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Weighty Implications for Obesity Research: A Rhetorical Analysis

In the United States, losing weight is a national obsession. Throughout our daily lives, we are inundated with advertisements proclaiming quick and easy weight loss. Yet according to statistics compiled by the National Institute of Health, up to one third of Americans are overweight despite the \$30 billion they spend each year in attempts to slim down. And more than just vanity is at stake. Obesity is the cause of several serious health problems, ranging from diabetes to heart disease. Hence, the identification of a gene, whose mutation is believed to cause obesity in both humans and mice, has sparked more than just a scientific interest. Two articles have recently been written detailing the exciting discovery of this so-called obesity gene: Jean Seligmann's "A Gene That Says 'No More'" from *Newsweek* (Dec. 12, 1994) and Klaus Lindpaintner's "Finding an Obesity Gene: A Tale of Mice and Men" in *The New England Journal of Medicine* (March 9, 1995). Although these two articles address the same issue, they are written for different audiences and, therefore, many rhetorical disparities arise. Specifically, the articles differ in terms of their points of emphasis, their attitude towards the research, and their presentation of technical detail. The overall result of these rhetorical differences is that Seligmann's article is a far more sensationalized account of the obesity gene's weight controlling potential than Lindpaintner's biochemically based discussion of genetic research methods.

The rhetorical decisions made by the authors were based on their given periodical's target audience. *Newsweek* is a weekly periodical which caters to a broad audience of three million readers. Current events, covering nearly every imaginable scope, are served up in a concise and enticing manner. In order to capture the interest of their vast audience on such a wide variety of topics, the focus of *Newsweek* articles is inevitably given a human-interest slant. For example, Seligmann's article is found in *Newsweek*'s subsection of "Science", which is appropriately contained within the larger category of "Society". *The New England Journal of Medicine* services a much smaller and more uniform audience of 168,000. The journal presents original articles and interpretive reviews of a variety of developments in major aspects of medicine, its science, its art and practice, and its position in today's society (Ulrich's 4507). And judging by the advertisements, ranging from prescription medicines to medical equipment, it is obvious that the journal is written by doctors, for doctors and other related scientific professions. Consequently, it is presumable that the rhetoric of *The New England Journal of Medicine* is more likely to contain a stronger scientific focus than that of *Newsweek*.

The clearest manifestation of these audience differences is reflected in the emphasis of each article. While Seligmann clearly emphasizes the importance of the obesity gene discovery in terms of its potential to materialize into a weight loss drug, Lindpaintner focuses on the importance of this discovery as a validation of the use of animal models in disease research. These dissimilar emphases are most apparent in the introduction and conclusion of each article. Lindpaintner begins his article by discussing the definition of a complex disease and explains the challenges of finding the genes involved. Seligmann's introduction, on the other hand, strikes right at the heart of America's biggest nemesis—weight gain. The authors aim their articles in such different directions because of the

different audiences each is attempting to draw in. Seligmann knows that very few Americans could resist reading an article that promises a potentially life-changing news [for those who are waistband-challenged], just as Lindpaintner knows that his audience would be enticed by an article focusing on new fields of research. The conclusions offer further support of the authors' rhetorical choices. Once again, Lindpaintner downplays any immediate benefits the gene may offer to obese people and concentrates instead on the contributions that animal models may provide in the search for genes involved with other types of complex diseases. In contrast, Seligmann emphasizes the pharmaceutical implications this gene may hold for treatment of obesity, and even suggests that this type of genetic research is only as useful as the results it can produce to profit mankind. Therefore, it is evident that each author has made a conscious decision to emphasize the aspects of this discovery thought to be the most appealing to his target audience.

These articles also differ in the author's attitude toward the research process involved in the discovery of the obesity gene. While Lindpaintner proclaimed the discovery to be the result of an elegant study, which will be widely cited as a model [in future investigations], Seligmann was a little less liberal with his praise. In his *Newsweek* article, Seligmann refers to the discovery as the "gene-of-the-week" and states, incorrectly and without support, that the scientists have rushed to call this an "obesity gene," [when its only action appears to be in regulating satiety]. This drastic difference in rhetorical styles is probably the result of two factors. First, Lindpaintner's piece cites only one reference, that of the original research article, but Seligmann's article contains quotes from various experts. Therefore, Lindpaintner's article is an interpretation of the original research paper directed at informing his readers of advances in genetic research, while Seligmann's article offers a brief account of research in the trendy area of weight-control, sensationalized with quotes from multiple experts as a ploy to capture his audience's attention. Secondly, although Lindpaintner's audience contains other researchers who likely would be insulted by Seligmann's irreverent statements, *Newsweek* is written for an audience filled with generations of science-skeptics who likely applaud his suspicious sentiments. Consequently, the given audiences are either instilled with a sense of awe or given a dose of skepticism, based on which emotion the author believes he can better sell to his readers.

Finally, the style in which each author presents the technical details of the obesity gene differs for each article. Both authors use a pictorial representation of the gene's function, but Lindpaintner's figure is unquestionably more detailed and scientifically oriented than Seligmann's fat-rat cartoon. Each is likewise tainted with the author's underlying message. While Lindpaintner uses his figure to illustrate the cellular mechanism of the gene, Seligmann's figure relays only the external results of the mutated gene. This decision was made based on the aspects of the discovery the authors felt their audience would be most interested in. While the scientifically-educated audience of *The New England Journal of Medicine* would probably be interested in a more in-depth model depicting the sites of expression and reception, the more general audience of *Newsweek* would most likely rather see a figure displaying the weight-regulating implications of the mutated gene. Also, Lindpaintner spends a large portion of the body of his article discussing the intricate details of gene-isolation, yet Seligmann mentions the entire process in a sentence. In contrast, Seligmann's article is filled with details and quotes about how the gene acts as a messenger to affect body weight in mice and possibly humans, while Lindpaintner spends less than a paragraph discussing the weight regulation aspects of the gene and predicts that its effects will be "less spectacular in humans than in the mouse." The authors' choice of which aspects of the gene to cover in detail and which to remain

brief are once again the product of the authors' audience assessment. Seligmann most likely predicted that his audience would be bored and confused by an in-depth discussion on the gene's synthesis, but more interested, and therefore more apt to understand, the weight regulation aspects of the gene. Lindpaintner, however, was writing to an audience with biochemical background who could easily understand the cellular mechanisms of the gene, yet would probably be less enticed by a discussion on its possible pharmaceutical character until its effectiveness can be proven in humans. Therefore, because the authors had a strong understanding of their target audiences' preferences and background knowledge, they were able to present the same story while tailoring the technical data to suit their readers.

The discovery of the so-called obesity gene[®] has generated a powerful response from both the general public and the scientific community. However, due to the varying interests and educational backgrounds of these two populations, the same information must be presented using different rhetorical styles. Seligmann's *Newsweek* article and Lindpaintner's *New England Journal of Medicine* article both address the obesity gene, yet they differ in their points of emphasis, their attitude towards research, and their presentation of technical detail. While Seligmann attempts to generate interest from his diverse audience by harping on the weight-regulating potential of the gene, Lindpaintner relies on the innovative methods used by the researchers to draw in his small, scientifically oriented audience. Consequently, these two articles offer completely different perspectives on the implications of the obesity gene's discovery. Yet although they are different, they are both valid interpretations of the obesity gene, suitably tailored to satisfy the authors' target audience.

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