

Evaluating Media Ethics According to Fuzzy Method

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Abstract

Media ethics is considered to be among the very principal and vital component of media-related jobs since it shapes social, civic and moral space for the mass at whatever local, national, international and globalized levels. If the principles and codes of media ethics are not observed by journalists, media men and women working at the personal, the broadcast and interactive, the audio and audio-visual and the printed media, the fixed and the mobile, the convergent and the stand-alone media, morality can not be seen as the product of ethics nor no ethical behavior can be observed as the result in journalism. In this paper 13 main constructs which affects journalists' media ethics are examined. Each construct traces one objective as far as media ethics are concerned. The relative ideal status of each of these

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constructs are examined through questionnaire and comments from the relevant media experts as well as the triangular fuzzy number. Meanwhile the relevant real status of each of the constructs are obtained through a triangular fuzzy number from the respondents. Taking advantage of two fuzzy triangular numbers, the distance of the real and ideal status of each construct were calculated which were finally classified in the following three categories. A- Constructs whose real status distance were very close to the ideal status: that is independence, awareness, and avoiding disinformation, B- constructs whose real status distance from the ideal status were relatively more that is observing people's privacy, observing national identity, objectivity, impartiality, sympathy, honesty, observing public decency, accountability and coherence. And finally C- Constructs whose real status distance from ideal distance were very high that is the responsibility.

Keywords: Media Ethics, Fuzzy set theory, Distance of two fuzzy numbers, Ranking

1. INTRODUCTION

One of the greatest challenges facing journalists, reporters, editors, and content managers is an anomaly or a state of confusion in providing an operational definition for ethical principles and standards within the context of historical and cultural background specific to a given country; such as Iran. Along with this conundrum, we can also refer to prioritizing, classifying, and weighing processes in line with evaluating such principles and standards as another challenging issue. It is also important to refer to the role of mathematical models; such as fuzzy theory which can be implemented in human sciences. One of the main features of gathering data in human sciences; such as sociology, psychology, or mass communication is to use questionnaire in order to gather opinions or ideas of specific representative of a given population. However, due to its qualitative nature, the responses recorded by the researcher do not easily lend themselves to proper quantification that the researcher requires in order to make relevant decision. Often on, one might even suggest, that the extend of systematic errors, which inflicts decision making, is due to the nature of qualitative data and its limitation in becoming quantified. In response to this problem in qualitative data, the researcher applied a specific model borrowed from mathematics in order to render qualitative data into the quantitative corresponds.

In line with the main trend of this investigation, the researcher first identified the constructs of media ethics and then he classified them regardless of their subjective and/or cultural interpretation. In other words, the classification lent itself to a standardization of the weighs of each construct. Among many studies on media ethics, one can refer to Cohen-Almagore (2001), Rao and Lee (2005), Herrscher (2002), Strentz (2002), Brkrobarny (2000), and Granpai (1999). In fact, in most of these studies, the data gathered are presented as quantitative rather than qualitative values.

In the second part of the study, the researcher reviewed the nature of "Fuzzy" mathematical concept by reviewing two example of this quantitative rendering. In the third

part of the study, the researcher presented an array of definitions for construct which make up media ethics. Afterwards, the researcher analyzed the data gathered in light of the mathematical model and finally, implication and suggestions for further studies were presented.

2. Mathematical Analysis

We review the fundamental notions of fuzzy set theory, initiated by Bellman and Chen (1994), to be used throughout this note. Below, we give definitions and notations taken from Chen (1994).

Definition 1. Let X be the universal set. \tilde{A} is called a fuzzy set in X if \tilde{A} is a set of ordered pairs $\tilde{A} = \{(x, \mu_{\tilde{A}}(x)) : x \in X\}$, where $\mu_{\tilde{A}}(x)$ is the membership value of x in \tilde{A} .

Remark 1. The membership function of A ($\mu_{\tilde{A}}$) shows the degree that x belongs to \tilde{A} .

Definition 2. The support of a fuzzy set \tilde{A} is a set of elements in X for which $\mu_{\tilde{A}}(x)$ is positive, that is,

$$Supp \tilde{A} = \{x \in X : \mu_{\tilde{A}}(x) > 0\}.$$

Definition 3. A fuzzy set \tilde{A} is convex if

$$\forall x, y \in X, \quad \forall \lambda \in (0,1) \quad \mu_{\tilde{A}}(\lambda x + (1-\lambda)y) \geq \min\{\mu_{\tilde{A}}(x), \mu_{\tilde{A}}(y)\}.$$

Definition 4. A convex fuzzy set \tilde{A} on R is a fuzzy number if the following conditions hold:

(a) Its membership function is piecewise continuous. (b) There exist only x_0 that $\mu_{\tilde{A}}(x_0) = 1$.

Definition 5. A fuzzy number \tilde{A} is called positive (Negative), if its membership function is such that $\mu_{\tilde{A}}(x_0) = 0, \forall x < 0 (\forall x > 0)$.

Definition 6. (L-R fuzzy number) A fuzzy number \tilde{A} is of L-R type if there exist reference function L (L for left), (R for right) and scalars $\alpha > 0, \beta > 0$ with

$$\mu_{\tilde{A}}(x) = \begin{cases} L\left(\frac{m-x}{\alpha}\right) & , \quad x \leq m \\ R\left(\frac{x-m}{\beta}\right) & , \quad x > m \end{cases}$$

m , called the mean value of \tilde{A} , is a real number, and $\alpha > 0, \beta > 0$ are called the left and right of \tilde{A} , is a real number, and $\alpha > 0, \beta > 0$ are called the left and right expanse respectively, \tilde{A} is denoted by $(m, \alpha, \beta)_{LR}$.

When $L(x) = R(x) = \begin{cases} 1-x & , \quad 0 \leq x \leq 1 \\ 0 & , \quad otherwise \end{cases}$
 then we have triangular fuzzy number.

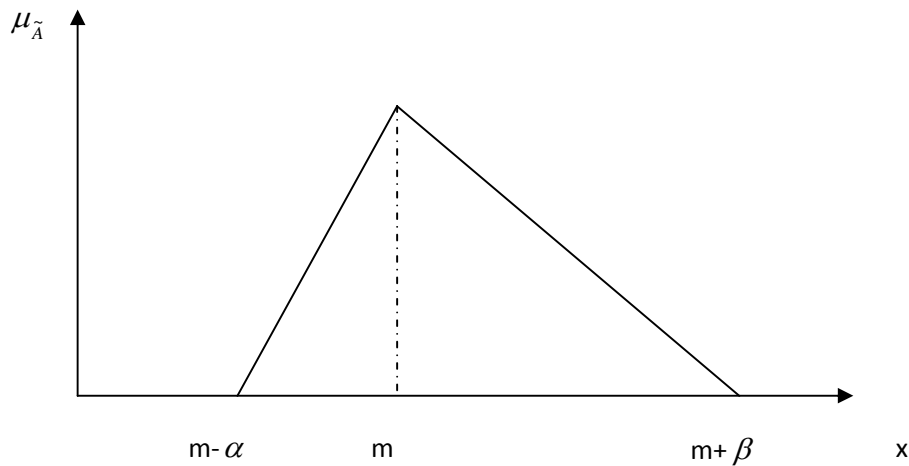


Figure 1. Triangular fuzzy number.

Now suppose that \tilde{A} and \tilde{B} are two trapezoid numbers:

$$\tilde{A} = (m, \alpha, \beta) \quad , \quad \tilde{B} = (m', \alpha', \beta') \quad 11$$

then, the distance between two trapezoid numbers is calculated as follows:

$$d(\tilde{A}, \tilde{B}) = \sqrt{\frac{1}{3} \{ [(m - \alpha) - (m' - \alpha')]^2 + [m - m']^2 + [(m + \beta) - (m' + \beta')]^2 \}}$$

Example: Let $\tilde{A} = (1, 0.8, 1)$ and $\tilde{B} = (1.1, 0.8, 0.3)$, then the distance between A and B is as follows:

$$d(\tilde{A}, \tilde{B}) = \sqrt{\frac{0.38}{3}}$$

3. Data

Media ethics is considered as made up of applied ethics and professional ethics with a synthesis of description and theory. The researcher presented thirteen construct for media ethics. The following table presents the constructs along with their definition.

	Type of construct	Definition
1	Honesty	Avoiding telling lies about a social event
2	Observing people's privacy	Acknowledging private properties, avoiding trespassing private space and respecting people's reputation and stature
3	Independence	Avoiding any affiliation with political parties, ethnic groups, or any other ideological trends
4	Observing national identity	Defending national values in terms of national language, cultural heritage, religious values, historical and social tradition.
5	Avoiding disinformation	Damaging the news reference in order to accomplish a journalistic goal.
6	Observing public decency	Avoiding indecent thought and social misconduct
7	Sympathy	Developing tolerance for religious, political, and cultural ideas.
8	Awareness	Deep comprehension of information and profound interpretation of the news for the audience
9	Coherence	Systematizing the gathered information and avoiding haphazard classification of information
10	Objectivity	Avoiding contamination of information using personal interpretation
11	Impartiality	Avoiding taking side with the news in favor of a specific political party
12	Conscientiousness	Leading people towards adaptation, progress, and meeting requirements for the public
13	Accountability	Observing the audience right to know about the reference of the news and other properties of it.

Table 1. Type of construct

Having classified the constructs for media ethics as mentioned above, the researcher attempted to find the real-life distance among them in order to compare the constructs with one another and calculate the distance of each construct with its ideal value.

The subjects for this study were selected among university professors in the field of communication and media, journalists, writers, decision makers, and policy makers and those who were involved with journalism. The researcher selected 300 subjects through stratified sampling procedure.

4. DATA ANALYSIS

All the constructs were presented in the questionnaire with a 5-value option, ranging from very low, low, medium, high, and very high. Next, the researcher rendered those qualitative values to “fuzzy” values, each presenting a triangular value.

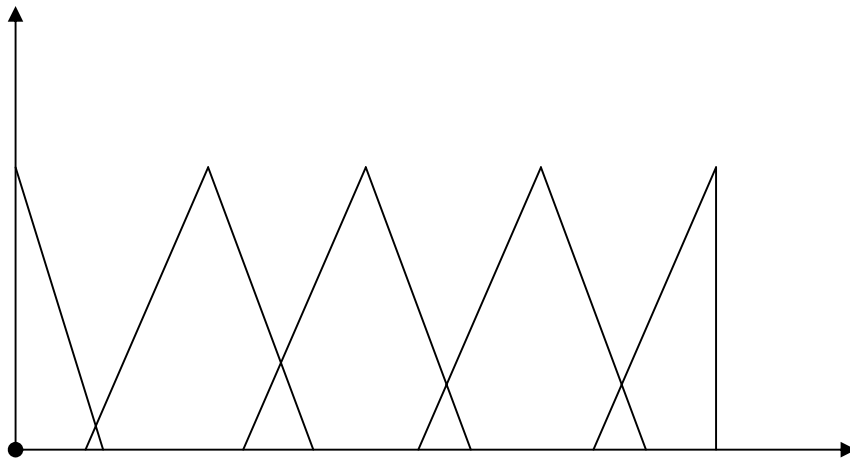


Figure 2. Rendering qualitative to “fuzzy” values.

Having gathered data, the researcher found the “Fuzzy” difference between ideal and real status of each construct.

No.	construct	Real status	Ideal status
1	Honesty	(8.9 , 13.9 , 19)	(9.5 , 15.5 , 20)
2	Observing people's privacy	(8.8 , 14 , 19.2)	(9.6 , 14.6 , 20)
3	Independence	(9.1 , 13.1 , 17.5)	(9.3 , 13.3 , 17.5)
4	Observing national identity	(9.1 , 14.1 , 19.4)	(10.1 , 15.1 , 20)
5	Avoiding disinformation	(9.2 , 14.1 , 19.2)	(9.4 , 14.5 , 19.2)
6	Observing public decency	(9 , 14 , 19.3)	(10.8 , 14.9 , 19.1)
7	Sympathy	(10 , 14.2 , 18.1)	(9.6 , 14.6 , 19.7)
8	Awareness	(10.1 , 15.2 , 20)	(10.2 , 15.5 , 20)
9	Coherence	(10.1 , 15 , 19.8)	(11.2 , 17.2 , 20)
10	Objectivity	(10.38 , 14.38 , 18.4)	(10.12 , 15.2 , 19.7)
11	Impartiality	(8.95 , 13.9 , 19)	(10.38 , 14.5 , 18.3)
12	Conscientiousness	(8.6 , 15.7 , 20)	(12.7 , 18.6 , 20)
13	Accountability	(10.32 , 14.4 , 18.5)	(9.5 , 15.5 , 20)

Table 2. **Real and Ideal status** for type of construct

Next, the researcher calculated the distance between the real and ideal status for each construct in terms of fuzzy value. We should also notice the status of each construct is rendered into a fuzzy value; hence, the researcher was able to calculate the distance accordingly.

No.		Distance
1	D(Honesty, the real status, honesty, the ideal status)	1.143
2	D(Observing people's privacy, the real status, Observing people's privacy, the ideal status)	0.739
3	D(Independence, the real status, Independence, the ideal status)	0.163
4	D(Observing national identity, the real status, Observing national identity, the ideal status)	0.887
5	D(Avoiding disinformation, the real status, Avoiding disinformation, the ideal status)	0.258
6	D(Observing public decency , the real status, Observing public decency, the ideal status)	1.168
7	D(Sympathy , the real status, Sympathy, the ideal status)	1.089
8	D(Awareness, the real status, Awareness, the ideal status)	0.182
9	D(Coherence , the real status, Coherence, the ideal status)	1.425
10	D(Objectivity , the real status, Objectivity, the ideal status)	0.900
11	D(Impartiality , the real status, Impartiality, the ideal status)	0.982
12	D(Conscientiousness , the real status, Conscientiousness, the ideal status)	2.899
13	D(Accountability, the real status, accountability, the ideal status)	1.174

Table 3. The distance between the real and ideal status

According to the above table, the constructs of ethical media can be classified and weighed in line with the distance calculated. The researcher found that, since the ideal values were higher than the real values, the corresponding fuzzy value was higher than the real value. The following Figure presents the constructs according to their relevant distance from their ideal fuzzy value.

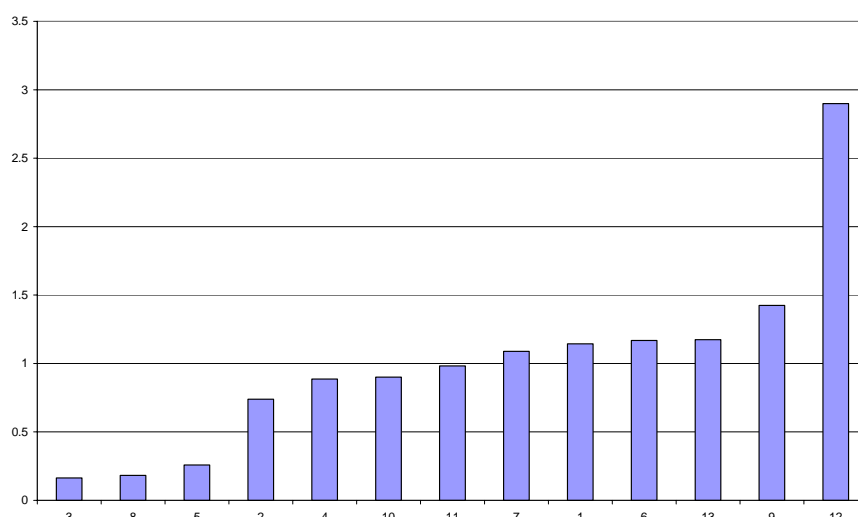


Figure 3.

5. CONCLUSION

The findings of this study supported the previous studies regarding thirteen constructs of media ethics; namely, Honesty, Observing people's privacy, Independence, Observing national identity, Avoiding disinformation, Observing public decency, sympathy, awareness, coherence, objectivity, impartiality, Conscientiousness, accountability. The distance calculated between the real and ideal status of each construct reflected the ethical deficiency in the media. In fact, more distance calls for planning and taking measure in closing the gap between the real and ideal distance. The researcher found that "coherence" and "honesty" suffer from the farthest distance and "sympathy" and "awareness" enjoy the lowest distance between the real and relevant status. In other words, according to the subjects who took part in this research, "coherence" reflects the highest distance between the real and ideal status in the media. "Honesty" took the second place in terms of the distance. Others constructs were found to be gathered around the middle, reflecting an approximately similar distance between their real and ideal status.

In trying to find the most important construct in closing the gap between the real and ideal status, the researcher found a specific order to observation for the constructs: conscientiousness,

observing national identity, Observing people's privacy, and observing public decency. In other words, the more conscious the media become of those four constructs, the smaller the distance becomes between the real and ideal status of all other constructs.

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