and money, requires longer working hours for journalists who create a complete multimedia package for a single story. My experience shows that although backpack journalism gives me the flexibility to work independently, the probability that a journalist would produce a more comprehensive report given a limited time is higher when working with a team. In this case, I highly suggest assigning backpack journalists to feature stories so that they are not time-bounded and could work with ample preparation. However, backpack journalists could also be assigned to cover breaking stories but working in tandem is ideal.

5.3 Humanising the story

Although backpack reporting offers a lot of benefits in terms of producing technical and multimedia content, it is also noteworthy to mention how this practice could be advantageous in capturing human elements important to balance a story. I am referring here to the elements of emotion, characters, events and other people elements embedded in my multimedia package. The mantra of most journalists is that the most compelling stories always involve people and I took advantage of this to advance my story plot. I captured the mood of a post-disaster town by filming establishing shots and elicited human emotions by filming Catholics celebrating a mass outside their devastated church. I also injected the atmosphere of homelessness by visiting typhoon evacuees in the tent city and collected personal anecdotes through casual conversations with typhoon survivors. Mainstream journalists could also get these human elements but I argue that there are moments of

spontaneity and authenticity that could only be captured by a backpack journalist who attracts less attention, solicits informal dialogues, uses casual equipment, and walks in the vicinity like an ordinary traveller curious about the surroundings. I have covered similar remote areas in the Philippines in the past and I argue that the mere presence of a news crew alters the surroundings and makes people act less natural. This makes backpack journalism an effective alternative to capture the community's typical way of life, the people's natural character and unfiltered emotions and ambiance.

5.4 Putting elements together

Field work activities such as interviewing, taking photos, video recording and collecting field notes are only the first stage in converged journalism process. After completing the field work, the tougher challenge is how to put these elements together. This sections endeavours to expound the characteristics of the multimedia elements that I created using digital technologies. The multimedia package I am analysing here is an embedded type of multimedia journalism in a way that pieces of elements are strategically inserted in a long piece of text (Grabowicz, Rue, & Hernandez, 2014).

5.4.1 Audio/Video

The audio/video component of my multimedia report is in the form of a seven-minute news documentary that brings the audience to the actual site of devastation. My goal was to use the strength of video to offer a compelling narrative and let my audience hear directly from Typhoon Haiyan survivors on how they were coping after the disaster (also see documentary script in the appendix). The interviews were done using the local language and then subtitled into English. My seven-minute documentary has the following main elements:

- Interviews (sitdown and banters)
- Situationers or sitners / b-roll footage

- Narration
- Establishing shots
- Graphics

I highlight that my training in television production has largely influenced the way I wrote and directed my news documentary. It has the semblance of a television documentary as it is also fast-paced in storytelling and editing as if I was competing attention with another television channel. It is voice-over driven and mixes the sit-down interviews and informal or casual banters within the documentary thread. Apart from that, I adopted the format of television graphics— a simple layout that primarily complements the voice-over. The graphic was basically used to show a certain process such as the resettlement framework in post-disaster Philippines which is difficult to narrate using videos.

Albeit similar to a television documentary, I also recognise its similarity to online videos. First, my report is character-driven and not focused on my experience as a reporter. Second, I choose to be behind the camera throughout the documentary. Third, running time is brief to keep the audience engaged and also fits the short attention span of online consumers. Fourth, videos are recorded and edited in a cinematic manner. And lastly, my documentary is presented in a medium that does not dictate a specific running time as well as timeslot unlike in broadcasting. All these factors were considered during the filming, scriptwriting and post-production stages of my documentary.

Another audio/video component is a 60-seconder narrated montage that shows the destruction of Guiuan's 400-year-old Immaculate Conception Church. It highlights Catholics who were celebrating a mass on a makeshift chapel outside their broken church. I opted to create a montage rather than a photo slide show since my goal was to incorporate and blend

the moving image with the natural sound specifically the mass spoken in local dialect. It adds vitality to the story and offers the authenticity that is warranted in online videos.

5.4.2 Text and photos

The long-form article on the recovery of the Philippines after Typhoon Haiyan features a first-person narrative, an emerging style in contemporary multimedia journalism. The style complements the video content in a way that it talks about the same topic but written in a different angle and reporting style. In addition, unlike my video documentary wherein I distanced myself as a reporter, the text version takes advantage of my position as a Filipino journalist on a journey back home. I highlight that the text is the key element that binds the multimedia together.

The feature article takes advantage of the online medium's unconstrained space by providing enough details, background and hyperlinks that enhanced my reporting. This means I am giving my readers the choice to explore the topic deeper. Furthermore, I was able to utilise the quotations I failed to insert in the video documentary such as those with audio problems, deleted sound bites and interviews that were not video recorded. The photos inserted in between texts, on the other hand, were selected on the basis of its visual appeal and relevance to the feature article, such as the file image of the devastation and the profile shot of typhoon survivors featured. Since it is now possible to capture an image from a recorded video, the chance to 'screenshot' more action photos is also higher than before.

5.4.3 Data journalism

Two forms of data journalism were utilised in my multimedia package – the infographics in slide show format and the interactive map that shows the sources of foreign aid for the Philippines. The slide show provides added story context especially for my

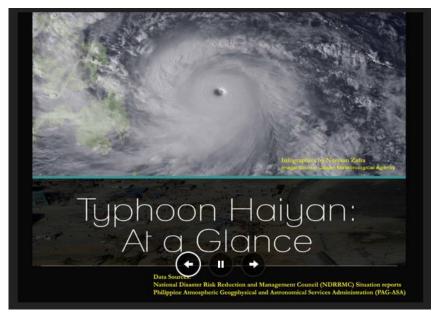


Figure 2. Screen shot of infographics in slideshow format



Figure 3. Data visualisation of foreign aid funds for the Philippines' recovery



Figure 4. Screen shot of interactive timeline created using Timeline JS

New Zealand audience who need further background to appreciate the report. Specifically, the infographics on quick facts about Typhoon Haiyan and the map and statistics of devastation remind the audience about the intensity of the disaster while the chart of the most fatal typhoons compares Haiyan with previous calamities that hit the Philippines.

The interactive story map, on the other hand, shows 64 donor countries that contributed in rebuilding the Philippines, and is comprised of 128 data entries. Each clickable content bears a photo of the country's flag for better visualisation. These forms of data journalism highlight the capacity of the online platform to visualise content in appealing and interactive ways. Prior to digitisation, journalists have limited space and airtime available for big data. For instance, the complete listing of foreign aid pledges and donations would require at least two pages in a newspaper and might be too cluttered for print publication. Likewise, a reporter for broadcast would usually highlight one or two examples of donations using graphics and then simply state the sum total. But data journalism extends the range of storytelling by allowing journalists to showcase complex data through engaging and interactive visuals and providing the audience an option to choose the content that is important to them. These innovations clearly illustrate Gordon's (2003) argument that storytelling convergence has all the potential to change the way news stories are told.

5.5 The turn to digital tools and applications

During my fieldwork in the Philippines, I have produced enough materials that could later on be transformed into a documentary, a montage and a long-form journalism. This could be labelled as a multimedia package already, but the work of a digital journalist does not end here. With an increasing number of free applications, software and online tools that allow the creation of purely online and born-digital content, journalists are given enough resources to enhance the news. As noted by Pavlik (2000), online news is transforming from

the basic inverted pyramid style to an immersive and interactive types of storytelling. But advancing one's technical skills does not depend on multimedia journalism textbooks alone. Digital tools of multimedia reporting are increasingly becoming more user-friendly which means despite having no extensive background in computer science, journalists are still able to take advantage of them.

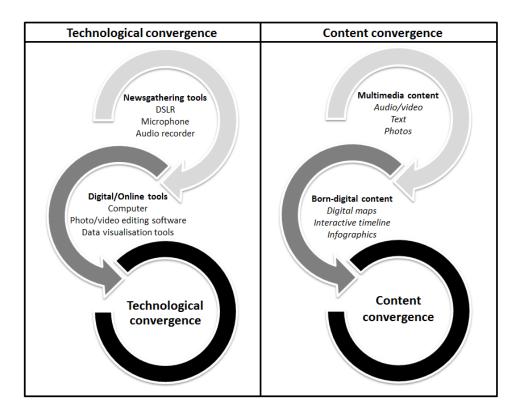


Figure 5. Model of content and technological convergence process

In order to draw the relationship between technologies and content, which is a key point of my discussion, I present here a parallel model of content and technological convergence (figure 5). Visualising the model as a process, the diagram on the left illustrates the convergence of newsgathering and digital online technologies while the diagram on the right represents the convergence of content from multimedia to born-digital contents. I highlight here that the technologies of newsgathering are directly related to the technologies of multimedia and digital content creation, but the model clarifies key boundaries.

5.5.1 Digital production

This section elaborates the applications and online software that I utilised in my digital content production. The <u>Timeline JS</u> was used to convert a modest list of typhoon-related events into a non-linear and interactive timeline of rebuilding efforts (figure 4). It is an open-source tool that offers journalists an easy way to create visually-rich and interactive chronology of events (Timeline JS overview, 2014). I used the timeline to remind the audience about the news that they might have missed a year after the international media hype on Typhoon Haiyan. Instead of putting the data as a text or graphics, the interactive timeline offers greater engagement especially that it is presented in an innovative style. *Google Spreadsheet* (similar to an excel document) is required in setting up a timeline.

I also used the <u>Google Maps Engine</u> tool for the data visualisation of foreign aid funds. The tool is an online service sponsored by Google, used mostly for storing and layering geographic data on top of the Google base map (Google Maps Engine API, 2014). My challenge then was to transform the massive volume of data that I gathered on foreign aid funds into a meaningful data visualisation. The process, which could take several hours to complete, involves collating and assigning data for each country using *Google Maps* and then individually drawing a yellow curved line to illustrate the sources of funds. It is a good way to illustrate the power of the web to hold, showcase and make sense of a supposed to be complex volume of data. Lastly, I used the template provided by *Piktochart*, to create infographics on Typhoon Haiyan. It is intended specifically for non-designers who wish to transform information into beautiful templates. Alternatively, I used Adobe Photoshop to create illustrations not available on *Piktochart*. I chose these online applications because they are free, easy to learn and fit the nature of the data that I want to visualise. These interactive, multimedia, and data visualisation contents were blended with the hypertextuality, nonlinearity, customisation, and personalisation features of the online platform (Kawamoto,

2003). The open-source <u>Wordpress.com</u>, a popular and free publishing platform and content management tool was finally used as a website for my multimedia package. It is easy to navigate even without much technical background and capable of embedding interactive content. I carefully selected a theme that appears like a website rather than a blog. Being a free platform, I encountered several limitations with *Wordpress*, such as the lack of widgets to embed the interactive timeline and as well as restrictions in design and functions.

It is clear the converged journalism is developing even faster than we had imagined a decade ago. The innovations in news production, from fieldwork to storytelling and even to the point of distribution, have tremendously altered both the job description and the products of new media journalists. This is an affirmation of scholarship in this field that argues that technological developments generate editorial effects (Boczkowski, 2004), that content is transforming due to technological changes (Pavlik, 2000), and using digital technologies extend the old ways of doing journalism (Deuze, 2008).

6. Conclusions

This paper examines how the practices of information-gathering and storytelling of disaster stories are changing alongside the advancement in digital technologies. It uses the idea of the 'one-man band' to illustrate the relationship between backpack and multimedia reporting practices and the convergence of technologies and content that exists in digital journalism. The transformation of convergence is traced from the notion of integrated newsrooms and workforces to the "optimised convergence" that allows a single person to assume multiple reporting roles.

Although backpack newsgathering means less newsroom collaboration, technologyfocused news gathering, and susceptible to technical issues, it still offers the advantage of
quicker and efficient production, autonomy and artistic freedom and collection of more
natural and personal narratives, especially in the context of disaster reporting. In addition,
because a backpack journalist attracts less attention, solicits informal dialogues, uses casual
equipment, and walks in the vicinity like an ordinary traveller - the captured feel and emotion
of the story appear natural, compelling and persuasive.

More than publishing in multiple formats, multimedia journalists should also adapt to online applications in order to improve a (disaster) story. This paper's empirical evidence shows that the emerging online tools are increasingly becoming free and user-friendly, allowing digital journalists to convert complex and big data into interactive visualisation. By having a variety and combination of contents, digital audiences could now feel the story through still and moving images, understand deeply the story through text, and gain context through data visualisation.

In this paper, I have shown the impact of digital technologies on my individual journalism practice. What this research has not shown is an analysis of multimedia journalism

in emerging digital natives or purely online news organisations. It is good to examine, in future research, the reporting challenges of converged journalists working in purely digital newsrooms. The results of this paper, especially the analysis of pros and cons of backpack and multimedia journalism, could provide a springboard of hypothesis for future inquiries.

References

- Achtenhagen, L., & Raviola, E. (2009). Balancing tensions during convergence: Duality management in a newspaper company. *International Journal on Media Management*, 11(1): 32–41. doi:10.1080/14241270802518505
- Avilés, J. A. G., & Carvajal, M. (2008). Integrated and cross-media newsroom convergence: Two models of multimedia news production the cases of Novotécnica and La Verdad multimedia in Spain. *Convergence: The International Journal of Research into New Media Technologies*, 14(2), 221-239. doi: 10.1177/1354856507087945
- Avilés, J. A. G., León, B., Sanders, K., & Harrison, J. (2004). Journalists at digital television newsrooms in Britain and Spain: Workflow and multi-skilling in a competitive environment. *Journalism Studies*, 5(1), 87-100. doi: 10.1080/1461670032000174765
- Avilés, J. A. G., Meier, K., Kaltenbrunner, A., Carvajal, M., & Kraus, D. (2009). Newsroom integration in Austria, Spain and Germany. *Journalism Practice*, 3(3), 285-303. doi:10.1080/17512780902798638
- Bhuiyan, S. (2009). Strategies for developing media managers for convergence: An analysis of perspectives from management theory and practice for managers of converged newsrooms. *Pranjana: The Journal of Management Awareness*, *12*(2), 1-15. Retrieved from https://docs.google.com/document/d/1w2LlK06p 5yRJ4lWcKlennjGvuf_fnpxRcpY0RIfaXRc/edit?pli=1
- Brannon, J. (2008). Maximize the medium: Assessing obstacles to performing multimedia journalism in three U.S. newsrooms. In C. Paterson & D. Domingo (Eds.), *Making online news: The ethnography of new media production* (pp. 99-112). New York: Peter Lang.
- Bock, M. A. (2012). Video journalism: Beyond the one-man band. New York: Peter Lang.
- Boczkowski, P. J. (2004). The Processes of adopting multimedia and interactivity in three online newsrooms. *Journal of Communication*, *54*(2), 197-213. doi: 10.1111/j.1460-2466.2004.tb02624.x
- Boczkowski, P. J. (2004a). *Digitizing the news innovation in online newspapers*. Cambridge, Mass.; London: MIT Press.

- Boczkowski, P. J., & Ferris, J. A. (2005). Multiple media, convergent processes, and divergent products: Organizational innovation in digital media production at a European firm. *The ANNALS of the American Academy of Political and Social Science*, 597(1), 32-47. doi: 10.1177/0002716204270067
- Colon, A. (2000, May/June). The multimedia newsroom. *Columbia Journalism Review*, 39(1). pp. 25-27
- Cottle, S. (2009). *Global crisis reporting: Journalism in a global age:* Maidenhead: Open University Press.
- Cottle, S. (2013). Journalists witnessing disaster. *Journalism Studies*, *14*(2), 232-248. doi: 10.1080/1461670X.2012.718556
- Cottle, S., & Ashton, M. (1999). From BBC newsroom to BBC newscentre: On changing technology and journalist practices. *Convergence: The International Journal of Research into New Media Technologies*, *5*(3), 22-43. doi: 10.1177/135485659900500304
- Craig, D. A. (2011). Excellence in online journalism: Exploring current practices in an evolving environment. Thousand Oaks, Calif.: Sage.
- Dailey, L., Demo, L., & Spillman, M. (2005). The convergence continuum: A model for studying collaboration between media newsrooms. *Atlantic Journal of Communication*, *13*(3), 150-168. doi: 10.1207/s15456889ajc1303_2
- Deuze, M. (2004). What is multimedia journalism? *Journalism Studies*, 5(2), 139-152. doi: 10.1080/1461670042000211131
- Deuze, M. (2007). *Media work*, Cambridge, UK; Malden, MA: Polity.
- Deuze, M. (2008). Understanding journalism as newswork: How it changes, and how it remains the same. *Westminster Papers in Communication & Culture*, *5*(2), 4-23. Retrieved from https://www.westminster.ac.uk/__data/assets/pdf_file/0006/20022/002WPCC-Vol5-No2-Mark_Deuze.pdf
- Doig, S. (2013). Data journalism (1). In S. Tanner & N. Richardson (Eds.), *Journalism research and investigation in a digital world*, (pp 116-122). South Melbourne, Vic.: Oxford University Press.

- Domingo, D. S., Aguado Terrón, J.M., Cabrera, M., Edo Bolós, C., Masip, P., Meso A., ... Giménez, E. (2011). Four dimensions of journalistic convergence: A preliminary approach to current media trends at Spain. *Paper presented at the 8th International Symposium of Online Journalism*. University of Texas, Austin. doi: 2011-11-22T12:10:57Z.
- Dooley, P. L. (2007). *The technology of journalism: Cultural agents, cultural icons.* Evanston, Ill.: Northwestern University Press.
- Duhe, S. F., Mortimer, M. M., & Chow, S. S. (2004). Convergence in North American TV Newsrooms: A nationwide look. *Convergence: The International Journal of Research into New Media Technologies*, 10(2), 81-104. doi: 10.1177/135485650401000206
- Dupagne, M., & Garrison, B. (2006). The meaning and influence of convergence. *Journalism Studies*, 7(2), 237-255. doi: 10.1080/14616700500533569
- Dworznik, G. (2006). Journalism and trauma. *Journalism Studies*, 7(4), 534-553. doi: 10.1080/14616700600757977
- Erdal, I. J. (2009). Cross-media (Re)production cultures. *Convergence: The International Journal of Research into New Media Technologies*, 15(2), 215-231. doi: 10.1177/1354856508105231
- Friend C. & Singer J. B. (2007). *Online journalism ethics: Traditions and transitions*. New York: Sharpe.
- Gage, R. (2006, Winter). Navigating the road to convergence: 'Being small and a family-owned company are attributes that have helped us to become a multimedia news organization'. *Nieman Reports* 60(4), 19-22. Retrieved from http://niemanreports.org/articles/navigating-the-road-to-convergence/
- Goldenberg, K. (2012, September). The genuine article: What is the atomic unit of journalistic storytelling? *Columbia Journalism Review*, 42-43. Retrieved from http://www.cjr.org/cover_story/the_genuine_article.php?page=all
- Google Maps Engine API. (2014) Retrieved from https://developers.google.com/maps-engine/documentation/start

- Gordon, R. (2003). The meanings and implications of convergence. In K. Kawamoto (Ed.), *Digital journalism: Emerging media and the changing horizons of journalism*, (pp. 57–73). Lanham, MD: Rowman & Littlefield.
- Grabowicz, P., Rue, J., & Hernandez, R.K. (2014). *Tutorial: Taxonomy of digital story packages*. Retrieved from http://multimedia.journalism.berkeley.edu/tutorials/taxonomy-digital-story-packages/
- Gray, J., Bounegru, L., & Chambers, L. (Eds.). (2012). *The data journalism handbook*. Sebastopol, Calif.: O'Reilly.
- Hemmingway, E. (2005). PDP, the news production network and the transformation of news. *Convergence: The International Journal of Research into New Media Technologies*, 11(3), 8-27. doi: 10.1177/135485650501100302
- Hemmingway, E. (2008). *Into the newsroom: Exploring the digital production of regional television news*. London: Routledge.
- Hollings, J. (2005). Reporting the Asian tsunami: Ethical issues. *Pacific Journalism Review*, *11*(2), 151-166. Retrieved from http://www.pjreview.info/sites/default/files/articles/pdfs/pjr11%282%29_Asian%20ts unami_hollings%20pp151-167.pdf
- Huang, E., Rademakers, L., Fayemiwo, M. A., & Dunlap, L. (2004). Converged journalism and quality: A case study of The Tampa Tribune news stories. *Convergence: The International Journal of Research into New Media Technologies*, 10(4), 73-91. doi: 10.1177/135485650401000407
- Huang E., Davidson K., Shreve S., Davis T., Bettendorf, E., & Nair, A. (2006) Facing the challenges of convergence: Media professionals' concerns of working across media platforms. *Convergence*, 12(1): 83–98. doi: 10.1177/1354856506061557
- Infotendencias Group. (2012). Media Convergence. In E. Siapera & A. Veglis (Eds.), *The handbook of global online journalism* (pp. 19-38). Malden, Mass: Wiley-Blackwell.
- Jacobson, S. (2010). Emerging models of multimedia journalism: A content analysis of multimedia packages published on nytimes.com. *Atlantic Journal of Communication*, 18(2), 63-78. doi: 10.1080/15456870903554882

- Jacobson, S. (2012). Transcoding the news: An investigation into multimedia journalism published on nytimes.com 2000–2008. *New Media & Society*, *14*(5), 867-885. doi: 10.1177/1461444811431864
- Jenkins, H. (2001, June). Convergence? I diverge. *Technology Review. Retrieved from http://phase1.nccr-trade.org/images/stories/jenkins_convergence_optional.pdf*
- Jenkins, H. (2006). *Convergence culture: Where old and new media collide*. New York: New York University Press,
- Kawamoto, K. (2003). Digital journalism: Emerging media and the changing horizons of journalism. In K. Kawamoto (Ed.), *Digital journalism: Emerging media and the changing horizons of journalism* (pp. 57–73). Lanham, MD: Rowman & Littlefield.
- Kaltenbrunner, A., & Meier, K. (2013). Convergent Journalism—Newsrooms, routines, job profiles and training. In S. Diehl & M. Karmasin (Eds.), *Media and convergence management* (pp. 285-298). doi: 10.1007/978-3-642-36163-0_19
- Keats, P. A., & Buchanan, M. J. (2013). Covering trauma in Canadian journalism: Exploring the challenges. *Traumatology*, 19(3), 210-222. doi: 10.1177/1534765612466152
- Kennedy, T. (2010). *Whitepaper on Backpack Journalism*. Washington, DC: American University School of Communication. Retrieved from http://www.american.edu/loader.cfm?csModule=security/getfile&pageid=1713568
- Klinenberg, E. (2005). Convergence: News production in a digital age. *The ANNALS of the American Academy of Political and Social Science*, 597(1), 48-64. doi: 10.1177/0002716204270346
- Kolodzy, J. (2006). *Convergence journalism: Writing and reporting across the news media.* Lanham, Md.: Rowman & Littlefield.
- Kolodzy, J., Grant, A. E., De Mars, T. R., & Wilkinson, J. S. (2014). The convergence years. *Journalism & Mass Communication Educator*, 69(2), 197-205. doi: 10.1177/1077695814531718
- Kumar, P. (2011, December/January). Backpack journalism overseas. *American Journalism Review*, 32(4). Retrieved from http://ajrarchive.org/Article.asp?id=4986

- Larrondo, A., Larrañaga, J., Meso, K., & Agirreazkuenaga, I. (2012). The convergence process in public audiovisual groups. *Journalism Practice*, 6(5-6), 788-797. doi: 10.1080/17512786.2012.667282
- Lawson-Borders, G. (2006). *Media organisations and convergence: Case studies of media convergence pioneers*. New Jersey: Lawrence Erlbaum Associates, Inc.
- Martyn, P. H. (2009). The MOJO in the third millennium. *Journalism Practice*, *3*(2), 196-215. doi:10.1080/17512780802681264
- Moe, H., & Syvertsen, T. (2007). Media institutions as a research field: Three phases of Norwegian Broadcasting Research [Jubilee Issue]. *NORDICOM Review*, 28, 149-167. Retrieved from http://www.nordicom.gu.se/sites/default/files/kapitel-pdf/249_moe_syvertsen1.pdf
- Örnebring, H. (2010). Technology and journalism-as-labour: Historical perspectives. *Journalism*, 11(1), 57-74. doi: 10.1177/1464884909350644
- Pavlik, J. (2000). The impact of technology on journalism. *Journalism Studies*, 1(2), 229-237. doi: 10.1080/14616700050028226
- Pool, I. d. S. (1983). *Technologies of Freedom*. Cambridge, Mass: Belknap Press of Harvard University Press.
- Quandt, T & Singer, J. (2009). Convergence and cross-platform content production. In T. Hanitzsch & J. Wahl-Jorgensen (Eds.), *The Handbook of Journalism Studies* (pp.130-144). New York: Routledge.
- Quinn, S. (2004). An intersection of ideals: Journalism, profits, technology and convergence. *Convergence: The International Journal of Research into New Media Technologies*, 10(4), 109-123. doi: 10.1177/135485650401000409
- Quinn, S. (2005). What is convergence and how will it affect my life? In S. Quinn & V. Flak (Eds.), *Convergent journalism: An introduction* (pp. 3-20). Boston: Elsevier.
- Quinn, S. (2005a). Convergence's fundamental question. *Journalism Studies*, 6(1), 29-38. doi: 10.1080/1461670052000328186

- Quinn, S. (2005b). Convergent journalism: The fundamentals of multimedia reporting. New York: P. Lang.
- Quinn, S. (2011) *Mojo: Mobile journalism in the Asian Region* (2nd ed.). Singapore: Konrad Adenauer Foundation.
- Reich, Z. (2011). Comparing reporters' work across print, radio, and online: Converged origination, diverged packaging. *Journalism & Mass Communication Quarterly*, 88(2), 285-300. doi: 10.1177/107769901108800204
- Robinson, S. (2011). Convergence crises: News work and news space in the digitally transforming newsroom. *Journal of Communication*, 6(61), 1122-1141. doi: 10.1111/j.1460-2466.2011.01603.x
- Rogers, S. (2014). Data journalism is the new punk. *British Journalism Review*, 25(2), 31-34. doi: 10.1177/0956474814538181
- Rosenberg, B. (2008). *News media ownership in New Zealand*. Retrieved from http://canterbury.cyberplace.org.nz/community/CAFCA/publications/Miscellane ous/mediaown.pdf
- Saltzis, K., & Dickinson, R. (2008). Inside the changing newsroom: Journalists' responses to media convergence. *Aslib Journal of Information Management*, 60(3), 216-228. http://dx.doi.org/10.1108/00012530810879097
- Scanlan, C., & Craig, R. (2014). *News writing and reporting: The complete guide for today's journalist* (2nd ed.). New York: Oxford University Press.
- Silverstone, R. (1995). Convergence is a dangerous word. *Convergence: The Journal of Research into New Media Technologies*, *I*(1), 11-13. doi: 10.1177/135485659500100102
- Singer, J. B. (2004). Strange bedfellows? The diffusion of convergence in four news organizations. *Journalism Studies*, *5*(1), 3-18. doi: 10.1080/1461670032000174701
- Singer, J. B. (2004a). More than ink-stained wretches: The resocialization of print journalists in converged newsrooms. *Journalism & Mass Communication Quarterly*, 81(4), 838-856. doi: 10.1177/107769900408100408

- Singer, J. B. (2006). Partnerships and public service: Normative issues for journalists in converged newsrooms. *Journal of Mass Media Ethics*, 21(1), 30-53. doi: 10.1207/s15327728jmme2101_3
- Smith, S. (2011). *Going solo: Doing video journalism in the 21st century*. Columbia, Mo.: University of Missouri Press.
- Smith, L. K., Tanner, A. H., & Duhe, S. F. (2007). Convergence concerns in local television: Conflicting views from the newsroom. *Journal of Broadcasting & Electronic Media*, 51(4), 555-574. doi: 10.1080/08838150701626354
- Steensen, S. (2010). Online journalism and the promises of new technology. *Journalism Studies*, 12(3), 311-327. doi: 10.1080/1461670X.2010.501151
- Stevens, J. (2002). Backpack journalism is here to stay. *Online Journalism Review*, 2. Retrieved from http://www.ojr.org/ojr/workplace/1017771575
- Tameling, K., & Broersma, M. (2013). De-converging the newsroom: Strategies for newsroom change and their influence on journalism practice. *International Communication Gazette*, 75(1), 19-34. doi: 10.1177/1748048512461760
- Thornton, L. J., & Keith, S. M. (2009). From convergence to webvergence: Tracking the evolution of broadcast-print partnerships through the lens of Change Theory [Part of a special issue]. *New Models of Mass Communication*, 86(2), 257-276. doi: 10.1177/107769900908600201
- Thurman, N., & Lupton, B. (2008). Convergence calls: Multimedia storytelling at British news websites. *Convergence: The International Journal of Research into New Media Technologies*, 14(4), 439-455. doi: 10.1177/1354856508094662
- Timeline JS overview. (2014). Retrieved from http://timeline.knightlab.com/
- Tompkins, A. (2012). Aim for the heart: Write, shoot, report and produce for TV and Multimedia, Washington, DC: CQ Press.
- Vobič, I. (2011). Online multimedia news in print media: A lack of vision in Slovenia. *Journalism*, 12(8), 946-962. doi: 10.1177/1464884911398339

- Wallace, S. (2009). Watchdog or witness? The emerging forms and practices of videojournalism. *Journalism*, 10(5), 684-701. doi: 10.1177/1464884909106539
- Wallace, S. (2013). The complexities of convergence: Multiskilled journalists working in BBC regional multimedia newsrooms. *International Communication Gazette*, 75(1), 99-117. doi: 10.1177/1748048512461764
- Walker, T (2009). *Doing more with less? Convergence and public interest in the New Zealand news media*. (Unpublished master's thesis). AUT University, Auckland, New Zealand. Retrieved from http://aut.researchgateway.ac.nz/handle/10292/788
- Wenger, D. H. & Potter, D. (2012) Advancing the story: Broadcast journalism in a multimedia world (2nd ed.). Washington, D.C.: CQ/SAGE.
- Wesley, A. (2013, Spring). Today's visual journalist. *Quill & Scroll*, 87(2), 7. Retrieved from http://issuu.com/quillscroll/docs/spring2013
- Zelizer, B. & Allan, S. (2010). *Keywords in news and journalism studies*. Berkshire, England: Open University Press.
- Zhang, S. I. (2012). The newsroom of the future. *Journalism Practice*, 6(5-6), 776-787. doi: 10.1080/17512786.2012.667281

Appendix: News documentary script

Rebuilding after a super storm Norman Zafra

Video	Audio
Establishing shots Guiuan	Rosemarie's life is simple, she has a complete
Sits Rosemarie inside her tent	family, a good husband and all her children are attending school.
	But Typhoon Haiyan damaged their home, washed away their properties and similar to the fate of hundreds of families internally displaced after the disaster, her family was forced to evacuate in a temporary relocation.
	She is hopeful that after living here for almost a year, they will be relocated in a suitable accommodation.
	But waiting has been an arduous task.
	SOT Rosemarie dela Cruz, 'tent city' resident 'Sometimes we feel like losing hope that we will still be relocated from here. We even think of returning to our village. But we don't have money to fix our house.'
Tent city sitners	When I visited her tent city 10 months after Haiyan, I noticed that makeshift shelters made up of woods have been built and attached to the tents donated for Haiyan survivors, including Rosemarie's house.
	It is difficult if you only got a tent, it is very hot inside. It is like we are being boiled to heat.
	SOT: This is our house, our beautiful house. This is the most beautiful house in the world (laughs). I'm just joking.
	These are reject woods donated by IOM. They'd rather donate these to us than throw them as rubbish.
Sitners of damages infrastructures in Guiuan	When the disaster swept away several homes and properties in Guiuan, they were lucky their source of livelihood was spared from devastation.

SOT This one survived Typhoon Yolanda. It was almost hit by a tree. But we were lucky. Now it is the only source of livelihood left to us. SOT Benito dela Cruz Jr., Rosemarie's husband We value this property so much. It lives with us through thick and thin. For Rosemarie who values her connection to her place of origin, relocation is not always Rosemarie while walking around the the easy option. tent city SOT Maybe if the relocation that they promised does not push through, we will definitely return to out village. We miss our village. It is where my three children were born. It is where I lived all my life. Early this month, a year after Haiyan, Rosemarie and the tent city residents in Guiuan were transferred to a transitional housing site. Generic sits of tent city residents **Transition** The Philippine's recovery process from a natural calamity has never been this so massive. Up natural sound of construction Gensits of rebuilding Dubbed as the strongest typhoon to ever make landfall, Haiyan has left 6300 dead, more than a thousand missing and almost 900,000 displaced families. Some of the homeless have returned and rebuilt their houses in areas declared as no build zones. While others remain living in temporary accommodations Sits of Tacloban City Transition In Tacloban city, the place that suffered the biggest infrastructure damage and more than 2000 deaths, many things have changed but so much has stayed the same.

Transition Profile shot of Jennifer Jennifer's memories of Haiyan and storm surge are still fresh and raw. Jennifer inside her house Her family still mourns even a year after her mother was swept away by the storm surge that hit their coastal village. Jennifer Vasquez, lives in transitional housing SOT Everything was washed out. My mother was swept away too. We didn't find here body. I keep thinking she is still alive. I keep thinking that she will soon return to us. But then I said, if she survived, she must have showed up already. Her husband and two of her seven children were also swept away by the surge but they struggled to swim to safety. SOT This is my son Jason. He was swimming during Yolanda. He got wounded here and also on his feet. There's a scar here on his head and also here. Jennifer and daughter sitners Today, they live in this transitional housing project donated by a humanitarian organisation. The site was turned over to its beneficiaries March this year and has been the home to around 400 families mostly affected by the storm surge. Transition GRAPHICS over shots of transitional Transitional housing is considered the middle shelters in Tacloban stage in the Philippines resettlement framework, the first stage is the immediate recovery strategy in the form of evacuation centres and tents and the last is the construction of permanent housing. Apart from being relocated far from their fishing livelihood, Jennifer is grateful to be given a unit in this transitional site. In Tacloban alone, there are more than 300 families who are still living in tents, waiting to

be relocated.

Graphics

Out of the overall 200,000 target permanent housing units, only over a thousand have been so far completed. It may take years before full recovery.

Generic construction sitners

Local officials admit, land acquisition hampers the resettlement process.

Sot Jerry Yaokasin, Vice mayor, Tacloban City 'It is always never fast enough. Our target is at least it will take us two to three years. We face a lot of obstacle really in acquiring land. There's one land that we wanted to expropriate now but we found out that many are claiming that piece of land'.

The disaster also illuminates the insecurity of land tenure of most affected families.

SOT Justin Morgan, Oxfam country director If a person has to be relocated, it is very much dependent on did they have title of the land of which they are being relocated from either formally or informally. These things exist in the Philippines and are limiting some the choices that people have with or without the typhoon.

Transition

Gensits of Tacloban City

Rebuilding is a daunting task for a developing nation like the Philippines.

And while the resilience of its people has been commended and admired, it is time Filipinos get the change and redevelopment they need to move forward.

Norman Zafra - Tacloban, Philippines