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As Predicted: Fact and Improbability in News Coverage of Astrology

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This study examines a recent eruption of news about astrology. For a theoretical lens, it uses contemporary research on how traditional news values might allow what some have labeled “mystical” ideas to maintain public acceptance in spite of scientific evidence against them. As a contrast to that approach, a different perspective by Neil Postman is provided, an approach that suggests the dominant media of our culture will have as much impact as will professional practice in determining the nature of our messages. In investigating a group of news stories that questioned the validity of key astrological principles, the current study finds reporting did not provide significant scientific basis for dismissal of the belief. The two theories for analyzing this case provide very different insights, however, especially regarding the extent to which journalists (and media) play a role in promoting empiricism and discouraging mysticism.

Keywords: astrology, astronomy, Neil Postman, religion news, science news

Introduction

In early 2011, a Minnesota college professor named Parke Kunkle made a statement that burst into the news and soon had many people questioning their faith. Kunkle did not raise suspicions about the authenticity of a sacred religious text. Neither did he suggest that some contemporary religious leader was a charlatan. Rather, in the context of a mundane interview about astronomy, he mentioned that a shift in earth’s position caused significant change in its relationship to certain well known constellations. More specifically, Kunkle said this astrophysical alteration called “precession,” well known to those who follow astronomy, should also be of interest to those with faith in *astrology*. As he explained, the dates printed on the daily horoscope for each zodiac sign are dead wrong. Signs such as Aquarius and Aries no longer correspond to actual relations between earth and their respective star clusters. And, added the scientist, if zodiac fans really wish to categorize constellations as they align with our sun at different points in the year, they should add a thirteenth to the commonly recognized twelve. That thirteenth is called “Ophiuchus.”

For reasons to be discussed later, Kunkle’s comments were widely shared in newspapers around the United States during the ensuing weeks. *The Wall Street Journal*, *USA Today* and *New York Times* all wrote stories about it. Some major national news publications ventured into the subject on more than one occasion.

Seemingly prescient of all this, an American scholar of mass media may have foreshadowed the kind of coverage Kunkle received. Shortly before the news cycle for the Ophiuchus story kicked into gear Edward Caudill published an article in *Journalism & Mass Communication Quarterly* that examined how mainstream news media discuss “anti-science.” Though Caudill’s specific topic was news reporting on “intelligent design,”¹ a theoretical alternative to Darwinist evolution, he suggested that certain cultural factors of contemporary journalism allow “anti-science” views to hold privileged positions in modern society. He claimed these views have gained from journalism’s confused orientation toward empiricism. Anti-Darwinism was Caudill’s main target. But, he noted, other beneficiaries of the confusion are “mysticism” and “astrology” (p. 86).

Interestingly, almost no previous research has been conducted in relation to media and astrology, a practice that is unusual in its tendency to blend the empiricism of astronomy with claims of supernatural power or purpose. Little is known about how reporters actually approach this subject when news values suggest it as a focus of reporting.

The following study steps into the gap of knowledge by investigating a recent flurry of news coverage related to this socio-religious experience. Taking Caudill’s discussion on the empirical nature of news coverage into account, the current investigation asks to what extent facts are key features in framing news about astrology. But, it also examines broader theoretical issues to understand why astrology might receive the coverage it does. While admitting

with Caudill that journalistic norms may account for much of what occurs when reporters write about mystical stargazers, it suggests that additional insights can be gained by examining the events within a theoretical framework proposed by Neil Postman.

Whereas Caudill claimed that certain cultural aspects of the journalistic profession might lead reporters to provide unwitting assent to astrologers, Postman offered a theory that places the focus elsewhere. The latter scholar argued that human professional practice is a manifestation of something bigger, the technologies through which communication is disseminated. How reporters speak of astrology might have as much to do with channels as it does the professional structures and decisions.

This study takes advantage of a recent burst of news stories about astrology in an attempt to understand the extent to which both Caudill and Postman's approaches are heuristic. It asks two basic questions. 1) What are the basic contours of news coverage about an "anti-science" like astrology? 2) To what extent does this coverage appear to be circumscribed by the professional practice of reporters, and to what extent is it seemingly constrained by the media through which such coverage is shared?

Astrology and the News

Like any belief system, astrology is multi-faceted and difficult to define. People who claim to believe in astrology often have different ideas as to what it is, and what it means to "believe" in something. Generally stated, astrology is:

...the interpretation and prognostication of events on earth, and of men's characters and dispositions, from the measurement and plotting of the movements and relative positions of the heavenly bodies, of the stars and planets, including among the latter the sun and moon. (Tester, 1987, p. 11)

For most modern followers of astrology, the "stars and planets" relate most directly with heavenly bodies that were many years ago envisioned as constellations. The zodiac system that most are familiar with today was developed in 5th century BCE Bablylon (Campion, 2009, pp. 81-82). Though the extent to which early astrologers believed stars controlled individual lives varied, most early astrology had strong religious connections. And, those connections persisted throughout history. As Whitfield (2001, p. 8) states, "having begun as a pagan science, it always contained a strongly religious element." More importantly, astrology has demonstrated tremendous flexibility, as it consistently "proved capable of being harmonized" (p. 8) with the traditional religions from the culture in which it adapted. This was certainly the case in medieval Christian Europe, where astrology was introduced to the learned community largely due to the fact that a key aspect of their scholarship was Latin, and many Latin texts were pagan texts revealing Greece and Rome's attachment to star gazing (Tester, 1987). Thus, though much Christian teaching was dogmatically opposed to the practice of looking to the heavens for guidance, the broader culture quickly adopted it. Later, Reformation leaders such as Luther and Calvin spoke against astrology, but were not able to abolish it (Whitfield, 2001).

In the 20th century, astrology quietly became a mainstream media phenomenon when the *Sunday Express* published an ad hoc horoscope for Britain's infant Princess Margaret in the 1930s (Campion, 2008). Response to the piece was overwhelmingly favorable, and the paper decided to hire its author, astrology lecturer R.H. Naylor, to provide periodic horoscopes. Given this background, one is not surprised that in the 1980s Leo Bogart (1989) reported that over 80% of daily newspapers in the United States had a horoscope column. And, in the 21st century, about a quarter of Americans believe the stars have some power in their lives (Pew Center, 2009). Even so, many citizens agree with Caudill that astrology is irrational, and unscientific. Some even believe it is dangerous. In the 1980s, a group called the Committee for Scientific Investigation of Claims of the Paranormal requested that newspapers and magazines place health warnings on their published horoscopes (Bok, Jerome and Kurtz, 1975). Scholars have demonstrated that those who reject such rational appeals and adhere to astrology substitute it for more traditional forms of religious practice (Wuthnow, 1976). And, for some, astrology overlaps with those practices. People who label themselves as Christians are only slightly less likely to read horoscopes than are members of the general population (Pew Center, 2009).

In spite of the continuing practice of astrology and its presence in the media, few mass communication scholars have studied it. Some of the best academic investigation into media and astrology has examined the historic development of horoscope columns in newspapers and magazines (Campion, 2008), the role of gender and class in the content and audience for those columns (Evans, 1996), or the relationship between state funded media and astrology as a form of religious communication (Kuffert, 2010). Though valuable, all these studies scrutinized presentation of astrology in the media by its proponents, not the way journalists—as presumably objective cultural observers of social practice—write about the belief system. In other words, what has not been addressed is the general tone that is provided when traditional journalistic organizations cover astrology as part of their regular news cycle. That is the overall purpose of the following investigation.

Journalistic Facticity and Persistence of Anti-Science

Edward Caudill proposed a theoretical perspective for explaining how astrology might be reported by the press. That perspective largely focused on journalism's cultural and professional constraints. Borrowing from Dicken-Garcia (1989), he viewed the professional news room as having sprung from the nineteenth century, a period when “the press developed standards that held ‘fact’ as the measure of quality” (Caudill, 2010, p. 85). Some of this is a reflection of the modern newspaper's time of birth. As they became firmly established, empirical science was making significant strides and technological advancements were meeting public needs. There is little surprise, then, that the press became “an empiricist institution” (p. 86).

Along with this, though, Caudill followed the work of Tuchman (1978) and Gans (1979) to demonstrate several important principles. News work is routinized to facilitate the daily tasks that journalists must do on schedule. And yet, the product of that labor still must appeal to “enduring cultural values” (Caudill, 2010, p. 87) in order to prevent alienation of audiences. These two factors typically lead to escalation of coverage in many instances, but also evince a natural tendency to respect a democratic ethos that includes “altruism” and “moderatism.” Finally, regarding science, stories must be condensed and simplified to further ensure that audiences are willing to pay attention.

Such a professional environment serves news organizations' functionality well, but might have unintended negative consequences. For Caudill, one of those consequences is that ideas which, on their face, should be rejected by an enlightened, empirically oriented populace continue to be embraced. In his 2010 analysis, the questionable idea he investigated was intelligent design, a perspective that is “faith based” and of “dubious value” (p. 96). Yet, he argued, its adherents succeeded in getting their message across, seemingly because they were aware of the professional structures described in the previous paragraph. More abstractly, he worried that any “movement” could do so if it “recognizes, appeals to, and manipulates those standards” (p. 96).

Medium, not Messenger, as the Determiner of News

Caudill's concerns largely turned on questions of history and practice of the profession. That is, how have journalists developed the norms under which they operate and how might those norms sometimes lead to unintended consequences. His analysis, looked at within a simple model of communicative behavior, is focused on message creators.

In significant contrast to Caudill's approach, Neil Postman devoted less energy to analyzing the creators of messages and instead focused on the channels through which messages are sent. He consistently asked questions about the channels we use, that is, communication technologies. In two of his books, he argued that the technologies that a culture calls upon most often to share its vital information have powerful impact on the very nature of that information. Such an approach seems quite germane to discussion of how “anti-science” viewpoints might be discussed in a public forum.

In *Amusing Ourselves to Death* (1985), Postman laid out the framework for his perspective with a basic argument. Succinctly:

It is an argument that fixes its attention on the forms of human conversation, and postulates that how we are obliged to conduct such conversations will have the strongest possible influence on what ideas we can conveniently express. And what ideas are convenient to express inevitably become the important content of a culture. (p. 6)

More specifically, modern society has moved from being a typographic culture (one with great reverence for the printing press) in the 19th century to being a show business culture (one enamored of television) in the 20th. The former, print oriented culture, tended to reflect the importance of written words. To be part of such a culture meant “to uncover lies, confusions, and overgeneralizations, to detect abuses of logic and common sense” (Postman, 1985, p. 51). Such acts came to represent the culture as a whole. To reiterate, typographical ideas were, “convenient to express” in such a milieu.

Of course, on top of the printing press, western cultures added the telegraph, posing a significant challenge to the former technological milieu. Postman, consistent with his broader theory, suggested that the very nature of information changed once wires instantaneously sent it over great distances.

The telegraph made a three-pronged attack on typography's definition of discourse, introducing on a large scale irrelevance, impotence, and incoherence. These demons of discourse were aroused by the fact that telegraphy gave a form of legitimacy to the idea of context-free information; that is, to the idea that the value of information need not be tied to any function it might serve in social and political decision-making and action, but may attach merely to its novelty, interest, and curiosity. (p. 65)

This development paved the way for radio, and eventually television, a medium that combined earlier inventions' abilities to defy time and space with another key feature, visual focus. While telegraph and radio continued to rely heavily on words, television was part of what Postman labels—borrowing the term from Daniel Boorstin—the “graphics revolution” (p. 74). Once television became the dominant means of communication in America, all other institutions had to adapt to it. For Postman (1985), “how television stages the world becomes the model for how the world is properly to be staged” (p. 92). If one is to understand any features of our culture, then, one must understand how they mold themselves to the constraints of television to survive.

Moving beyond the medium of television, Postman investigated digital media in *Technopoly* (1993). The computer, with its amazing speed and efficiency for storing and distributing huge amounts of information, created a different kind of world altogether. The computer is the epitome of a phenomenon Postman saw as developing with the advent of other electronic technologies. People are so overwhelmed with information, a system he calls “information chaos” (p. 60), that the world has become completely “improbable.” By that, Postman meant people have no worldview in place for sorting and making sense of information; they will believe just about anything that is presented to them. And, Postman was hinting that as the Internet becomes the new model for how the American conversation is conducted such improbability is going to be increasingly evident.

Method of Study

Given the goal of understanding the way mainstream news organizations report about astrology, this study examined a collection of news stories that followed Parke Kunkle's comments about the zodiac. Analysis was limited to the twenty-five newspapers with the highest circulation in the United States. The search for stories was conducted by using three avenues: Lexisnexis; ProQuest's National Newspaper database; and individual newspaper web sites. As quotations from Kunkle's original interview were published on 9 January 2011, the researcher sought any stories available that were published from then until February 15 of the same year. In all, twenty-two stories were encountered.

Following the lead of Caudill (2010, p. 87), the study used a “thematic” analysis, with special interest given to how stories debated the nature of “fact.” Given that Caudill did not provide significant description of thematic analysis, the researcher relied on a process that Lindlof and Taylor (2002) refer to as categorization. In viewing and reviewing the data, the researcher's goal was to look for ways to conceptualize repeating units be they “constructs, concepts, themes” (p. 214) or other ways of making sense of the text of the stories. As noted below, this process was simplified by the fact that reporters tended to follow predictable patterns in reporting.

Analysis

What was astonishing about the stories that followed Parke Kunkle's "news" of changes in the zodiac was the consistency of framing by different papers. Given striking similarity in the structure and content of many of these stories, a handful of themes were easily discernable. Those themes were fourfold, specifically: Source of conflict; reaction; rebuttal; and, improbability in reaction and rebuttal.

Source of Conflict and News

A fascinating aspect of this story is that it all began with a simple interview of a relatively unknown college professor. Parke Kunkle is not an internationally celebrated research scientist. As the initial story (Ward, 2011) reported, Kunkle is a faculty member at Minneapolis Community and Technical College. He is also a member of the Minnesota Planetarium Society and quite knowledgeable about the science of astronomy. In the process of an interview with the *Minneapolis Star Tribune*, he mentioned the effect the earth's gravitational pull has had on alignment with constellations. Given that shift, according to Ward's description, "most horoscope readers who consider themselves Pisces are actually Aquarians" (Ward, 2011).

Kunkle's statement was the obvious source for all of the stories that were generated within the months of January and February analyzed here. And, newspapers were very open to admit this was the case. When they did, they tended to provide the basic background for the story (Kunkle's claim) and on some occasions provided a bit more scientific elaboration. Often, as will be discussed later, they admitted that the starting point of their news was not the traditional wire services from which papers typically hear about important news.

As Caudill (2010, p. 86) pointed out, science news tends to appeal to a lay audiences, so "oversimplification of scientific complexities" is the norm. That was certainly the case with the precession issue. News stories tended to provide one, at most two sentences, to explain the scientific principle at play. A sampling of the wording used shows this:

...because of the moon's gravitational pull on Earth, the alignment of the stars was pushed by about a month. (Wilson, 2011)

An astronomer says that a shift in the Earth's alignment has changed zodiac dates and added a 13th sign. (Los Angeles Times, 2011)

...the Earth's wobbly orbit means it's no longer aligned to the stars in the same way as when the signs of the zodiac were first conceived, about 5,000 years ago. (USA Today, 2011)

...over the past 3,000 years, the moon's gravitational pull had shifted the stars' alignment with Earth, and moved corresponding Zodiac signs back a month. (Dodes and Smith, 2011)

...the moon's gravitational pull has slowly moved the Earth in its axis, creating about a one-month bump in the stars' alignment... (Washington Post, 2011b)

...a short story about the precession of the Earth -- the incremental movement that "wobbles" the planet on its axis -- and how it changed the Earth's relation to the constellations. (Washington Post, 2011a)

Finally, one reporter tried to share the facts, but muddled the distinction between astronomy and astrology, writing "astronomers believe there is a 13th Zodiac sign called Ophiuchus, which falls between Scorpio and Sagittarius" (Chicago Tribune, 2011b). Of course, astronomers speak of constellations, not signs.

Though muddled, perhaps, "facts" were the basis for the story, and facts were used to initiate discussion. As will be discussed later, the extent to which *more* facts should have been provided is questionable. Worth noting here, though, is that while news writers attempted to give due diligence to science, they appear to have wished to move on to other things.

Those other things were often revealed in information journalists provided about the source of their story. Many admitted that they were informed of Kunkle's comments by the Internet, and, more specifically, social networking technologies. Along these lines, *The Boston Globe* noted:

Twitter and Facebook are credited with helping to spark the Egyptian and Tunisian revolutions. Around the same time last month, the social networking sites also demonstrated their impressive power to arouse the world over nothing. (MacRobert, 2011)

Most other papers were not quite so honest as to admit that the story was a product of the flammable nature of new media, but hinted that such was the source of their inspiration to dig deeper. They used terms such as "went viral on the internet" (Feldman, 2011) and "...as news shot around cyberspace..." (McKinley, 2011). Some admitted that much of the story's interest was its Facebook dimension. Others said that it was the "blogosphere" (Denley, 2011) that caught their attention or the amazing traffic on certain web sites such as PlanetWaves.net that cued them to the importance of the news (USA Today, 2011).

News impact

Regardless of the source of the news, most stories quickly turned to a related subject. How did people react to this shift in cosmology? Remarkably, only one reporter asked academics such as sociologists, historians, psychologists or theologians to talk about the implications of the re-alignment between science and belief.² Instead, journalists welcomed votaries of astrology to express their emotions about the topic. As one might expect, some responses were quite strong.

Many sources communicated significant anxiousness in regard to the news. Some shared a complete unwillingness to accept it. Representative of the responses were comments like, "A Libra fits my description and if it's wrong, I now have to accept that I'm not the person I read about" (Angel & Ortiz, 2011). Another respondent said, "Well ... what can I say? I like being a Capricorn... so I will ignore this!" (Dodes & Smith, 2011). Kunkle's announcement clearly led to soul searching. For some, personal identity was at stake. They questioned whether their inner being was reflective of a new reality imposed on them—as they saw it—by a realignment of the stars. One astrology fan said, "Now I'm a Sagittarius? I don't feel like a Sagittarius!" (USA Today, 2011). In the same story, another interviewee seemed more concerned with the possibility that this realignment would change her character than she was by the plausibility of such cosmically-instilled change. She stated, "Will my personality change?...Capricorns are diligent and regimented, and super-hard-working like me. Sagittarians are more laid back. This is all a little off-putting" (USA Today, 2011).

Of course, one difficulty readers faced in this situation was determining the exact tone of the comments shared. Several stories, for example, suggested that fans of astrology worried the tattoos on their bodies might not accurately reflect the solar/constellational relationship at the time of their birth (Angel and Ortiz, 2011; Mallozzi, 2011; USA Today, 2011). Were people who suggested this, and others mentioned above, dead serious, somewhat serious, or quite tongue in cheek? When *USA Today* reported that one person demanded, "Give me my sign back!" readers were left to wonder if the comment was really made in anger, or ludic jest. Similarly, *The Wall Street Journal* tied the change in horoscopes to the fashion profession where, according to the paper at least, astrology is taken quite seriously. Readers could only guess, then, if designer Isaac Mizrahi was serious when he said, "First global warming, now this!" (Dodes & Smith, 2011).

News Rebuttal

In another key theme registered by the overwhelming majority of these stories, little question was left as to the serious nature of what was said. Beyond interviewing fans of astrology, most newspapers interviewed persons considered experts in the field (astrology, not astronomy) or professional astrologers from the local community. A story in *USA Today* allowed four different astrologers to respond. A *New York Times* column quoted three. In these and other reports, though the responses showed various levels of certainty as to how they might answer science, comments were humorless. One thing these respondents shared was that none of this was news to them. Astrologers quoted in the *Los Angeles Times*, *New York Times*, and *Washington Post* all proclaimed that they were fully aware of the issue of precession and that the topic arises from time to time. They seemed surprised that journalists latched on to a story many said they had heard before. Regarding the final point, astrologer's memories served them better than

did those of the journalists who wrote about them. A controversy similar to the Kunkle case arose in 1995 and was covered by *The Boston Globe* (White, 1995) with a story structure that is eerily similar to the majority of reports examined here.

Even when claiming journalistic amnesia was sufficient excuse to ignore the story, some astrologers welcomed the opportunity to provide additional information and did so concisely. Most common among the responses was an explanation that there are numerous forms of astrology. More directly, there are “two distinct brands of astrology” commonly practiced in the world (Washington Post, 2011a). These are “sidereal” and “tropical.” Some of the reports studied here made reference to this distinction and tried to explain the differences between them. One respondent who was labeled as a “psychotherapist and astrologer” made the claim—a factual one—that astrology is the “mother of astronomy” (Feldman, 2011). She also intimated that astrology maintains strong elements of the scientific method and said it is not about sun signs but “the 10-planet system, the 12 signs and charts based on birth date, place and time” (Feldman, 2011). In an attempt to out-science the scientists, she added, “It’s about exactitude.” As with Kunkle’s explanation of precession and constellations, this got quite jumbled at times. Many of the astrologers, however, were adamant that science had not provided any basis for questioning the validity of their practice. One story, for example attributed to a weekly horoscope columnist the claim that his astrology does not deal with stars, but rather “the planets and solar system” (McKinley, 2011). A story in the *Wall Street Journal* summarized astrologer Linda Zlotnick’s rebuttal by saying, “The bottom line: Western Zodiac signs remain valid, they say.”

The Improbability of it All

Given facts provided by astronomers, and facts provided by astrologers, one might guess that readers were as confused *after* reading the stories as they were when they began. Indeed, interviewees and journalists also seemed to indicate that their heads were spinning as a result of the convergence of multiple facts and multiple opinions. This was a common theme of a number of stories, especially in their conclusions.

Exemplary of this, and reflective of the earlier comments about multiple forms of astrology, one newspaper wrote:

For those who treat astrology as a bit of fun, if you don't like your reading from the Western zodiac system, you can hop over to the East and see what Vedic astrology predicts. But for those who have grown to love their star signs, nothing has to change. That's good news for Kristin Smith, a 20-year-old Dowling College student who is sticking with her sign. (Angel and Ortiz, 2011)

Nonchalance of this type was common, and related to the notion that people eventually became bewildered by the task of proving anything. Bewilderment then gave way to avoidance of tough questions.

Quite possibly, the phenomenon in question shows that the public is developing an awareness of the ephemeral nature of digital “news.” One astrologer reflected that view in the following words:

This doesn't change your chart at all. I'm not about to use it, she said. Every few years a story like this comes out and scares the living daylights out of everyone, but it'll go away as quickly as it came. (USA Today, 2011)

A professional, who seemed to adapt his career to what he reads in his horoscope showed a similar insouciance (at least, in the end). As the *Wall Street Journal* reported about his beliefs and his work life:

I personally wouldn't act any different or make decisions differently than how I already do, said designer Peter Som, who said he heard about the shift but soon after heard it had been refuted. Life is already busy enough—who has time to second guess their own daily behavior? (Dodes & Smith, 2011)

Most notably, Peter Som’s daily routine is as busy as the media he consumes. Given this fast pace, he feels a certain intransigence or inertia. Moreover, there is the overwhelming conflicting information that he receives. Mizrahi, who was mentioned earlier, expressed similar feelings and suggested that the whole Kunkle story might be a “plot” to

discredit astrology. The reporter added, “With the exception of your horoscope, ‘you can’t believe everything you read’” (Dodes & Smith, 2011).

While Mizrahi’s comment might have been serious—and, if so, indicting of the news business—some reporters used the improbability of the world as a good excuse for a laugh, and a means to leave readers more at ease. Craig Wilson, writing in the *USA Today*, took a more light-hearted approach as the finale to his inquiry on the perils of science and stars. To quote him:

Shelly Ackerman, an astrologer and spokeswoman for American Federation of Astrologers, says she has been swamped with e-mail from worried clients whose signs would change under the new system. Whom to believe? I’m happy to report Ackerman says we shouldn’t be carried away by all this. She’s keeping her cool and says we should, too. Finally someone is talking sense here. Besides, what are guys going to use as their pickup line now? “I bet you used to be a Scorpio ...”? (Wilson, 2011)

Discussion

This study examined how a Minneapolis astronomer brought interesting questions about astrology to news writers’ attention and caused a short term upsurge in the popular belief system’s coverage by the news industry. The basic themes presented above suggest the story emerged from an unlikely source (and channel), that the initial shock believers had upon hearing the news was a key factor that drove the story, that firm adherents to the faith were allowed to rebut vital information, and that the result of the whole process was confusion and resignation. These findings suggest the need for further research, and also provide interesting fodder for discussion of two theoretical perspectives presented earlier.

Though space does not allow such, much more could be considered in regard to the similarities and differences in coverage of astrology and other religious beliefs. The introductory paragraphs to this article hinted that the initial elements to the pattern described here are visible in how science/religion/media interact in general. How is the coverage here similar or different from that which occurs when scientists make claims that conflict with beliefs that may have existed in a culture before science became a dominant epistemological approach? In the case of the Kunkle incident, journalists appear to have allowed astrologers to easily wiggle free of the difficult questions raised by the claims of an empirically-oriented scholar. To what extent do they allow believers of other spiritual claims to facilely avoid confronting what science may have to say about their fundamental tenets? Of course, there are broader theoretical issues to be discussed. To what extent is journalism’s apparent unwillingness to press the empirical evidence too firmly evidence that they—like many others—are concerned with the possibility that science can quickly become scientism. As newspapers and other popular media reach large, diverse audiences with diverse views, might it be wholly appropriate for them to not privilege one worldview over another? Addressing the variety of abstract issues related to this concrete event indicates the need for additional research.

Meanwhile, the current case does allow for some discussion of Caudill and Postman’s foresight into how media cover competing ideas. The themes that arose from the stories studied here suggest strong connections that are worthy of discussion. Specifically, they suggest both scholars were on target as to some of the difficulties journalists face in relating scientific and unscientific practices. At the same time, all of the evidence provided above suggests that Caudill and Postman are really looking at different phenomena through different lenses. Both areas of questioning are important; both lenses are important. Questions as to where researchers should spend more time investigating these matters are also important.

Caudill’s insistence that reporters may not be thinking critically enough about their professional practice seems quite on target with the experiences that are studied here. His concern that the idea of “balance” might be a source of difficulty when applied to science news is worth further consideration. Regarding news of astrology, there are legitimate questions as to whether providing an opportunity for astrologers to speak each time astronomers do is a valuable professional practice. More importantly for the specifics of this study, news of Kunkle’s comments about celestial realignment demonstrated that journalists actually allowed many more astrologers to speak than they did astronomers.³

Here, Caudill's terminology provides an accurate description of the current scenario. Major newspapers that reported about astrology in 2011 did so in a way that clearly created what Caudill would see as a "forum for anti-science" (Caudill, 2010, p. 86). Journalists, in addition to quoting sources that skeptics of astrology would rather not hear, simplified scientific and historical fact to the point where little actual learning about the differences between the metaphysical speculation of astrology and the pure empiricism of astronomy, the academic discipline that, ironically, emerged from it. In almost all cases, they avoided direct questions as to the scientific validity of the former.⁴ The majority of writers simply failed to ask about the field's validity. In contrast, one writer brought the issue up, then avoided it. She claimed that news about the shift in signs was "so much hogwash," and followed that with, "Whether astrology is hogwash is an entirely different conversation" (Allday, 2011). Toward the end of the article she quoted a psychiatrist, but only to address why people believe, not whether they should. This is as close as journalists came to confronting the big issue. In their quest to be understandable, popular, and democratic, then, news reporters fell victim to their own values, even if they should be working to "venerate the fact," as Caudill (p. 96) described their quest.

Providing very different insights to this situation is Postman, who had fewer concerns about individual scientific facts than he did about the nature of facticity itself and how different media affect it. Thus, he was less interested in something so narrow as professional practice and more interested in the broader issue of what newspapers are forced to become in an age of digital media.

In *Technopoly*, Postman provided an analogy for his idea of the improbable world, one that is apropos here. The key image for the analogy is a deck of playing cards. Societies that existed before the advent of information chaos had clear structures for limiting information and making sense of the information that they did encounter. Limiting their "information" to what was useful for living their lives, what they did accept as more simplistic and made sense. Postman suggests that a pre-chaos culture is akin to a person who is presented with a deck of cards that has not been shuffled. Upon seeing an ascending sequence from the same suit (Ace of hearts, one of hearts, two of hearts), people can adequately guess the next card before seeing it. Conversely, information chaos is like a shuffled deck. The cards are too numerous and too random for observers to make sense of them. On that basis, the people seeing the cards give up any attempt to make sense of stimuli and, as a result of this epistemological uncertainty, accept whatever card dealt and is never surprised. No "fact" is improbable.

This general image of a society in information chaos, along with media that (because of the technological nature of television) are avenues for amusement, not exposition, paints for Postman an accurate picture of modern society. And, given that image, Postman would not be at all surprised by the events described above.

The one added twist here is the new feature of the internet. As Postman's books only gave a foreshadowing of that addition to the media environment, he did not provide clear insights in this area. Even so, his comments on the computer and its ability to quickly process information demonstrated that there are features here that merely increase exponentially the negative consequences of the telegraph. That earlier technological device created "context-free information," or, the idea that the "value of information need not be tied to any function it might serve in social and political decision-making and action" (Postman, 1993, p. 67-68). The telegraph, along with radio and television after it, created a world of information fragments. And, says Postman (1985, p. 8), "We attend to fragments of events from all over the world because we have multiple media whose forms are well suited to fragmented conversation." Certainly, there is no evidence this is changing in a positive way. In a media environment in which YouTube, Facebook and Twitter are the primary means of communication for millions of Americans, Postman would not be surprised that the most prestigious newspapers quickly print a story that is context free and has so little importance for political or economic decision making.

Neither would he be surprised that the reaction to the story was so fragmented and irrational. The new digital technologies described above have few features that attenuate television's tendency to quickly share visceral information and then move on to the next tidbit. Postman referred to this tendency as the "Peek-a-Boo world" (1985, p. 64) and it shows no indications of decline in the Internet age. Media that quickly present one image, and then shift to another limit our ability to engage in clear thinking on any subject. In *Amusing Ourselves to Death*, Postman contrasted this modern world with an earlier one based on written text.

To engage the written word means to follow a line of thought, which requires considerable powers of classifying, inference-making and reasoning. It means to uncover lies, confusions, and overgeneralizations, to detect abuses of logic and common sense. It also means to weigh ideas, to compare and contrast assertions, to connect one generalization to another. (p. 51)

And, to reiterate, such engagement slowly disappears once the dominant means of communicating in a particular culture shift from the printing press to the airwaves (or DSL). Newspapers, according to Postman, do not continue to act like newspapers in spite of the fact they are no longer the dominant medium; they slowly adapt to a culture that cannot understand logical conversation. Thus, Postman, would not be at all shocked that a prestigious daily would print the following text (mentioned earlier in this study):

For those who treat astrology as a bit of fun, if you don't like your reading from the Western zodiac system, you can hop over to the East and see what Vedic astrology predicts. But for those who have grown to love their star signs, nothing has to change. That's good news for Kristin Smith, a 20-year-old Dowling College student who is sticking with her sign. (Angel and Ortiz, 2011)

Postman's comments above suggest that the average western citizen from the 19th century would read those lines and be completely addled. Is there a logical relationship between the second sentence and the first? Is the author attempting to contrast two ways of approaching the zodiac change? Do those who "love their star signs" not "treat astrology as a bit of fun"? Are these two ways exclusive of each other? In the first option, does something *have* to change? Why is it that things need not change for those who love their star sign? Little wonder that most of the people interviewed for the stories above gave up trying to make sense of any of this.

Here is where Postman's emphasis clearly shifts from Caudill's. Caudill's focus seems to indicate that if newspapers limited their discussions of astrology to scientific fact, the populace would quickly lose faith in this form of mysticism and abandon it in favor of reason. Journalism's empiricism can serve the purpose of rationalizing society. For Postman, this ignores a bigger issue. Citizens today cannot engage in an intelligent conversation, but not for want of science and scientific data. Their affliction, information chaos, is largely a *result* of the unchecked path of science and technology. For Postman, the challenge is not lack of information; it is ubiquity (and speed) of information. With millions of bits of data—what "news" becomes, in a digital world—incessantly bombarding them from every direction, most people cannot begin to make sense of any of it. Eventually, they just give up and believe everything they hear, even if much of it is logically absurd.

Caudill and Postman provide different insights into the practice of reporting about astrology, but for different reasons and with different visions of the solution to the problem. The former paints a picture of a profession that needs to come to better grips with its empirical task. The solutions—less focus on balance and appealing to audiences, more focus on scientific fact—are pretty obvious. The latter paints a bigger picture of the problem and is less promising in regard to solutions. The problem modern people face cannot be solved by science itself, a system that is very handy for providing answers to some earthly plights, but gives no instruction on how to develop meaning and values. Put bluntly, science provides no way of dealing with the glut of facts that come with it. Postman, referring again to the improbable world, wrote:

I mean that the world we live in is very nearly incomprehensible to most of us. There is almost no fact, whether actual or imagined, that will surprise us for very long, since we have no comprehensive and consistent picture of the world that would make the fact appear as an unacceptable contradiction. We believe because there is no reason not to believe. (p. 58)

In sum, then, Caudill is suggesting that if reporters simply reported the facts and avoided giving too much attention to those mystical astrologers, astrology's dubious worldview would most likely disappear in an age of enlightenment. Postman suggests that with the technological world of McNews, television and Internet, the very system is going to automatically generate and share information about a mystical practice with a large number of adherents. Moreover, since Western cultures, on the whole, have abandoned any means other than science to make sense of massive amounts of information generated by technology, haphazard acceptance of incredible fact is the norm. Thus, researchers should not be surprised when newspaper readers' most common response could easily be replaced with one that Postman said was the stock retort to any claim made in the technological world, "Really? Is

that possible?” (Postman, 1993, p. 57). Indeed, according to Postman, before those readers have a moment to answer their own question, another tweet will probably change the subject and provide them with another improbable “fact.”

Notes

¹ Caudill never defines “intelligent design.” Michael Ruse, a philosopher and ID critic, teamed up with William Dembski, a mathematician and ID proponent, to write the following: “Intelligent design is the hypothesis that in order to explain life it is necessary to suppose the action of an unevolved intelligence” (Dembski & Ruse, 2004, p. 3).

² That reporter was Allday (2011) who quoted a child psychiatrist and a professor of clinical psychology. As noted later, however, she really did not push either to question the overriding claims of astrology.

³ In a postmodern world, the notion of balance can move two directions, though. Astrologers might complain that astronomers are sometimes invited to speak to the former’s comments, even though the latter have little knowledge of the field of astrology. An insightful anonymous reviewer of the current work pointed this out.

⁴ One writer (McCartney, 2011), wrote a column after much of the dust settled from this instance. Therein, he directly addressed the question of whether or not astrology is, in itself, worthy of serious discussion.

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