The Future of News Literacy in a Connected World

Global News Literacy Conference, Stony Brook University, New York, August 14-15, 2017

"Ahead of the e-curve in fact checking education: The University of Hong Kong's Cyber News Verification Lab, leads verification education in Asia" by Anne Kruger, Assistant Professor of Practice, the University of Hong Kong.

ABSTRACT

The University of Hong Kong's "Cyber News Verification Lab" was founded in June 2016, and is arguably the first of its kind in Asia, as a focused, experiential project developing undergraduates' online verification skills. It has been hailed as "Ahead of the curve" in online and social media fact checking education by the industry's groundbreaking verification journalists. In September 2016, Meedan, (a founding partner of First Draft News including Google News Labs) joined the experiment by providing access and technical support to their open source verification platform called 'Check'. The project led to a significant increase in the quality of verification techniques and critical thinking actions by students. This paper discusses the curriculum design and initial findings from the Cyber News Verification Lab implemented into News Literacy courses at HKU in Semester 2, 2016-17. The paper also outlines current developments towards a news literacy verification rating scale – that arose from measures created by the instructor to assess student outcomes from the experiential project.

BACKGROUND

The University of Hong Kong's "Cyber News Verification Lab" experiment was first implemented via foundation undergraduate courses at the Journalism and Media Studies Center in 2016. The lab received teaching development grant funding from HKU to support innovations in curriculum design. The Cyber News Verification Lab began as an experimental side project in experiential learning, and quickly became a major component of foundation journalism classes including News Literacy, and reporting and writing classes.

The partnership with Meedan saw a collaboration with HKU students' beta testing from Semester 1, 2016-17, the latest version of the Check software, with the feedback directly informing digital coders. The interface was then implemented by industry professionals in Election.Land to fact check the 2016 US Presidential polls; in CrossCheck during the 2017

French elections; and by University of Hong Kong students in the 2017 Chief Executive Elections in Hong Kong.

INTRODUCTION

The objective of the HKU Cyber News Verification Lab is for students to develop and apply a critical thinking lens to meet the challenges and pressure of reporting in a post web 2.0 digital age, where they:

- identify, analyse and deconstruct real-life case studies emanating in real-time from online sources, and,
- evaluate and report on their findings in a journalistic manner.

Students simultaneously learn how to apply critical thinking skills from a News Literacy perspective, as well as practical digital skills to 'debunk and discern' online information and make sense from the constant 'noise' flowing from photos, videos and messages online.

As most students at the University of Hong Kong are multi-lingual, they bring with them several languages, mostly from across Asia. Students debunk social media observations from these e-language cultures, and translate them into the University's medium of instruction, English. Students learn from the lab to not only debunk information, but also to discern the motivations behind dis-information and the ramifications applicable to different parts of Asia. From auto-mated bots used to troll unsuspecting citizens, to content farm factories, and chat app 'chain' rumors, students see how social media and technology is used to spread political and racial biases, and the nuances in different parts of the region.

LITERATURE REVIEW AND DEFINITIONS

This literature review will very briefly define and outline research into 'fake news' or misinformation and disinformation; media literacy and measurement scales; and, finally experiential learning theory.

Fake News (for wont of a better name)

This research paper considers 'motivations' behind the creation of so-called 'fake news' as a key to delineate and define the misinformation and disinformation into different group types. Frank (2015, pp. 315-316) noted the "intentional dimension" is essential to consider in defining 'fake news', for example, mistakes made by a news outlet may arise from

unintended human error, quite distinct from a hoax where the creators had an intention in the beginning to trick or deceive the audience (news consumers).

Clare Wardle, researcher for First Draft noted the term 'fake news' made popular by US President Donald Trump, is unhelpful, in that it doesn't fully describe the complexities of the "information ecosystem" (Wardle, 2017 Par 1). Wardle (2017, par 5) has devised a typology of "problematic information" in relation to the search for a better definition and term than 'fake news'. Wardle (2017, par 5) noted "they sit on a scale, one that loosely measures the intent to deceive:"

1. Satire or Parody – No intention to cause harm but has potential to fool

2. Misleading Content – Misleading use of information to frame an issue or individual

3. Imposter Content – When genuine sources are impersonated

4. Fabricated Content – New content is 100% false, designed to deceive and do harm

5. False Connection – When headlines, visuals or captions don't support the content

6. False Context – When genuine content is shared with false contextual information

7. Manipulated Content – When genuine information or imagery is manipulated to deceive
 (Source: First Draft News, 2017).

Media Literacy and Measurement Scales

The News Literacy curriculum at the University of Hong Kong teaches News Literacy concepts to digital native students with the aim of developing critical thinking so that students can make informed decisions about the media in which they consume and participate. However, the aim of this experiential project was to extend and enrich how students put their knowledge into practice through verification and fact-checking in real-life, real-time cases. Renee Hobbs (2004, p. 56) noted "teachers must design learning experiences that help students, as quickly as possible, to stand on their own two feet – able to critically analyse and create messages in a culture that is densely saturated with an ever-changing array of media messages and technology tools."

Early quantitative measurements of student media literacy skills were devised in Australia and combined multiple choice and open-ended questions from which evaluation instruments were created (Quinn and McMahon 1995 cited in Hobbs and Frost 2003). Hobbs and Frost (2003, p.335) adopted the Quinn and McMahon evaluation instrument in a study of ninth grade students and concluded there was a positive effect on students' literacy levels and

critical thinking: "After 12 weeks of instruction, findings showed that students whose teachers integrated media-literacy concepts and activities with existing curriculum outperformed those in other classes whose teachers used "off the shelf" curriculum". These initial studies led to developments of established 'grading scales' in media literacy. A more recent study by Maksl et al (2017) surveyed news media literacy levels in college students at Stony Brook University in New York. Results showed students who had taken News Literacy course had significantly higher knowledge of current affairs and were more motivated to follow the news compared to those who hadn't. However, the survey used a prepared Likert scale and multiple-choice questions – there was no space for 'real time' reaction to measure how students would "stand on their own two feet" as suggested by Hobbs (2004) above. This paper argues there is room for a measurement scale to focus on measuring the quality of verification steps and considerations students take when they apply their skills to real world, real time scenarios.

While media literacy is a well-established area of research, measurement scales need to address News Literacy competencies and critical thinking skills in a digital native, participatory, 'post-truth' era. This has arguably never been more important in Asia given the implications social media can cause in political campaigns, geo politics, and society in this diverse, and highly mobile-connected region. While new research is emerging in the media literacy subset of News Literacy, there are little, if any "rigorous assessment tools to gauge the impact of (news literacy) pedagogical methods" (Kajimoto, 2016, p. 148). This paper extends the focus on "pedagogical methods" to pedagogical outcomes and skills obtained (and retained) by students.

Experiential Learning

Kolb (1984, p. 41) defines Experiential Learning Theory as "the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience." Experiential learning is not new to higher education journalism schools such as the University of Hong Kong's Journalism and Media Studies Center, where all undergraduate journalism majors, (taught by academics with current or past journalism experience) must also undertake a meaningful internship in a media organisation in order to graduate. Brandon (2002, p. 62) describes experiential learning as "a process during which a person experiences an event, acquires competencies, and then compares the knowledge gained with knowledge gained in similar situations."

METHODS

The Cyber News Verification Lab forms part of the author's PhD research thesis. The research includes an experiential experiment, case study analysis and interviews with media experts in the form of modified Delphi iterations (where the experts can be called up to continue to advise and comment according to different stages and progress throughout the study). In the first semester of the project, the experiment was implemented using a control group, with results (available in the PhD thesis) informing the implementation of verification exercises for the second semester. The focus of this paper is on the second semester of the operation of the Cyber News Verification Lab; where the entire class of 88 students in the News Literacy-focused JMSC course 'Principles of the News and Media' were signed up as 'journalist' contributors on the Check platform. An extra 25 journalism majors from the JMSC course 'Reporting and Writing' also took part on the Check platform.

Students attended regular weekly lectures and tutorials according to course syllabi, with the 'Cyber News Verification Lab' inserted as an enrichment project that ran continuously throughout the course. Exercises in the Cyber News Verification Lab included weekly forums; a social network journalistic report; a verification report on the Hong Kong Chief Executive Elections; and a case study reflection exercise.

1. Weekly forums: For the first three weeks of semester the classes uploaded on the University learning platform 'Moodle' while enrolments and orientations were being finalized. From week three, all students signed up and used 'Check' exclusively for their forums. Students were instructed to monitor their social network accounts in their native language and upload links on interesting or questionable content, that they then put into context for the rest of the class to view. All students in the 'Reporting and Writing' class had already completed the News-Literacy focused class 'Principles of the News' so they were instructed to carry out verification and fact checking immediately. For the larger 'Principles of the News' class (that form the main focus of the analysis in this paper below), the instructors gradually encouraged students to do more fact checking and verification as the lectures progressed with more News Literacy and verification principles and techniques shown. Students were required to translate where necessary the headline, lede and any pertinent quotes or material into English so that everyone in the class could view each other's work.

The Check platform allows students to upload online content (including Chinese characters) and show each of the steps involved in the verification process. Reports are classified by a colour coding system according to the status of verification. When the report is still being investigated it is marked as 'in progress' and when finished is classified as 'false', 'verified', or 'Inconclusive'. Fellow classmates are encouraged to observe and collaborate on reports within projects.

2. Social Network Report: Students were instructed to use the social networks they were personally a member of, or monitoring, to create a journalistic report. The students were instructed to use verification and fact-checking measures, to consider ethical issues, and to consider the project from a 'civic' journalism perspective. The civic journalism approach was used to show students how a one-sided blog or comment in social media is not enough to help society find answers about the issue. Students were guided on how to report 'fairly and accurately'. Students were instructed to interview at least three people and gather other data sources to create the story, find the context and angles.

3. Report on the Hong Kong Chief Executive elections: Voting for the next Chief Executive of Hong Kong (Hong Kong's highest leadership position located in the SAR under the 'One Country, Two Systems'), took place on March 26th, 2017 – just after half way through the semester. Tutorial groups were required to research each candidate and the election issues and policies in the lead up to the poll. Students were to monitor social media and a separate project was set up on 'Check' following the election to track any rumours surrounding the event. Students then were required to submit a verification 'report' where they followed a particular rumour or item that required fact-checking. Similar to the Social Network Report above, extra credit was given for direct contact with sources, physical attendance and or observation from locations related to any rumours (such as gatherings of protestors, rallies and the polling venue) as well as further cross checking of media reports and data (for instance government reports, police statements).

4. Reflective Case Study: At the end of the semester students were given a 'fake news' case study, where students were given ten minutes in class time, to list and describe all of the possible steps they would carry out and any other considerations to debunk the story. Students were asked to write in two columns: On the left, they were to consider what steps they would have carried out and how, prior to taking the course. On the right-hand side,

students were then to list every possible step and consideration they would use now, in relation to the particular case study. Students were told they would not necessarily get 'any more, or any less' grades on whether they had a little on the left side and a lot on the right, but rather, grading depended on the quality and specific methods they discussed. Students were told to consider it a type of 'stream of conscience' writing, where they consider all the thoughts they have when they are now presented with online information.

CREATION OF VERIFICATION MEASURES

By matter of necessity, the author developed a scale in order to efficiently grade the students' assessment items appropriately and fairly. The scale was informed by in-person interviews conducted by the author with media experts about verification techniques in the professional sphere. In particular, early interviews and subsequent iterations from Iain Martin (Storyful), Tom Trewinnard (Meedan), Claire Wardle (First Draft News), and from ABC News (Australia) proved most effective.

A combination of their techniques distilled the following necessary verification skills:

VERIFICATION RATING METHODS

1. Reverse Image Search

2. Observation skills – including photos and videos

3. Question the 'motivation' of the person publishing the material, this can include analyzing the profile of the original publisher and find/observe/analyze others linked to them

4. Cross check with other data available, such as government reports, statistics, social networks

5. Make direct contact where possible with the original publisher/stakeholders, either online or physically

These five areas were then combined with the core lessons and principles of News Literacy stemming from the Stony Brook curriculum. Core principles of the Stony Brook (2015) News Literacy concepts include key acronyms and taxonomies that are studied and used extensively in class exercises and tutorials:

1. Verification, Independence, Accountability (shortened to the acronym VIA – see Appendix A).

2. The VIA concept is supported by an analysis in the early weeks of the course of different information classifications which have been condensed into a 'Taxonomy of Information Neighborhoods' by Stony Brook (see Appendix B). The taxonomy of information neighborhoods delineates the differences that journalism has from public relations, entertainment, propaganda, and raw data; and the course shows where at times the lines overlap, for example, native advertising delivered to look like a traditional news item.

3. Multiple Sources and verification: Multiple Sources that corroborate the information and verification. This is based on an analytical framework of sources devised by Stony Brook University, and known by its acronym 'IM VAIN' (see Appendix C).

4. The above concepts are taught against a backdrop introducing students to 'what makes news'. Stony Brook University's framework of 'Universal News Drivers' helps students to identify and understand why editors have traditionally selected stories for their audience (for example people are drawn to stories about celebrities or other prominent people held to higher standards; conflict and tragedy; timeliness; unusual or unique trends). And in turn, this has helped students to understand and identify why items can go 'viral' on the internet or catch people's interest.

From the above, combined with regular discussions between the Principle Investigator (the author) and the course Research Assistant, and media experts, the following rating scale was developed in reference to the "Verification Rating Methods":
VERIFICATION MEASUREMENT SCALE
0 = No verification conducted, the student shares without any critical thinking, or the thinking level is superficial
1 = The student can put the issue into some sort of context and explain/state what issues need to be followed up on. The student may make good suggestions, but not necessarily carry them out.
2 = The student will carry out steps 1-3 as listed by the media experts above ("Verification Rating Methods", as relevant, and may exhibit the ability to carry out steps 5-6 in the 'Verification Rating Methods" but put little effort into these. Alternatively the verification methods may have been fulfilled at this point.

3 = The student will carry out step 5 from the "Verification Rating Methods" (which may involve a number of attempts or iterations) to gather first-hand information. It is assumed the earlier steps have also been carried out where appropriate.

RESULTS AND FINDINGS

Experiential Project – Results from the 'Check' forums

During the semester, the Check platform was divided up into a number of key projects related to Hong Kong and Asia, including 'Chat Apps' (such as Whatsapp or closed Facebook groups); 'CE Elections' (focused on the week leading up to, and after Hong Kong's leadership poll); 'South Korea' (focus on anything from Samsung to the beleaguered former President); and 'Wildcard' (an open project for any topics that don't fit current projects, but reflect interesting things in Asia). Both classes submitted to these same projects. Students were asked to identify interesting, topical or suspicious looking items in their social media feeds.

1. Chat Apps (closed groups, or messages where posts are messaged or forwarded, not as 'public' or open for example as a public Facebook site):

TOTAL POSTS/CLAIMS = 31
40% of the posts/rumours were determined to be false by the students;
10% inconclusive;
30% were verified (however in 50% of these cases the students added more information and verification steps than the original post/story)
The remainder are still 'in progress' (still need more time to decide, or potentially inconclusive by the end of semester).

A key example was a Whatsapp message a student received from family reporting that 'paracetamol has been contaminated with deadly virus' - students determined that to be false!

2. The Week preceding and immediately after the CE Election Polls:
Students had been covering Hong Kong politics throughout the semester but a separate project was created to focus narrowly on rumours stemming in the final week up to the election and the week following. A total of 45 reports (taking into consideration some duplicates, otherwise there were 61 reports).

4.5% of the posts were determined to be False,

24.5% inconclusive

53% were verified

The remainder are 'in progress'.

Analysis: These results can be interpreted that social media messages sent via chat apps have a higher percent chance of being determined as 'False' content or rumours. The projects such as the political election polls tend to focus more on 'Verifying' that includes cross checking rumours from different angles. In one example, so-called 'Patriotic supporters' were rumoured to be paid $600 to rally in support of Chief Executive candidate Carrie Lam. Verification involved a number of steps including making contact and getting a reply from the Whatsapp number allegedly calling for people to sign on; attending and observing the rally in person and interviewing participants. Other examples in this project include verifying facts such as - will Carrie Lam be disqualified from taking office as Chief Executive because her husband has right of abode in Europe? The review from the department of justice determined that no, this does not affect her. Students had to contact the Department of Justice and follow responses from the Electoral Commission to determine this to be a false claim. However, speculation on the internet, particularly in the form of blogs, did not allow for such a process to unfold.

3. South Korea – including the South Korean Presidential Scandal:

The analysis is similar to the Hong Kong politics, in that there was a combination of 'fact checking' and observation.

Out of a total of 20 posts, 15% of rumours were False; 20% were verified and the remainder are in progress. Examples include rumours that the former President Park is abandoning her dogs at the palace - the video in the rumour was found to be from six years ago! Students also fact-checked a rumour that China had banned all travel to South Korea (also False as a travel warning statement was taken out of context).

In the Verified cases, the students' fact-checking often included more cross checking and transparency than in the original posts.

4. Wildcard:

Results: 162 posts in total

False= 12%

Verified=40%

In progress = 25%

Unfinished = the remainder, as most students left this project to focus on the elections. Some interesting examples include a rumour that an elderly woman in Hong Kong said she was glad it was young people that were hurt in an accident caused by a faulty escalator in a Hong Kong shopping mall. But when a Cyber News Verification Lab student listened and interpreted the video clip (in Cantonese), the woman's words had been misconstrued, and she meant normally there would be more elderly people present at the mall, however there weren't as many as usual at the time of the accident which was fortunate.

Other rumours in this category that were determined to be false include 'the Burmese President resigned', 'Mr Bean is Dead' and 'Microwaves can spy on your house'.

Results from the Reflective Case study

These results focus on the 88 students participating in the JMSC course 'Principles of the News and Media' in semester 2, 2017.

As explained above, students were given a case study in the final lecture of the course, and invited to comment in two columns. The 'left' side was to be a reflection on what they would have done before completing the course, and the 'right' side was to be a reflection on all the verification steps they would take and news literacy considerations they would have, as applicable to the case study. The instructor carried out a content analysis of the students' answers against the Verification Measurement Scale to assess their responses. The measurement scale first distilled into 'steps' (according to the 'Verification Rating Methods' above) the actions the students would take to verify. Students were told be specific as 'more words' did not necessarily mean 'more meaningful steps'. Those steps were graded or 'rated' on a scale of 0-3 (with '2' being applicable to a level the instructor considers the general public should be capable of, and '3' showing signs of advanced verification and news literacy knowledge).

Results from the reflections on 'before' taking the course found that 48% of students would conduct no verification or news literacy steps at all. Of that 48%, 60% of the students then admitted they would have also shared the post – that represents about 29% of the total class

sharing on social media without verification. Of the remainder who would verify, they listed on average 1.2 verification steps. The whole class scored an average of 0.7 in verification quality of what they would have done before studying the course.

Results on the 'after' or 'right hand' side, considered what the students would now know to do when faced with the case study in real life. Not surprisingly, 100% of the class did some form of verification work. The average number of steps taken were five. And finally, the average quality of those steps by the class equaled 2.7 – nearing an advanced verification level.

Student comments on the case study were all positive towards the course. Many students noted that previously they would look to see if any of their friends had 'liked' or shared the post, and that would greatly influence the likelihood of them also sharing or liking the post. Students also commented that now they feel a stronger responsibility to not only consider verifying and debunking, but to also alert their friends on social media to any 'suspect' material.

Conclusion

Initial findings from the exercises belonging to the Cyber News Verification Lab inserted into foundation news journalism classes, has led to a significant increase in the quality of verification techniques and critical thinking actions by students. Student reflections clearly show a change in attitude and realization of the need for critical thinking and verification training. The exercises provided real life, real time experiences for the students to fact check and debunk. The Principle Instructor noted to students that they are not necessarily expected to carry out these verification steps on each post they see in social media, but having experienced this course they have an awareness of the need to think critically and wait before 'sending' or sharing.

The paper also outlined current developments towards a news literacy verification rating scale – that arose from measures created by the instructor to assess student outcomes from the experiential project. The measurement scale will be further developed against independent coding from the coursework and written into the author's PhD research on the same topic.

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APPENDIX

Appendix A 'VIA'.

Source: Center for News Literacy, SUNY. Available from:
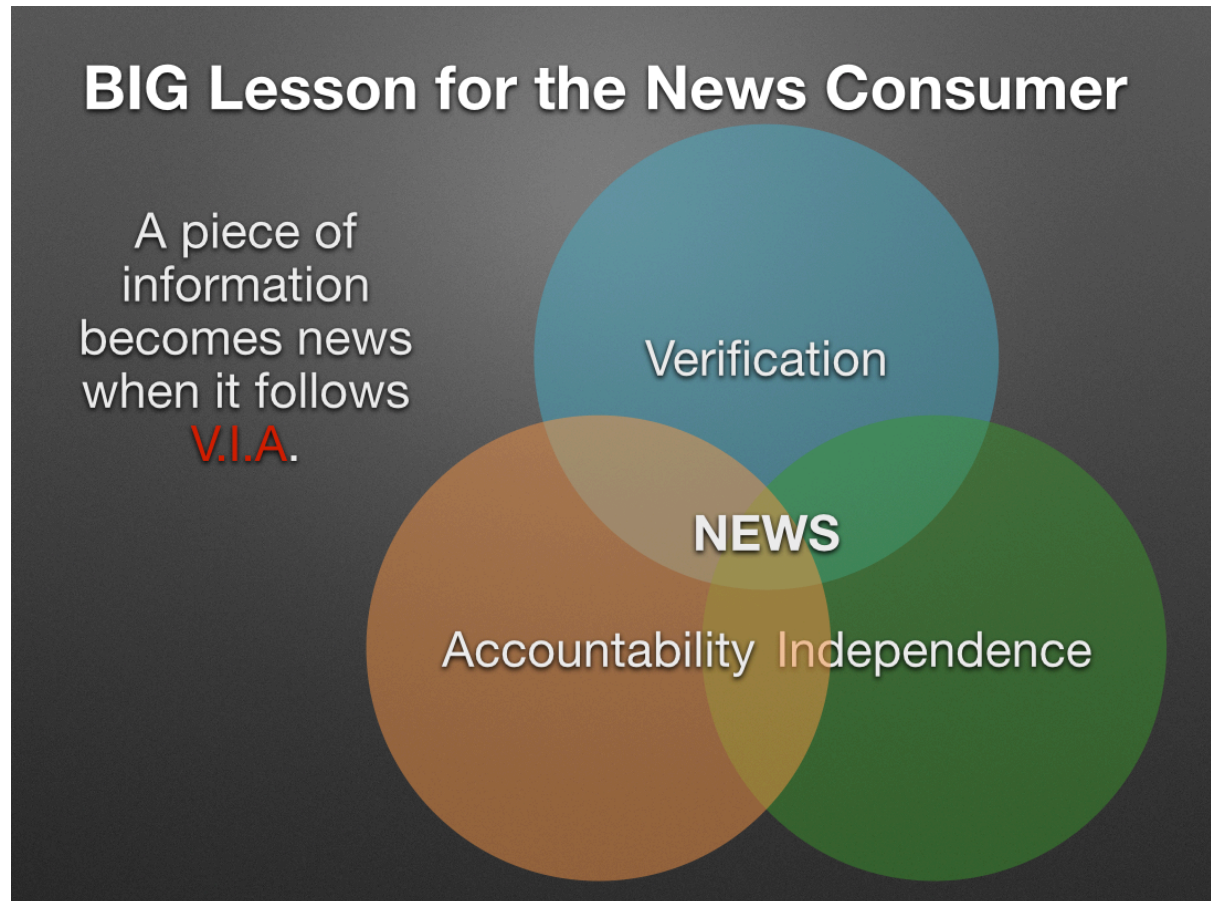
Appendix B 'News Neighbourhoods'

Source: Center for News Literacy, SUNY. Available from:

	JOURNALISM	ENTERTAINMENT	PUBLICITY	PROPAGANDA	RAW INFORMATION
Goal	To Inform	To Amuse	To Promote	To Build Mass Support	To Bypass
Method	Verification Independence Accountability	Storytelling, performance, visually, music	Public Relations Activities	One-Sided Accounts or manipulation	Social Networks
Practioners	Reporters, Videographers, Editors	Actors, Musicians, Producers	Publicists, Gov't Spokespersons	Political Operatives	Anyone with Internet
Outcome	Empowers Citizens through Education	Increased Sales	Heightened awareness	Group gains power	Outlet for self-expression

Appendix B 'News Neighbourhoods'

Appendix C 'IMVA/IN'

Introducing IMVAIN

For the purposes of this course, we use the acronym IMVA/IN to methodically evaluate sources who show up in news stories.

I:

Independent sources are better than self-interested sources

M:

Multiple sources are better than single sources

V:

Sources who **Verify** with evidence are better than sources who assert

A / I:

Authoritative / **Informed** sources are better than uninformed sources

N:

 Named sources are better than unnamed sources

Appendix D 'Universal News Drivers'.

Source: SUNY Available from:

Importance

- Stories such as those on long standing wars or international outbreaks of disease are deemed important for the public to know as it could have direct implications on their lives right at that point in time.

Prominence

- A public figure of some sort is involved. That public figure could be a politician, or an entertainer. The fact that many know who this person it makes news about them something that draws the audience in.

Human interest

- A unique or universal experience explores the human condition. These are usually stories of the everyday man/woman who is caught up in a situation that most of the audience can relate or empathize with.

Conflict

- Clashes of people, institutions or ideas. Just like we mentioned with wars in the "importance" driver, conflicts between political parties are constantly in the news.

Change

- For good or ill, the world has changed. This is denoted by the fact that a belief, a law, or scientific discovery has changed the "face" of the nation. The debate over Same Sex Marriage has been the most prominent demonstration of "change" in the news.

- # Proximity
  - NIMBY: News in My Back Yard -- News that happens in an area near the audience. We usually think about it as local news.

- # Timeliness
  - Anniversaries or holidays or deadlines, the calendar is the crucial context of these stories. Remember the time you saw that story about Santa Claus delivering gifts to kids in the hospital? You saw that in December, not July (usually...).

- # Magnitude
  - Numbers are the essence of this story. We've heard that this was the coldest winter on record -- or was it? How did it compare to previous winters? These kinds of stories deal in numbers.

- # Relevance
  - A story with wide impact. In this case, we think about the audience. If you're talking to a college students, word that interest rates on new college loans are going up may be on the front page, since it will impact many of them.

- # Unusualness
  - Peculiarity– news that alerts and diverts. We use the example that "dog bites man" is usual, but man bites dog is unusual, and it becomes the story.