In the Interest of Science Journalism ….. *a personal essay.*

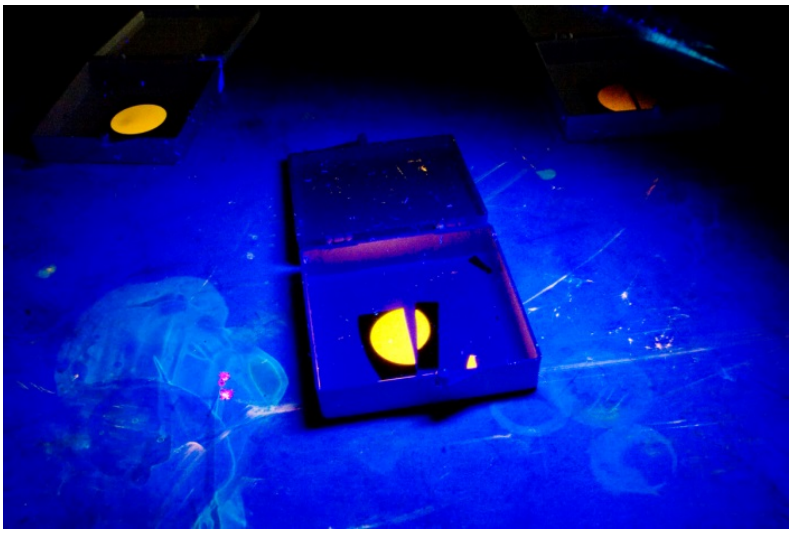
Abstract: Science communication is fertile ground for scholarly study and innovative journalism. Prior to solidifying my decision to commit to a master's degree in journalism, I planned to pursue an interdisciplinary master's program where I could combine journalism, information science, and new media studies into one degree. These concepts are still at the root of my plans, though perhaps in increasingly abstract permutations, ballooning with the addition of new ideas as I collect them. The following narrates the development of those expanding ideas that have led me to pursue science in my journalism degree.

(Photo: Amelia Jaycen)

Beginning in 2007, I became incredibly excited about new media, a term that I would only fully understand much later. Media-as-art and multi-media journalism became synonymous in my practices as I trained in journalism and fine art photography. I began to unleash creativity in my journalistic practices, and weave a variety of elements together, drawing from disparate influences. Multi-media signified to me a fascinating modern reality: the backpack journalist gathering material of assorted kinds at once, without the valuable support or limiting restraint of working as part of a team on a story—a paradoxical but exciting arrangement. Carrying a kit with audio, video, and photography gear, as well as the traditional reporter's notebook, astute, questioning mind, and a passion for getting to the bottom of whatever story may present itself was an activity that set me afire with renewed passion, reminding me of why I loved this game so much as a naïve, enthusiastic teenager.

The first project on which I chose to test this skill set was a UNT chemist who created a compound that offered promising results for a team of scientists trying to solve "the incandescent

lamp problem," as they called it. I immersed in their studies and experiments, documenting interchangeably with photographs, audio, and impromptu questions at a series of interviews with various researchers who each performed different parts of this journey toward successful scientific innovation. The process of documenting their work became like a fast-paced puzzle with many layers of components. The experience was a fascinating whirlwind, and it was my first introduction to many of the basic challenges of communicating—as well as understanding—science. I was determined to work until the story shaped into a multi-media piece that conveyed not only the inherent technical information but also the broader impacts of my sources' work on society, in a format and on a platform that could reach non-scientists.



(Photo: Amelia Jaycen)

The fire set that fateful week in 2009 has never extinguished. On the most basic level, this is the purpose of science communication: burning in me as in every human being is the desire to understand the world around me to a depth that suits my curiosity and my needs. Yet at its most grave, science communication is a matter of finding, crafting, and bestowing information as it is passed through various filters and players in society in order to shape attitudes and educate the public as they make decisions and form policy that guides human action, and therefore the course of history. I believe science communication is more than worthwhile; it is incredibly important to society and offers the fulfillment of a major goal of journalism: to provide information that may otherwise escape the public. I have decided to dedicate my career to its study and practice.

Using the tools at my disposal and skills learned through advanced study, I plan to pursue a specialization in environment, engineering, science, and technology journalism, with a focus on community engagement and public education. Interdisciplinary collaboration is a key practice in

science and engineering research and development, and highly specialized researchers form effective research groups to tackle specific problems belonging more to society as a whole than to any one specialized field. The greater good is augmented by the cooperation of distinct parts; together they form new directions and birth innovative ideas that more effectively address human needs and problems than any one researcher could hope to do alone.

In 1997 the National Science Foundation changed its criteria for grant proposals, adding that researchers must discuss the "Broader Impacts" of their work, also known as the dreaded Criterion 2 to researchers struggling to implement this consideration. As a result of the new criteria, researchers have been required to consider not only the intellectual merit of their work, or its value within specialized scientific circles, but also how well their proposed projects and the associated activities will benefit society, involve the community, educate the public, serve underrepresented groups, and promote partnerships. It is fascinating to observe how this criterion has affected the course of research and development activities, as well as to consider its questions as they can be applied to journalism where it meets science communication. Scholarly studies of the broader impacts of Criterion 2 itself and the workflow I have witnessed in the collaborative research circles mentioned above have drastically affected the way I think about my own craft. I am interested more than ever in systems studies as a basis for understanding journalism. A simple example is found in the following diagram created by Sven Rasegard in his book, *Man and Science, a Web of Systems and Social Conventions* (2002). Here Rasegard illustrates the path of scientific discourse, including term-assimilation and publishing, as it is created and moves through different circles in society within its lifespan.

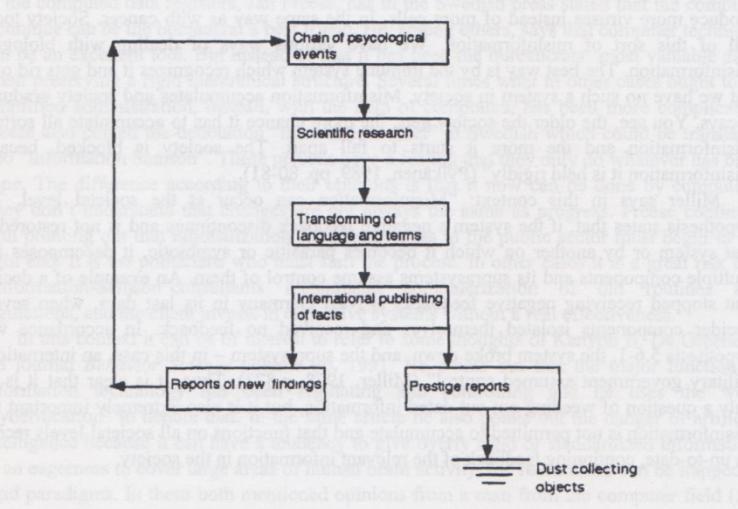
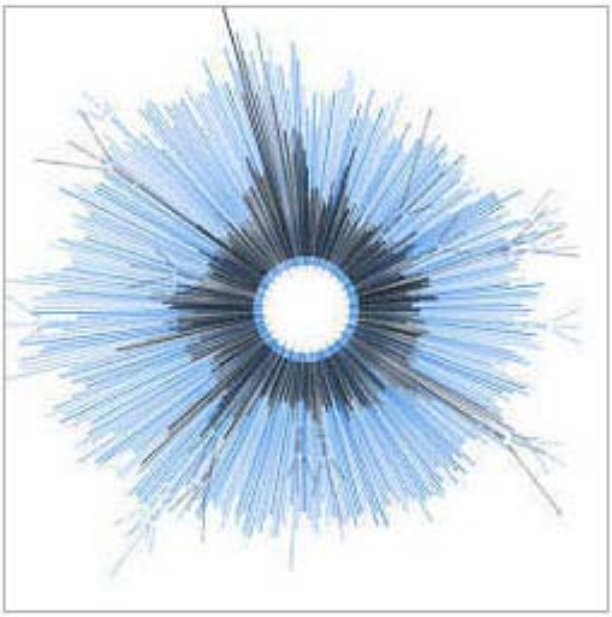


Figure 11. Main steps in a term-assimilation and publishing process (Rasegård, 1999 b).

There are several interesting parts of this cycle where journalism is and can be further involved, and fruitful discussions could ensue in a study of these interrelated systems (along with a multitude of other, more elaborate systems-based charts developed by Rasegard

and others.) However, here inclusion of this drawing makes a poignant joke, as perhaps was intended originally, for at the bottom it shows the fate of prestige reports that fail to induce a new cycle of discovery, confined to specialized circles by technical language and lack of vision: they become just a pile of "dust collecting objects." Like scientific discourse, journalistic communication lacking innovative vision risks the same fate.

While specialization is valuable, and many traditional journalistic practices should be conserved, journalism studies often suffer for lack of collaboration and formation of effective research groups with influences outside journalism. I believe there is potential for incredibly potent collaboration between journalism and disciplines such as sociology, anthropology, public administration, language and cultural studies, philosophy, new media art, graphic design, information technology, systems studies, library and information sciences, design research, rhetoric studies, law, and policy. These disciplines form a web of interconnected concepts that touch on journalistic interests and form a vast, fertile field for potential study. A variety of sub-disciplines also converge within journalism itself: hard news, investigative reporting, narrative writing, literary non-fiction, multi-media, and information graphics, for example, are all tools that can be applied to specialties like sports, business, music, art, advertising, criticism, and public relations.



Visualization of the frequency of the words "hope" (blue) and "crisis" (graphite) published in The New York Times, 1981–2010.

Credit: Jer Thorp

Information in modern, technological society takes on a new form, and much of it is stored as data: the subjective and real quantified into datasets that can be objectively measured. In a current example, the information gathered by the National Security Administration, whether for the protection or abuse of American rights, is in the form of data, creating an overwhelming live database that is constantly gathered and organized. People from a variety of disciplines are enlisted to develop ways to access and manipulate it into usable forms. Extracting meaning from an

(Cohen, Hamilton, and Turner, 2011)

ever larger body of data is becoming central to journalism just as every other discipline and corner of modern life, and journalists must know how to tap into it, or translate it. Computational journalism provides great promise for addressing this need with a call for collaboration between journalists and computer scientists, and it is an area of extreme interest to me, as it should be for most journalists today.

My goal is to write for a science magazine or research and development institution holding in high regard the importance of communicating technical and scientific information to the lay public, drawing it out of its confines within specialized fields and the "ivory tower," where it is often relegated for lack of vision and cooperation. In this role, I would like to complete in-depth, investigative, and narrative non-fiction reporting including audio, video, photographs, graphics, and text components. If journalists consider documentation of "the failure of government regulation, unintended consequences of programs, and influence-peddling as core elements of their public-service mission" (Cohen, Hamilton, & Turner, 2011), then the realm of science—fraught with a combination of ethical debates, power struggles, and policy formation as well as immeasurable potential to change global society, to push humankind to heights yet unknown, and to provide advantages (or possibly harm) to every citizen on a personal, day-to-day basis—is a rich area of study. I plan to approach science communication through careful study of the canons of scientists, engineers, and other innovators as well as journalists, carefully considering the valuable body of historical knowledge as well as a fearless new vision fueled by modern schools of thought that are tackling this important matter.

I hope I have demonstrated a glimpse into the evolution of my thinking about science communication, journalism, and my future. There is both a respected body of knowledge and a transformative collection of new ideas convalescing in the communication of science, and both fascinate me endlessly, as does the spirit surrounding the Mayborn tribe and the potential for innovation at UNT. I could not be more proud to join the ranks of generations of students who have benefitted from the UNT graduate journalism program, and I am excited to find myself at the beginning of such a powerful journey with the Mayborn as a seasoned guide.

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