

Television Doctors: An Analysis of Physicians in Fictional and Non-Fictional Television Programs

Rebecca M. Chory-Assad and Ron Tamborini

Although fictional television traditionally has portrayed doctors positively, recent fictional programming appears to portray physicians in a less positive manner. It has also been suggested that these images may conflict with depictions of doctors found on non-fictional television. A content analysis conducted here indicates that television's physician portrayals are less positive than they were in 1992, contemporary genres differ in their physician depictions, and television's doctor portrayals do not differ according to sex or race.

One important topic often emphasized by television is that of physicians and health care. Early research on portrayals of medical doctors indicates that television presents physicians in a very positive manner (Gerbner, Gross, Morgan, & Signorielli, 1981; Gerbner, Morgan, & Signorielli, 1982; Kalisch & Kalisch, 1984). Pfau, Mullen, and Garrow (1995) suggest that more recent, fast-paced medical dramas (e.g., *ER* and *Chicago Hope*) focus more on negative physician characteristics and claim such negative portrayals of physicians and the relationship between viewing these programs and perceptions of physicians should be investigated. Pfau et al. (1995) call for an investigation of the possibility that these newer, more negative, portrayals of television doctors may lead to decreased public confidence and trust in physicians. The present study responds to this call by conducting an updated content analysis of prime-time fictional television. The present study also extends the work by Pfau et al. (1995) to investigate the portrayals of physicians not only on prime-time fictional television, but on other daytime and evening program genres including soap operas, talk shows, network news, and news magazines.

The health care environment of today is a marked departure from that of the

Rebecca M. Chory-Assad (Ph.D., Michigan State University, 2000) is an Assistant Professor in the Department of Communication Studies at West Virginia University. Her research focuses on entertainment television's portrayals of aggression, health issues, and occupations/industries and the effects of exposure to these images on communication and related beliefs and behaviors.

Ron Tamborini (Ph.D., Indiana University, 1982) is an Associate Professor in the Department of Communication at Michigan State University. His research interests focus on the psychology of media entertainment.

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post-World War II era in which health insurance proliferated, access to health care increased, and physicians' abilities to cure diseases were dramatically increasing due to pharmaceutical and technological advances. During this period, physicians were held in high esteem and television added to this prestige through its American Medical Association-approved doctor shows such as *Medic*, *Ben Casey*, *Dr. Kildare*, and *Marcus Welby, M.D.* (Holoweiko, 1998).

Today, there are controversies over financing and delivering health care and there are concerns about cost and medicine as a scarce resource (Turow, 1996). The current climate surrounding health care and physicians appears to be one of medical consumerism in which the physician-patient encounter is viewed as a business transaction. Patients are more demanding of their physicians and they no longer have complete faith in them (Holoweiko, 1998). The public now questions scientific and technical institutions, such as medicine, and is becoming more aware of the social and ethical implications of scientific practices (Nelkin, 1996). Although the current health care environment is laden with such concerns, current television programming does not appear to reflect this reality (Turow, 1996; Turow & Coe, 1985). Turow (1996) argues that medical scarcity is shown as irrelevant to doctors and physicians are shown to act independently of the medical establishment and their superiors in providing patient care.

Though television does not appear to be accurately reflecting the health care environment, it is playing a more prominent role in providing health information and shaping perceptions about health care. A recent survey by the National Health Council revealed that today more people turn to television as their primary source of medical/health information (40%) than turn to physicians (36%). Seventy-six percent of the respondents reported having taken the advice offered in a news story they heard or read. Overall, respondents cited television news magazines as the most credible source of health news (*Healthcare PR*, 1998). In particular, television has been reported to be people's primary source of information on specific medical techniques such as cardiopulmonary resuscitation (Schonwetter, Walker, Kramer, & Robinson, 1993).

The current atmosphere surrounding health care in the United States, television's seemingly inaccurate portrayals of health care and physicians, the public's increased dependence on television for health information, and television's influence on the health-related perceptions of this public (Nelkin, 1996) warrant examining the relationship between television viewing and perceptions of physicians. This relationship can be considered in terms of cultivation (Gerbner & Gross, 1976; Gerbner, Gross, Morgan, & Signorielli, 1994) and related work on media exposure and social perceptions. The cultivation perspective purports that exposure to television's recurrent patterns of images cultivates basic assumptions and common conceptions of societal facts, norms, and values in viewers and that such exposure influences viewers' conceptions of reality, standards of judgment, attitudes, thoughts, and behavior. Therefore, exposure to television's portrayals of physicians would be

expected to shape viewers' perceptions and expectations about doctors and the health care system.

These television-influenced perceptions have several real-life health implications for viewers. When television portrays physicians in an overwhelmingly positive manner, which historically it has, individuals are expected to hold positive perceptions of physicians. One problem associated with such perceptions is that society's conception of physicians as "omnipotent and priestlike" and television's corresponding (positive) images may lead individuals to hold unrealistic expectations for their physicians (Malmsheimer, 1988, pp. 1-5). These expectations may result in disappointment, frustration, and eventually, malpractice suits. On the other hand, the need for the physician-patient relationship to overcome fear and uncertainty (Malmsheimer, 1988) may be well served by any source enhancing the positive image of medical doctors. It is possible, for example, that television's idealized physician images help calm patients who view them and provide examples for physicians to follow. Given that individuals experience anxiety, particularly communication-related anxiety, when interacting with their physicians (Booth-Butterfield, Chory, & Beynon, 1997), both patients and physicians may benefit from television's historically positive portrayals.

The relationship between viewing fictional television or non-fictional television genres and perceptions of physicians is important also because of the potential negative effects which may occur when viewers' personal experiences and television's traditionally constructive images of physicians conflict. Turow (1996) noted that while no research has investigated this issue, it is plausible that when personal experiences provide viewers with a different reality than the optimistic one they see on conventional medical dramas, these contradictory messages may lead them to become embittered and experience frustration. They may also find it more difficult to understand current health care controversies. In fact, 68% of respondents in the National Health Council's survey reported that health news is often difficult to understand and contradictory (*Healthcare PR*, 1998). Finally, Turow (1996) suggests that these people with television-influenced positive expectations of physicians may expect their own physicians to have more power over health care delivery than they actually possess, resulting in individuals blaming their physicians for decisions made and enforced by others.

Examining the personal characteristics of television physicians, such as their competence (Fitzpatrick, 1990; Ware, Snyder, Wright, & Davies, 1983), friendliness, concern for patients (Bertakis, Roter, & Putnam, 1991; Buller & Buller, 1987; Fitzpatrick, 1990; Tucker, 1998; Ware et al., 1983), warmth, attractiveness (La-Crosse, 1975; Larsen & Smith, 1981), and power (Bertakis et al., 1991; Buller & Buller, 1987), is also important because these physician dimensions are related to patient satisfaction. In turn, patient satisfaction has been shown to be associated with various topics of interest to the medical community: the medical consumerism trend (Holoweiko, 1998) mentioned earlier (McIver, 1991), health care costs (Levy, 1978), and patient compliance with medical advice (Hsieh & Kagle, 1991). If contemporary

television programming represents physicians negatively in terms of these personal attributes, then exposure to such depictions may influence viewers to perceive real life doctors in similar ways, potentially leading to dissatisfaction with physician care. Patient dissatisfaction resulting from exposure to television's negative physician images may then give rise to significant financial and physical health outcomes, such as not following medical advice, not seeking needed medical attention, and not paying medical bills.

Television's Portrayal of Physicians

From the 1950s through the 1980s, research on fictional television consistently demonstrated that television portrayed physicians as good, successful, and peaceful, and warmer, fairer, and more sociable than most other characters (Gerbner et al., 1981). Compared to nurses, television doctors were less benevolent, but they were smarter, more rational, more stable, more individualistic, fairer, and valued their work, service, and scholarship more (Kalisch & Kalisch, 1984). Television doctors were also ethical and kind risk-takers (Gerbner et al., 1982).

In addition to television doctors being portrayed as having positive personal qualities, television also portrayed doctors as extremely competent and nearly infallible in treating patients. In the 1960's and early 1970's, physician programs traditionally concluded with a dramatic operation that usually cured the patient's problem (Turow, 1996). Doctors on television were successful (Gerbner et al., 1981), they rarely failed, and they saved lives with ease (Malmsheimer, 1988), often due to their own initiative and at great personal risk. In 13% of medical cases on television, doctors disobeyed orders and went against the odds to successfully treat and cure patients. In 40% of television medical cases, they risked status to perform dangerous treatments, and did so with success (Gerbner et al., 1981). Only occasionally did television doctors allude to their own weaknesses and on the rare occasions when blundering physicians were featured, the level-headed television physicians brought them quickly back in line with the competent medical community (Malmsheimer, 1988).

Not only were television physicians shown to be medically skilled, they were also imbued with personal "power" over the emotional and social lives of their patients (McLaughlin, 1975). Television doctors could mend marriages, reconcile families (Malmsheimer, 1988), and solve various problems beyond those for which patients came to them looking for help. Overall, from the 1950s through the 1980s, television portrayed doctors as knowledgeable about both their jobs and their patients, and as competent in all that they do.

While past content analyses on fictional television's portrayals of physicians have been overwhelmingly positive, it has been suggested that these portrayals may be changing. In a more recent study, Pfau et al. (1995) content analyzed the personal attributes of physicians appearing on network prime-time programming (which was

predominantly fictional television). Television physicians were rated along the following six dimensions: *competence*, *ethical character*, *interpersonal style*, *regard for others*, *power*, and *physical attractiveness*. Once again, their research revealed that as recently as 1992 television physicians were portrayed quite positively overall, especially in terms of competence, physical attractiveness, power, wealth, and status. However, compared to other physician characteristics, television physicians were depicted somewhat less positively on the dimension of interpersonal style. For example, doctors were not rated as highly in terms of being pleasant and cheerful.

While their data demonstrated that television doctors in 1992 were still being portrayed positively in most respects, Pfau et al. suggest that prime-time television programs in 1995 often seemed to depict "occasional uncertainties in diagnosis and mistakes in treatment" and physicians' "unflattering personal traits, including adultery, arrogance, and avarice" (p. 455). Turow (1996) explains this increase in television's depictions of the more human side of physicians, with its emphasis on physicians' problems and personalities, as a consequence of ratings consciousness by network executives. As a result, a shift in focus from the difficulties of patients to those of physicians allows viewers to witness television physicians' more negative personalities.

Pfau et al. (1995) call for an examination of newer, fast-paced medical dramas (e.g., *ER* and *Chicago Hope*), which seemingly portray more negative physician characteristics. They claim negative portrayals of physicians "may erode public confidence in physicians" (p. 455). Perceptions of doctors as less credible may lead individuals to distrust and to avoid real life physicians, which could jeopardize their health. As such, we should be concerned with determining whether or not this claim of a change in television's representations of physicians is valid. The present study responds to this concern by conducting an updated content analysis of prime-time fictional television. In addition, the present study extends Pfau et al.'s (1995) work by examining the portrayals of physicians not only on prime-time fictional television, but also on other daytime and evening program genres including soap operas, talk shows, network news, and news magazines.

To determine if Pfau et al.'s (1995) findings regarding prime-time network programming can be replicated with a sample that includes the newer fast-paced medical dramas they suggested, research question one was examined.

RQ1: Are contemporary prime-time fictional television programs' portrayals of physician competence, ethical character, interpersonal style, regard for others, power, and physical attractiveness consistent with Pfau et al.'s (1995) findings?

The original version of the cultivation perspective suggests that exposure to television's consistent images leads one to develop beliefs that real life is similar to that shown on television (Gerbner & Gross, 1976); however, more recent research on specific content viewing suggests that total television exposure is not as strong or consistent a predictor of beliefs about real life as exposure to specific program types

is (Hawkins & Pingree, 1981; Potter, 1993; Potter & Chang, 1990). When television's content is not homogenous across genres (e.g., when fictional and non-fictional programs differ in their depictions), heavy exposure to a specific type of programming (versus total programming) is expected to be a better predictor of perceptions consistent with portrayals found in that genre. Concerning the present study, if physicians are depicted differently across genres, exposure to the different genres should result in different perceptions of doctors. As such, it is important that genres other than prime-time fiction be examined here.

As an extension to the work of Pfau et al. (1995), program content in genres other than prime-time fiction that are expected to provide images relevant to physician perceptions are also considered. Of central interest here are the soap opera, news, and talk show genres. The soap opera is another fictional television genre that tends to feature health topics and health care professionals quite often (Cassata, Skill, & Boadu, 1979; Gerbner et al., 1981; Katzman, 1972; Rondina, Cassata, & Skill, 1983; Turow & Coe, 1985). In addition, soap opera viewing has been associated with health-related perceptions (Snyder & Rouse, 1995). Because daytime soap operas and prime-time fiction air at different times of the day with different frequencies and attract different types of viewers, physician images on these fictional programs may also differ.

In contrast to fictional television's positive physician representations, Nelkin (1996) asserts news programming dealing with science-related issues such as medicine and health care tends to focus on non-routine events, especially disputes, scandals, controversies, and fraud in science. News journalists also tend to focus on extremes, such as the riskiest technologies. Because the goal of news is to inform as well as to entertain (Nelkin, 1996), and given that journalists are attracted to controversies, it seems plausible that physicians may be portrayed differently on television network news and news magazines than they are on fictional television.

Similarly, physicians featured on talk shows, another form of non-fictional programming that blends drama, humor, and information, may be depicted differently than doctors on purely fictional programs or strictly news-oriented programs. Talk shows are prevalent on daytime television, airing five days a week on the networks and through syndication. Talk shows also tend to feature health care issues (e.g., pregnancy, death, illness) and appearances by physicians discussing health care topics (e.g., diet, new medical procedures). Given the differences between television talk shows and other fictional and non-fictional programming, it is possible that doctors on talk shows differ from both television news and television fiction physicians.

To assess the potential differences in depictions of physicians across television genres and to further extend Pfau et al.'s (1995) research, portrayals of physicians on daytime soap operas, network news, news magazines, and daytime talk shows were examined.

RQ2: Are there differences among contemporary prime-time fiction, daytime soap operas, network news, news magazines, and television talk shows in their portrayals

of physician competence, ethical character, interpersonal style, regard for others, power, and physical attractiveness?

In addition to the differences in television's portrayals of physicians according to genre, it is also possible that depictions of physicians may differ according to whether or not the physicians are visually portrayed on screen. For example, physicians that are shown treating patients, talking with colleagues, and interacting with the public may appear quite competent and kind. On the other hand, physicians that are not shown doing these same things, but are simply talked about doing them, may not be characterized as positively. When other characters on the program talk about doctors that are never actually shown on screen, they may be talking about how inept or callous these unseen physicians are. Likewise, it is possible that doctors are visually portrayed as unscrupulous and self-centered, while physicians that are not visually portrayed are referred to as skilled and compassionate. Because exposure to visually portrayed physicians is likely to have a relatively greater and perhaps different impact on viewers' perceptions of physicians than is exposure to non-visually portrayed doctors, it is important that the potential differences in television's representations of these doctors be examined. The third research question addresses this issue.

RQ3: Are there differences between contemporary television programming's visually portrayed physicians and non-visually portrayed (but referred to) physicians in their portrayals of physician competence, ethical character, interpersonal style, regard for others, power, and physical attractiveness?

Methods

Two weeks of television programming were video-recorded, and from this two-week sample, program episodes were randomly selected to compose a one-week representative sample. For example, ten episodes of the daytime soap opera *The Young and the Restless* were contained in the two weeks of recorded programming (five episodes per week), however, only five episodes, which were randomly selected from the ten, appeared in the final sample. The sample included daytime soap operas, talk shows, morning and evening network news, evening news magazines, and regular prime-time fictional series that aired on four networks in a mid-sized midwestern United States city during February of 1999. No movies, sports, special presentations, game shows, local news, or reality-based programs were included in the sample.

All news magazines, network news, and fictional series from prime-time programs that aired on ABC, CBS, NBC, and FOX between 8:00 p.m. and 11:00 p.m. Eastern Standard Time (EST) were recorded for inclusion in the sample. The news contained in the sample consisted of nationally broadcast morning and evening news programs

airing on ABC, CBS, and NBC from 7:00 a.m. to 9:00 a.m. (EST) and from 6:30 p.m. to 7:00 p.m. (EST). In February of 1999 Fox only aired locally produced news and therefore its news programming was not analyzed in the present study. Episodes from all daytime soap operas ($N = 11$) and daytime talk shows ($N = 15$) that aired in the area in February of 1999 were recorded for inclusion in the sample. Two of the 15 talk shows aired on FOX, while the rest of the talk shows and all the soap operas aired on ABC, CBS, and/or NBC affiliates. Nine of the 11 daytime soap operas were 60 minutes in length, while the other two were 30 minutes in length. All of the talk shows ran 60 minutes in length. The sample contained a total of 224.5 hours of programming (48 hours of news, 12 hours of news magazines, 50 hours of daytime soap operas, 75 hours of talk shows, and 39.5 hours of prime-time fictional programming).

A research team of nine senior undergraduate communication majors and the first author screened the one-week representative sample for programs in which physicians were portrayed or discussed. To ensure that no program containing a physician was overlooked, the one-week representative sample was viewed twice. Portrayals or discussions of physicians were found in 94.5 hours—30 hours of network news, six hours of news magazines, 31.5 hours of daytime soaps, nine hours of talk shows, and 18 hours of prime-time fiction.

There were two units of analysis in the present study. The first was real life or fictional physicians who were visually portrayed in the sample and spoke at least one audible word. Physicians included family practitioners, diagnostic specialists, surgeons, gynecologists, psychiatrists, and other medical doctors. Medical residents were also considered physicians, while medical school students were not. The second unit of analysis was real life or fictional physicians who were not visually portrayed, but were spoken about by other individuals on the program. To qualify as a unit of analysis under this second category, an individual had to speak the term "doctor(s)," "physician(s)," or verbally use a more specific term that referred to the physician's specialty (e.g. "pediatrician"). In addition, the individual had to make reference to some personal or professional attribute (e.g. friendliness, qualifications) of the physician. All individually identified physicians or identified groups of physicians counted as separate units. The final sample consisted of 229 television physicians from 48 different programs (many of which had more than one episode included in the sample). Daytime soaps contained the most doctors ($n = 74$), followed by network news ($n = 65$), prime-time fiction ($n = 59$), news magazines ($n = 20$), and talk shows ($n = 11$). One hundred and seventy-seven (77.3%) of the physicians were visually portrayed and/or spoke at least one audible word, 29 (12.7%) were not visually portrayed, but were spoken about, and 23 (10.0%) were identified groups of physicians.

The personal characteristics of television physicians were coded according to the same scheme used by Pfau et al. (1995). Pfau et al.'s measure was derived from a principle components factor analysis that yielded six factors: physician competence, ethical character, interpersonal style, regard for others, power, and physical attrac-

tiveness. In Pfau et al.'s study and in the present study, television doctors were rated along these six personal attribute dimensions using semantic differential scales containing seven points each. Each of Pfau et al.'s and the present study's six personal attributes factors follow, along with the items that composed the factor: *competence*: unqualified/qualified, unintelligent/intelligent, and incompetent/competent; *ethical character*: selfish/unselfish, bad/good, dishonest/honest, immoral/moral, wrong/right, and improper/proper; *regard for others*: uncaring/caring, cold/warm, and unfriendly/friendly; *physical attractiveness*: unattractive/attractive, plain/stylish, and unsexy/sexy; *interpersonal style*: irritable/good-natured, gloomy/cheerful, unpleasant/pleasant, nervous/poised, tense/relaxed, and anxious/calm; *power*: poor/wealthy, low/high status, and weak/strong.

Coders rated physicians using this scheme based on information from the portrayals of the physicians themselves and/or from the behavior and communication of other characters/persons portrayed. Coders viewed the physicians' depictions throughout the entire television program and made an overall judgment for each of the physician characteristics they coded. The coders were instructed to rate the television physicians using only the information provided in the given episode and not to base ratings on past portrayals observed through their personal television exposure.

Three senior undergraduate students majoring in communication and the first author served as coders. These individuals were trained in coding procedures for approximately 10 hours each and participated in supervised practice sessions. During training, the coders rated five hours of programming that were not part of the final sample. Their intercoder reliability for rating the physician attributes was assessed using Rosenthal's effective reliability method (Rosenthal, 1987), which is based in part on the Spearman-Brown formula. Mean reliability ratings were computed across the four coders and adjusted for the number of coders. Rosenthal's effective reliability method considers the differences between coders and the sizes of these differences. It also adjusts for reduced random error, which tends to occur as the number of coders increases (Rosenthal, 1987). This method was used by Pfau et al. (1995) to assess intercoder reliability in their content analysis of television physicians. It has also been used to assess intercoder reliability in other content analyses (Bordia, DiFonzo, & Chang, 1999; Daly, Vangelisti, & Weber, 1995; Pfau, Moy, Holbert, Szabo, Lin, & Zhang, 1998; Pfau, Moy, Radler, & Bridgeman, 1998; Pfau, Tusing, Koerner, Lee, Godbold, Penaloza, Yang, & Hong, 1997). Because coding the television physicians' sex and race involved classifying characters into nominal categories, a version of Cohen's *kappa* (Potter & Levine-Donnerstein, 1999) appropriate for situations with more than two coders was employed as the index of interrater reliability for these variables.

Reliabilities for the physician characteristics in the present study were: competence (.62), ethical character (.80), regard for others (.85), physical attractiveness (.81), interpersonal style (.77), power (.73), sex (.85), and race (.85). After intercoder reliability had been established, two coders independently coded each physician

character. Their ratings were then averaged and their mean served as the final rating for analysis. In categorizing physician sex and race, an expert coder resolved differences when disagreements occurred between coders.

Results

The first research question asked whether the portrayals of physicians along the six personal attribute dimensions on contemporary prime-time fictional television programs are consistent with Pfau et al.'s (1995) findings. Pfau et al. only rated visually portrayed physicians, while the present study rated physician characters that were both visually portrayed and not visually portrayed (but referred to), as well as groups of doctors. Therefore, Pfau et al.'s findings were compared to the present study's sample of visually portrayed doctors and to the present study's total sample of physicians.

Large independent samples *t*-tests indicated that Pfau et al.'s (1995) ratings of visually portrayed doctors' physician characteristics on prime-time fiction in 1992 were significantly higher than the present study's ratings of visually depicted physician characteristics on 1999 prime-time fiction. In addition, independent samples *t*-tests revealed that Pfau et al.'s (1995) ratings of visually depicted doctors' physician characteristics on prime-time fiction in 1992 were all significantly higher than the present study's ratings of all physicians (visually portrayed and not visually portrayed) on the 1999 prime-time fiction examined here. These results must be interpreted with caution, however, because the coders of Pfau et al.'s sample and the present study's sample differed. Table 1 displays the results of these *t*-tests.¹

The second research question asked whether there were differences among contemporary prime-time fiction, daytime television soap operas, news program-

Table 1
Means on Physician Characteristics for Pfau et al.'s 1992 Sample of Prime-Time Fiction and the 1999 Sample of Prime-Time Fiction

Physician Characteristic	Visually Portrayed 1992 Mean (SD) N = 24	Visually Portrayed 1999 Mean (SD) N = 52	Total Sample 1999 Mean (SD) N = 59
Competence	5.85 (0.91)*	4.60 (.79)	4.56 (.82)
Ethical Character	5.31 (0.83)*	4.23 (.96)	4.12 (1.02)
Regard for Others	5.47 (0.80)*	4.58 (1.12)	4.45 (1.15)
Physical Attractiveness	5.87 (0.67)*	4.17 (.92)	4.15 (.86)
Interpersonal Style	5.19 (0.87)*	4.19 (.89)	4.17 (.83)
Power	5.65 (0.73)*	4.28 (.64)	4.26 (.61)

Note: Comparisons are horizontal only. *Significantly different from other row means at the .05 *alpha* level by a *t*-test.

ming (network news and news magazines), and television talk shows in their portrayals of physicians along the six personal attribute dimensions. One way analyses of variance (ANOVA) were conducted with (1) the entire sample of physicians (both visually portrayed and not visually portrayed physicians), (2) just the visually portrayed physicians, and (3) just the non-visually portrayed physicians, to assess these potential differences in ratings across the genres.

When the entire sample was analyzed, results indicate that representations of physicians' physical attractiveness ($F(4, 224) = 6.89, p < .05$) and interpersonal style ($F(4, 224) = 2.44, p < .05$) differed across television genres. There were no significant differences in portrayals of physician competence ($F(4, 224) = 1.15, p > .05$), ethical character ($F(4, 224) = 0.06, p > .05$), regard for others ($F(4, 224) = 0.79, p > .05$), or power ($F(4, 224) = 0.80, p > .05$). Least significant difference post hoc analyses indicated that daytime television soap operas ($M = 4.44$) portrayed physicians as significantly more physically attractive than prime-time fiction ($M = 4.15$), news magazines ($M = 3.97$), daytime talk shows ($M = 3.85$), and network news ($M = 3.78$) portrayed physicians. Furthermore, prime-time fiction depicted physicians as significantly more physically attractive than network news portrayed them.

Representations of physician interpersonal style also differed between network news and contemporary prime-time fiction, though this difference was in the opposite direction of that found for physical attractiveness. Network news programs depicted physicians as having significantly more interpersonal style ($M = 4.49$) than prime-time fiction ($M = 4.17$) and daytime soaps ($M = 4.22$). In addition, news magazines ($M = 4.53$) showed doctors as having more interpersonal style than did prime-time fiction. Portrayals of physician interpersonal style on talk shows were not significantly different from any other genre's depictions. Table 2 summarizes the results of the ANOVAs.

One way ANOVAs were also conducted to assess the potential differences in physician depictions among the five genres with the sample comprised only of visually portrayed physician characters. Significant differences among genres emerged for portrayals of physician competence ($F(4, 172) = 3.61, p < .05$), physical attractiveness ($F(4, 172) = 6.31, p < .05$), and interpersonal style ($F(4, 172) = 5.11, p < .05$). There were no statistically significant differences among genres for the portrayals of physician ethical character ($F(4, 172) = 0.66, p > .05$), regard for others ($F(4, 172) = 0.61, p > .05$), or power ($F(4, 172) = 1.98, p > .05$).

Least significant difference post hoc tests showed that regarding competence, news magazines ($M = 5.28$) portrayed physician characters as more competent than prime-time fiction ($M = 4.60$) and daytime soap operas ($M = 4.61$). No other genre differences in competence depictions were found.

Results concerning physical attractiveness mirrored those found for the entire sample. Least significant difference post hoc tests indicated that daytime television soap operas portrayed physicians as significantly more physically attractive ($M = 4.51$) than prime-time fiction ($M = 4.17$), news magazines ($M = 3.95$), and network

Table 2
Means of Physician Characteristics for Contemporary Television Programming's
Visually Portrayed and Non-Visually Portrayed (but Referred to) Physicians
Across Genres

Physician Characteristic	Genre				
	Prime-time	Daytime	Network	News	Daytime
	Fiction	Soaps	News	Magazines	Talk Shows
	Mean (SD) <i>n</i> = 59	Mean (SD) <i>n</i> = 74	Mean (SD) <i>n</i> = 65	Mean (SD) <i>n</i> = 20	Mean (SD) <i>n</i> = 11
Competence	4.56 (.82)	4.55 (.66)	4.56 (.73)	4.82 (1.0)	4.21 (.71)
Ethical Character	4.12 (1.02)	4.19 (.99)	4.14 (.70)	4.12 (.68)	4.18 (.44)
Regard for Others	4.45 (1.15)	4.61 (.94)	4.38 (.77)	4.33 (.79)	4.27 (.66)
Physical Attractiveness	4.15 _b (.86)	4.44 _a (.79)	3.78 _c (.68)	3.97 _{bc} (.87)	3.85 _{bc} (.32)
Interpersonal Style	4.17 _b (.83)	4.22 _{bc} (.76)	4.49 _{ad} (.54)	4.53 _{cd} (.63)	4.23 _{abcd} (.46)
Power	4.26 (.61)	4.26 (.33)	4.31 (.49)	4.44 (.64)	4.17 (.31)

Note: Comparisons are horizontal only. Genre means with no subscripts in common are significantly different from one another at the .05 *alpha* level according to least significant difference post hoc analyses.

news ($M = 3.70$). However, prime-time fiction portrayed physicians as significantly more attractive than network news programs portrayed them. Talk shows' depictions of physician physical attractiveness were not significantly different from other genres' depictions.

Differences in the representations of physician interpersonal style were also similar to those found for the entire sample. Least significant difference post hoc tests showed that news magazines ($M = 4.84$) and network news programs ($M = 4.71$) depicted physicians as having significantly more interpersonal style than prime-time fiction ($M = 4.19$) and daytime soaps ($M = 4.25$). Portrayals of physician interpersonal style on daytime soap operas and prime-time fiction were not significantly different from each other, nor were depictions of physician interpersonal style on news magazines and network news. Talk show doctors did not differ from physicians on the other genres in terms of interpersonal style. The ANOVA results for the visually portrayed physicians are summarized in Table 3.

Of the total sample, 177 of the television physicians were visually portrayed and

Table 3
Means of Physician Characteristics for Contemporary Television Programming's
Visually Portrayed Physicians Across Genres

Physician Characteristic	Genre				
	Prime-time	Daytime	Network	News	Daytime
	Fiction	Soaps	News	Magazines	Talk Shows
	Mean	Mean	Mean	Mean	Mean
	(SD)	(SD)	(SD)	(SD)	(SD)
	<i>n</i> = 52	<i>n</i> = 64	<i>n</i> = 45	<i>n</i> = 13	<i>n</i> = 3
Competence	4.60 _b (0.79)	4.61 _b (0.62)	4.86 _{ab} (0.58)	5.28 _a (0.95)	5.00 _{ab} (0.00)
Ethical Character	4.23 (0.96)	4.40 (0.75)	4.39 (0.38)	4.26 (0.80)	4.72 (0.49)
Regard for Others	4.58 (1.12)	4.77 (0.84)	4.69 (0.56)	4.54 (0.93)	5.11 (0.67)
Physical Attractiveness	4.17 _b (0.92)	4.51 _a (0.83)	3.70 _c (0.80)	3.95 _{bc} (1.09)	3.56 _{abc} (0.54)
Interpersonal Style	4.19 _b (0.89)	4.25 _b (0.82)	4.71 _a (0.47)	4.84 _a (0.57)	4.92 _{ab} (0.17)
Power	4.28 (0.64)	4.29 (0.34)	4.43 (0.53)	4.68 (0.68)	4.39 (0.42)

Note: Comparisons are horizontal only. Genre means with no subscripts in common are significantly different from one another at the .05 *alpha* level according to least significant difference post hoc analyses.

52 (29 individual doctors and 23 groups of doctors) of the television doctors were not visually portrayed, but were referred to. To determine whether or not the non-visually portrayed *individual* doctors and the non-visually portrayed *groups* of doctors differed in their representations, independent samples *t*-tests across all genres and within each genre were conducted. Results show that there were no significant differences between these two groups' depictions across the sample as a whole or when looking within particular genres.² Therefore, the individual doctors and the groups of physicians who were not visually portrayed, but were referred to, were combined to form one group.

To assess the potential differences in physician depictions among contemporary prime-time fiction, network news, news magazines, daytime soaps, and daytime talk shows with the sample comprised only of physician characters that were not visually portrayed (*n* = 52), but were referred to, one-way ANOVAs were conducted. There were no statistically significant differences among the genres for any of the physician characteristics: competence ($F(4, 47) = 0.67, p > .05$), ethical character ($F(4, 47) = 2.34, p > .05$), regard for others ($F(4, 47) = 0.93, p > .05$), physical attractiveness

($F(4, 47) = 0.49, p > .05$), interpersonal style ($F(4, 47) = 0.23, p > .05$), or power ($F(4, 47) = 0.34, p > .05$). Table 4 contains the physician characteristics means across genres for physician characters that were not visually portrayed, but were referred to.

To determine if the depictions of physician characteristics differed depending on whether they were visually portrayed or not visually portrayed (but referred to), independent samples *t*-tests were executed for each physician characteristic within each genre. Results show generally that visually portrayed doctors were represented more positively than doctors that were not visually portrayed (but were spoken about).

Specifically, on network news, news magazines, and talk shows, visually portrayed doctors were represented as more competent and as having more interpersonal style than were doctors that were simply talked about. On every genre except news magazines, visually portrayed doctors were represented as having more ethical character and more regard for others than were physicians that were only referred to. On daytime soaps, network news, and news magazines, visually depicted physicians were portrayed as having more power than were doctors who were not visually

Table 4
Means of Physician Characteristics for Contemporary Television Programming's
Non-Visually Portrayed (but referred to) Physicians
Across Genres

Physician Characteristic	Genre				
	Prime-time	Daytime	Network	News	Daytime
	Fiction	Soaps	News	Magazines	Talk Shows
	Mean (SD) <i>n</i> = 7	Mean (SD) <i>n</i> = 10	Mean (SD) <i>n</i> = 20	Mean (SD) <i>n</i> = 7	Mean (SD) <i>n</i> = 8
Competence	4.29 (1.05)	4.18 (0.84)	3.89 (0.58)	3.95 (0.01)	3.92 (0.60)
Ethical Character	3.31 (1.21)	2.83 (1.23)	3.58 (0.90)	3.85 (0.21)	3.98 (0.18)
Regard for Others	3.45 (0.94)	3.53 (0.83)	3.68 (0.71)	3.95 (0.13)	3.96 (0.26)
Physical Attractiveness	4.00 (0.00)	4.00 (0.00)	3.96 (0.15)	4.00 (0.00)	3.96 (0.18)
Interpersonal Style	4.00 (0.00)	4.02 (0.05)	3.98 (0.23)	3.95 (0.09)	3.97 (0.11)
Power	4.07 (0.13)	4.07 (0.16)	4.03 (0.18)	4.00 (0.00)	4.08 (0.24)

portrayed. Finally, physicians on network news that were visually depicted were less physically attractive than were doctors that were only referred to. Table 5 contains *t*-values for the within genre comparisons of means for physicians visually portrayed (depicted in Table 3) with means for physicians not visually portrayed (depicted in Table 4).

Post hoc Analyses: Comparisons by Physician Sex and Race

Although no research questions were posited about differences in physicians' portrayals according to race or sex, it seemed possible that these differences may exist. Such differences would be of interest and importance to scholars concerned with depictions of race and sex in media programming. Therefore, additional analyses were performed.

Of the 229 physician characters, 141 (61.6%) were male and 50 (21.8%) were female, while the sex of 38 (16.6%) of the physician characters was not able to be determined by the information that the program provided. Regarding race, 149 (65.1%) were White Americans and 30 (13.1%) were non-White Americans—23 (10%) were African Americans, three (1.3%) were Latino Americans, and four (1.7%) were Non-Americans (who may have had any color of skin). The race of 50 (21.8%) of the 229 physician characters was not able to be identified by the information provided in the program. To assess potential differences in depictions according to race and sex, independent samples *t*-tests were conducted for each physician characteristic.³ The mean ratings of male and female doctors were compared. Because of their relative infrequency of portrayals, African American, Latino Amer-

Table 5
***T*-values for Within-Genre Comparisons of Contemporary Visually Portrayed and Not Visually Portrayed (but referred to) Physicians by Physician Characteristics**

Physician Characteristic	Genre				
	Prime-time Fiction (<i>df</i> = 57)	Daytime Soaps (<i>df</i> = 72)	Network News (<i>df</i> = 63)	News Magazines (<i>df</i> = 18)	Daytime Talk Shows (<i>df</i> = 9)
Competence	0.94	1.93	6.30*	3.66*	3.04*
Ethical Character	2.32*	5.59*	5.16*	1.34	3.95*
Regard for Others	2.54*	4.34*	6.19*	1.65	4.33*
Physical Attractiveness	0.49	1.93	-1.42*	-0.12	-2.18
Interpersonal Style	0.57	0.90	6.62*	4.04*	11.31*
Power	0.86	2.04*	3.28*	2.60*	1.57

*Visually portrayed physician characters were rated significantly different from physician characters that were not visually portrayed (but referred to) at the .05 *alpha* level by independent samples *t*-tests.

ican, and non-American physicians were combined to form one *non-White American* comparison group. The mean ratings of these non-White American physicians were compared to the mean ratings of the White American doctors.

When examining the sample as a whole, only one statistically significant difference was found between the portrayals of male and female doctors' characteristics. Female physicians ($M = 4.60$) were rated as more physically attractive than were male physicians ($M = 3.96$) ($t(189) = 4.61, p < .05$). This sex difference in physical attractiveness was also found when examining representations of doctors within daytime soap operas ($t(66) = 3.32, p < .05$), prime-time fiction ($t(53) = 2.21, p < .05$), and network news ($t(47) = 2.00, p < .05$). Network news also showed female physicians ($M = 4.93$) as having more interpersonal style than male doctors were shown to possess ($M = 4.58$) ($t(47) = 2.10, p < .05$). On the other hand, daytime soaps depicted female physicians as being less competent ($M = 4.35$) than male doctors ($M = 4.70$) ($t(66) = -1.97, p < .05$).

When examining the sample as a whole, there were no statistically significant differences found between the depictions of White and non-White American physicians on any of the attribute ratings. When examining representations of doctors within the individual genres, only one statistically significant difference emerged. On daytime soap operas, non-White American physicians were portrayed as less competent ($M = 4.29$) than White American doctors ($M = 4.70$) ($t(61) = -2.30, p < .05$).

Discussion

The present content analysis revealed that overall, contemporary television depicts physicians somewhat positively in terms of their personal characteristics, although these depictions were significantly less favorable than prime-time fiction's portrayals of physicians in 1992. In 1992 television doctors included *The Cosby Show's* wise and lovable Dr. Heathcliff Huxtable, the child-genius title character on ABC's family drama *Doogie Howser, M.D.*, and the attractive Dr. Joel Fleischman on CBS's quirky drama *Northern Exposure*. Compared to these honorable, talented professionals, 1999's prime-time fiction included physicians who were often mean, unethical, incompetent, insubordinate, and sometimes even criminal.

As Pfau et al. observed, more recent prime-time programming features physicians' unfavorable personal characteristics. For example, *ER's* Dr. Weaver and *Becker's* title character communicate gruffly and assert their unpopular opinions, without regard for the feelings of others. Contemporary prime-time medical dramas contained a *Melrose Place* physician orchestrating a sexual harassment/wrongful termination scam, an IV drug-using physician on *L.A. Doctors*, and a sports doctor on *Diagnosis Murder* dispensing harmful drugs to young boxers. Physicians on other prime-time dramas are even more disgraceful: Doctors committed murders on *The*

Practice, *Pretender*, and *Law and Order*; a physician on *Profiler* was revealed to be a child molester; and a doctor on *Martial Law* sold stolen babies on the black market.

It is important to note that although the present study showed that contemporary television's physician portrayals were less positive than television's depictions of doctors in 1992, these findings must be interpreted with caution, as different coders rated Pfau et al.'s 1992 sample and the present study's sample. While television's depictions of physicians' personal attributes seem to have changed from 1992 to 1999, the present study was only able to assess the separate reliabilities of coders used in the two studies (both of which were high), and not the reliability across the two studies.

Beyond claims concerning changes in physician representations over time, this study was able to determine that contemporary television genres differed amongst themselves in their portrayals of physician characteristics. These differences primarily involved depictions of physician interpersonal style, physical attractiveness, and competence.

Daytime soaps depicted doctors as sexier, more stylish, and more attractive than all other genres portrayed doctors, while prime-time fiction's physicians were more physically attractive than network news programs' doctors. Non-fictional and fictional programs also differed in their representations of physicians' interpersonal style such that fictional programs showed doctors as gloomier, less pleasant, more irritable, and more nervous, tense, and anxious than non-fictional programs showed physicians. Similarly, visually depicted doctors on television fiction were less competent than those on news magazines, though these findings should be interpreted with caution given the somewhat low intercoder reliability of the competence dimension (.62).

The findings related to physical attractiveness are not surprising, as physicians on news programming are real-life doctors, as opposed to actors who portray physicians on daytime soaps and prime-time fiction. Medical doctors appearing on news programs are most likely featured for their expertise, while doctors on prime-time fiction and daytime soaps are actors hired, in part, for their physical attributes, such as attractiveness and sex appeal.

The differences in interpersonal style found between doctors on fictional and non-fictional programming may be due to the different contexts in which the physicians are portrayed. As opposed to fictional television's representations of doctors, real life physicians appearing on network news and news magazines usually speak or are featured for only very short periods and they tend to be interviewed away from their hectic workplaces. In addition, doctors on news programs are most likely prepared for the questions that they are asked and respond as such. This context enables physicians to maintain a composed public persona while behaving in a more relaxed and prepared manner than physicians on fiction are shown to behave.

The disparity in competence between fictional television's and news magazine's visually portrayed physicians may be due to the different purposes served by the

physicians in the genres. News magazines tend to feature expert doctors so as to provide a seemingly credible source of information. As Pfau et al. (1995) observed, and as was confirmed here, contemporary fictional programming tends to show expert physicians, as well as those that are unskilled, make mistakes, or are unsure of their abilities. In fictional programming, these less able doctors provide the necessary dramatic or comedic effects appropriate for the given genre. Such doctors would not serve the informational purpose of news programming.

In addition to assessing differences in physician portrayals across genres, differences in depictions of visually portrayed and not visually portrayed, but referred to, physicians were assessed within each television genre. In general, visually portrayed doctors were rated more positively than those who were not visually depicted (but were referred to). This difference may be due to the referred to doctors receiving ratings equal to the scale midpoint. Because referred to physicians were rated if other characters talked about any of the six physician characteristics, many of the physicians received ratings equal to the scale midpoint on the characteristics that were not talked about by the other characters. On the other hand, doctors who were visually portrayed provided information through their verbal communication and nonverbal cues that may have enabled more accurate ratings of their characteristics to be made.

While the differences between visually portrayed and not visually portrayed physicians may be due to the coding procedures, it is also possible that contemporary television characters really do talk negatively about physicians, while contemporary television visually portrays physicians positively. It is also likely that when the doctors who are being negatively discussed are real people versus fictional characters, these doctors may not want to risk public embarrassment or damage by being visually shown on television or they may be advised to refrain from communicating with the media because of legal or other types of risks involved.

Results concerning the differences between male and female physicians in their interpersonal style, attractiveness, and competence are somewhat unsettling. The relative lack of difference in physician competence between the sexes shows that females were as skilled as their male counterparts, but were more physically attractive on both non-fictional and fictional programming. This difference suggests that male physicians need only be competent, while female physicians must be competent and beautiful. Furthermore, female doctors on network news were also more good-natured, pleasant, and poised than were male physicians. Taken together, these findings may imply that regardless of expertise, females must be more physically appealing and more interpersonally adept than their male peers to appear on television. On the other hand, these depictions may serve to enhance the female physician's image.

As opposed to the findings regarding sex, those involving race were more encouraging. The only difference in the portrayals of doctors according to race occurred on daytime soaps.

Non-White American physicians (African American, Latino American, and foreign physicians of any skin color) were portrayed as less competent than were White

American doctors. Although this was the only difference found, it is an important one given that physician competence is likely to be a main point of consideration when choosing or evaluating a physician.

The overwhelming lack of differences found between non-White American and White American physicians is consistent with the results of another recent content analysis (Tamborini, Mastro, Chory-Assad, & Huang, 2000). That study examined the personal attributes of members of the court and criminal justice systems on fictional and non-fictional television programming and found no difference in portrayals of personal attributes (e.g. competency, honesty, aggressiveness) according to race. The results of the present study and those of Tamborini et al. (2000) appear to indicate a move toward more balanced depictions of individuals of different races.

Conclusion

Implications of Findings

Although physicians on prime-time fiction are still being portrayed positively on an objective scale, these portrayals are less positive than they were in the past and less positive than physician images found on contemporary non-fictional programming. As such, we should expect to find support for Pfau et al.'s (1995) prediction that exposure to these more negative physician representations may decrease the public's confidence and trust in real life physicians. It is also plausible to expect that exposure to such television images could lead to higher health care costs and noncompliance with physicians' medical advice, given the relationship between perceptions of these characteristics and patient satisfaction discussed earlier. We should also consider that these less positive images may increase the anxiety associated with interacting with one's doctor (Booth-Butterfield et al., 1997), inhibiting patients from speaking candidly about their health care needs. More optimistically, exposure to television's less positive depictions of doctors may lead people to experience increased trust in and satisfaction with their actual physicians because they are better doctors and human beings than the physicians they watch regularly on television.

The effect that exposure to television's images of physicians may have on perceptions of physicians and related outcomes depends not only on the television content individuals view, but also on the ways in which said content is cognitively processed. Potential effects of exposure to television's doctor depictions on viewers' associated beliefs may be understood in terms of the heuristic systematic model of persuasion (HSM) (Chaiken, 1987; Chaiken, Liberman, & Eagly, 1989). According to the HSM, individuals may engage in systematic processing, which is characterized by active consideration and scrutiny of messages, or heuristic processing, which is marked by the use of simple decision rules to handle messages. Beliefs and attitudes formed through systematic processing are generally more stable, more resistant to

counterarguments, and more predictive of behavior than are those formed through heuristic processing (Chaiken, 1987).

Based on the findings of the present study and on the HSM, individuals who exclusively or primarily view fictional programs containing physician images may be at risk for being negatively affected by television's representations of physicians. Heuristic processing of fiction's somewhat negative depictions of doctors should lead viewers to hold negative beliefs about doctors. Systematic processing of fiction's doctor portrayals, on the other hand, may lead viewers to discount these images of doctors as unrealistic, decreasing their potential influence on beliefs about physicians. However, without exposure to more positive representations of physicians to counteract the discounted fictional portrayals, systematic processors may still be at some level of risk for being inadvertently influenced by fiction's portrayals.

Conversely, those who exclusively or primarily view news programming's generally complimentary doctor depictions may have their perceptions of physicians enhanced by exposure to nonfictional television. Systematic processors of non-fiction's depictions of physicians should closely examine these television images and realize that these are real doctors. Such conclusions should lend credibility to these physicians, increasing their impact on viewers (McCroskey, 1997). Although heuristic processors may not carefully examine doctors appearing in non-fictional television, these viewers should still be somewhat influenced by these positive depictions.

Television's effect on beliefs about physicians held by individuals who view a combination of fictional and non-fictional programming is less straightforward. Viewers of both types of programming who systematically process what they view may discount fiction's relatively negative physician portrayals in favor of non-fiction's more positive depictions. As previously discussed, systematic processing should minimize the impact of fictional programs on beliefs, but should enhance the impact of news programming on perceptions of physicians. If viewers of both fictional and non-fictional television are heuristically processing what they are viewing, then fiction's doctor depictions may not be discarded, nor should non-fiction's images be granted any increased credibility. Instead, we can expect that exposure to both types of television content may affect beliefs about doctors. If parallel processing of these images takes place, then the relative influence of fiction and non-fiction would depend on the aspects of the programming that are being systematically processed and those that are being processed using heuristics.

Suggestions for Future Research

The findings and implications of the present study provide many legitimate avenues for future research. First, results confirming Pfau et al.'s (1995) observation that prime-time fiction's portrayals of physicians are more negative than they were in the past calls for a study of Pfau et al.'s prediction that exposure to these more negative physician representations may decrease the public's confidence and trust in

real life physicians. It would also be interesting to examine the reverse possibility that exposure to fictional television's more negative doctor images may increase the public's appreciation and satisfaction with their own real life doctors because of the positive contrast effects associated with comparing real life physicians with television fiction's doctors. Similarly, the association between exposure to non-fictional programming and perceptions of doctors should be investigated and compared to the relationship between beliefs and fictional programming to better understand the role that content realism plays in media effects.

Second, the role of cognitive processing in the relationship between exposure to television's contrasting images of physicians and perceptions of physicians should be studied. Such research would help predict not only the outcomes associated with the present study, but the relative influence of fictional and non-fictional television programming of all content types on various beliefs.

Finally, an investigation of the physicians and the medical industry as portrayed on reality-based programs on network and cable television and on various Internet websites should be conducted. Today there are cable networks devoted to health (e.g., America's Health Network and Discovery Health), and networks not solely dedicated to medical issues also air reality medical programming (e.g., The Learning Channel's *Trauma: Life in the ER*). Furthermore, the Internet offers a plethora of web sites that provide medical information and on-line consultations with physicians. Continued research of this type may provide insight into other important sources of medical information that may be used to improve the health of individuals and the functioning of the medical industry.

Note

^{1,2,3} Results of these *t*-tests may be obtained by contacting the first author.

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