Neutrosophic elements in discourse

Florentin Smarandache[1], Daniela Gîfu[2], Mirela Teodorescu[3]
[1]University of New Mexico, 200 College Road, Gallup, NM 87301, U.S.A.
[2]„Alexandru Ioan Cuza" University, Faculty of Computer Science, 16, General Berthelot St., 700483, Iaşi
[3]Independent Researcher, Craiova

Abstract

Discourse analysis is a synergy of social science disciplines, including linguistics, education, sociology, anthropology, social work, cognitive psychology, social psychology, area studies, cultural studies, international relations, human geography, communication studies, and translation studies, subject to its own assumptions, dimensions of analysis, and methodologies. The aim of this paper is to present the applicability of (t, i, f)-Neutrosophic Social Structures, introduced for the first time as new type of structures, called (t, i, f)-Neutrosophic Structures, and presented from a neutrosophic logic.

Neutrosophy theory can be assimilated to interpret and evaluate the individual opinion of social structures. This type of analyse already tested and applied in mathematics, artificial inteligence as well can be applied in social sciences by reseachers in social sciences, communication, sociology, psycology.

Keywords: discourse, neutrosophy, truth, false, uncertainty

JEL classification: A10, Z10, H0

1   Introduction

The specifics of indeterminacy, of the hesitation between truth and false in social space is given by the fact that the uncertainty is not just a status of variables, but a status of the epistemic subject. Related to subject the status can be accordingly, ecquivalent of truth, diagreement, equivalent of false, or neutral. Any uncertainty is an uncertainty of creativity. In this context, neutrosophy considers a propositon, theory, event, concept, or entity, "A" in relation to its opposite, "Anti-A" and that which is not A, "Non-A", and that which is neither "A" nor "Anti-A", denoted by "Neut-A". Neutrosophy is the basis of netrosophic logic, netrosophic set, netrosophic probability and netrosophic statistic.

When we are talking about neutrosophic social structures, we have to take into account that the social structure is not a homogeneous and uniform construction. Its uni-plan appearance is the result of a correct conjecture on horizontal dimension. On the other hand, on the vertical dimension of social structure are identified three levels of the social mechanism of interaction-communication presented as network. The first level is the individual one, of the actor and the relationships he has with other actors individually. The second level is that of structure / structures of which the actor belongs (family, group, clique, clan etc.) and the third level is the social network as an integer, as whole. The social structure is configured as a whole it comprises and crosses the individuals relational (Smarandache, 2005; Teodorescu, Opran, Voinea, 2014).

In his writes, Immanuel Kant postulated intelligence as the ability to bear the uncertainty: the more ability to bear the uncertainty is greater, the higher the intelligence is. The superior minds have uncertainties, the mediocre one have indecision. Uncertainty is inextricably bound by a decision: there is not uncertainty without a thinking direction of estimation, prediction, forecasting, alternative future type (Vladutescu et al, 2010; Voinea, 2014). The novelty of this neutrosophic structure is that the uncertainty is the object of discussing, how can it to modify the structure, to which of truth or false status is going.

2   Previous work . The discourse between true and false

Neutrosophy Theory is a new science, it is applied in algebraic structures, geometry, physics, artificial inteligenge, robotics, philosophy, aestetics, communication, arts, literature. For example in communication, professor Smarandache together professor Vladutescu asserts: "Some communicational relationships are contradictory, others are neutral, since within the manifestations

of life there are found conflicting meanings and/or neutral meanings. In case of arts, M. Teodorescu and M. G. Paun shows: "what is beautiful coincides with what is good, and indeed in different historical epochs were set very close connections between beautiful and good. But if we judge by our daily experience, we tend to define as good not only what we like, but what we would like to have for us" (Teodorescu & Păun, 2014). In hermeneutics, also we have neutrosophical interpretation. Hermeneutists agree that there is an irrepressible tendency to project modern meanings of words on the texts that represent a neutrosophic approach. The hermeneutist cannot entirely escape from the condition of present time being. The interpreter's limit is the author quality. Once written, the work refuses whoever produced it, and it isolates and wrongs him. The author will never provide the best interpretation of his own work, if such an interpretation is there somehow. The author does not have a right of interpretation derived from the right he has previously had to write (de Figueiredo, 2014). In the same context, looking in arts, we can assert that an evaluation of Ugliness has some traits in common with an assessment of Beauty. First, we can only assume that the ordinary people's taste would correspond to some extent with the artistic taste of their times. "If a visitor came from outer space would enter into a contemporary art gallery, and would see female faces painted by Picasso and would hear that visitors consider them beautiful, would make the mistaken belief that the everyday reality men of our times considere beautiful and enticing that female creatures whose face resembles to that represented by the painter" (Eco, 2007). The same visitor from space could change opinions if they attend a fashion show or a Miss Universe contest, which will see that are agreed other Beauty models.

We should like to investigate the neutrosophy structures on discourse. Every discourse is the work of formatting techniques, enunciating of a message. The discourse is the original way in which the message is sent. The engaged authors in discourse study started from the finding that "the success in communication depends not only on interlocutor's linguistic competence, but the general competence of communication comprehending: a referential dimension (of the field); a situational dimension (interpersonal norms and types of discourse), a textual dimension, micro and macro-structural" (Rovenţa-Frumuşani, 2000).

Finally, "producing discourse is both controlled, selected, organized and redistributed through a number of procedures that were meant to conjure powers and dangers, to dominate the random event, to avoid overwhelming, her redoubtable materiality" (Foucault, 1998).

Truth and false are a seemingly indestructible syncretism. Cogitations effort must focus on veridic processing of the "credible" material. For this, as for any other substantial undertake, and not thorough ceremonial, is required an impulse, a triggering internal necessity, a set of tools, a set of rules and principles work (Stan, 2008; Voinea, 2011; Vlăduțescu, 2013). The veridic procedure works as the result of procedural engagement of relationships and veridic forces. The most used tools for opinion influence, all of time, are conviction and persuasion. Conviction corresponds to a communicational act aiming to alter the mental state of an individual in a context where he retains or believes that retains a certain freedom. Conviction is an effective method to influence, in that it allows to achieve the objective, but it is not always effective, i.e. it is limited in time and is uneconomical. Persuasion is more subtle, seemingly more mobile, it is directly insidious. Its objectives are the same: to change finally an opinion, an attitude or behavior, but with the agreement and through pseudo-convictive internalization from the target. Persuasion, a verbal method par excellence, it has become definitive in the current acceptance in our century, reaching the postmodern era to be theorized and widely used in complex strategies such as political techniques (Negrea, 2014). In this vast space of individual opinions, group or entire network, they can be classified in three states (truth, uncertainty, false), in part or entirely. Persuasion is a method of influencing the mind to truth or false depending on the aim of the discourse.

3   Work methodology. Arguments for Neutrosophical Social Structures

In any field of knowledge, each structure is composed of two parts: a **space**, and a **set of axioms** (or **laws**) acting (governing) on it. If the space, or at least one of its axioms (laws), has some indeterminacy of the form *(t, i, f) ≠ (1, 0, 0),* that structure is a *(t, i, f)* - Neutrosophic Structure. If the structure is applied to social area, we have *(t, i, f) - Neutrosophic Social Structures*. The *(t, i, f) - Neutrosophic Social Structures* [based on the components *t* = truth, *i* = numerical indeterminacy, *f* = falsehood] are exponential remodeled in social space from the perspective of social actor (Smarandache, 2005).

3.1. *Numerical Indeterminacy (or Degree of Indeterminacy)*, which has the form *(t, i, f) ≠ (1, 0, 0),* where *t, i, f* are numbers, intervals, or subsets included in the unit interval *[0, 1],* and it is the base for the *(t, i, f)*-Neutrosophic Social Structures.

3.2 Indeterminate Space (due to Partially Known Element).

Given the set $M = \{3, 4, 9(0.7, 0.1, 0.3)\}$, we have two elements *3* and *4* which surely belong to *M*, and one writes them neutrosophically as *3(1, 0, 0)* and *4(1, 0, 0)*, while the third element *9* belongs only partially (*70%*) to *M*, its appurtenance to *M* is indeterminate (*10%*), and does not belong to *M* (in a percentage of *30%*).

Example

Let suppose we have 2 candidates in final confronting of election, each one having own voting pool. After voting, we evaluate data from point of view neutrosophic.
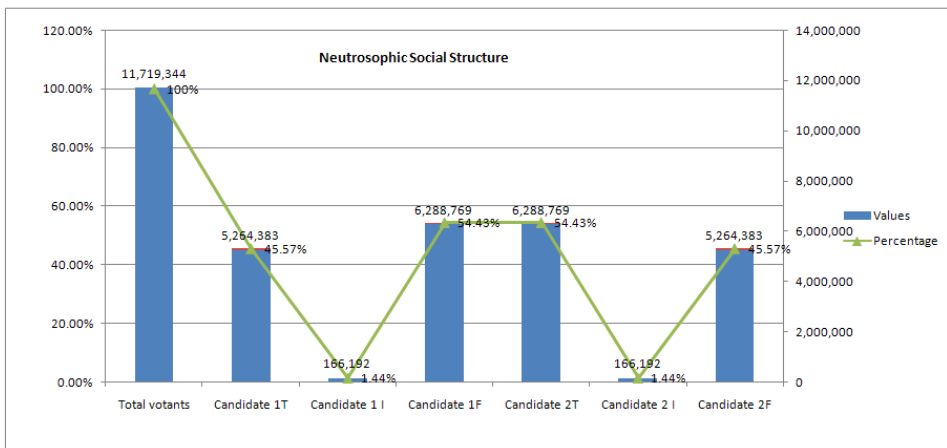
Neutrosophic analysis looks like:

Figure 1. Analysis of votings

The neutrosophic space M = {c1(t1, i1, f1), c2(t2, i2, f2)} where the law of neutrosophic social structure is: winning the election.

Data obtained of two candidates are:

In values, representing the votes:

Candidate		T		I		F	
C1	t1	5.264.384	i1	166.111	f1	6.288.769
C2	t2	6.288.769	i2	166.111	f2	5.264.384

Percentage

		T		I		F	
C1	t1	45,57%	i1	1,44%	f1	54,43%
C2	t2	54,43%	i2	1,44%	f2	45,57%

This analysis is for the votings.

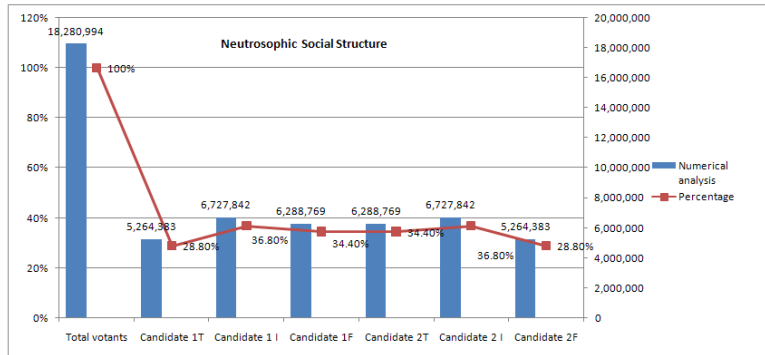We have also the analysis of whole situation of all possible votants.

Figure 2 Analysis of possible votants

In values, representing the votes:

Candidate	T		I		F	
C1	t1 5.264.384	i1	6.727.842	f1	6.288.769	
C2	t2 6.288.769	i2	6.727.842	f2	5.264.384	
Percentage						
C1	t1 28,8%	i1	i1	36,8%	f1	34,4%
C2	t2	34,4% i2	i2	36,8%	f2	28.8%

The result is relevant, indeterminacy has a very high rate, 36,8%, this evaluation can be interesting for sociologist, how to decrease indeterminacy and increase both truth and false. Important decision is how to decrease this iincertaity percentage in favor of candidates. Anyway this is interpretation from Neutrosophic Social Structures point of view (Waiyaki & Brits, 2015).

4   Conclusion

As a whole, the social structure appears as the panel of nodes and connections that represent abstract actors and relevant relations between them. The main elements of a social structure are the actor and his relationships. The actors's opinions of a structure are of infinite variety in relation to a relationship / law, with total or partial agreement, total rejection. Through this new theory of

neutrosopfy can make a qualitative and quantitative assessment and analysis of opinions, evaluation that can be used for analyze of the evaluated actors's space taken as part and then evaluated as part analysis in whole.

References

Bunăiaşu, C. M., Vlăduţescu, Ş., & Strungă, A. C. (2014). Managerial competences in the field of university curriculum for virtual learning communities. *Revista romaneasca pentru   educatie multidimensionala-Journal for Multidimensional Education*, 6(2), 17-27.

Călin, R. A., & Evelyne, A. (2014). L'impact de la negligence manifestee au cours de leur formation professionnelle par les etudiants futurs professeurs sur filesysteme educatif: etude comparative Cameroun-Roumanie. *Creativity, Imaginary, Language*.

de Figueiredo, C. M. M. (2014). *Emotions and Recommender Systems: A Social Network Approach* (Doctoral dissertation, Universidade do Porto).

Eco, U. (2005). *Istoria Frumosului*. Bucureşti: Editura RAO.

Eco, U. (2007). *Istoria Urâtului*. Bucureşti: Editura RAO.

Florea, Cristina Andreea, & Strungă, Alexandru Constantin (2015). Innovative Training Strategies in Teaching Financial and Monetary Models in the Context of Socio-Economical Cohesion. In C. M. Bunăiaşu, E. R. Opran, & D. V. Voinea, *Creativity in social sciences*. Craiova : Editura Sitech.

Foucault, M. (1998). *Ordinea discursului*. Bucureşti: Ed. Eurosong & Book.

Gîfu, D. (2013). *Temeliile Turnului Babel*. Bucureşti: Editura Academiei Române.

Iorgulescu, A. (2009). *Introducere în relaţii publice*. Universitaria.

Kot, S., & Brzezinski, S. (2015). Market Orientation Factors in Sustainable Development and Corporate Social Responsibility. *Asian Journal of Applied Sciences*, 8(2), 101-112.

Lorenc, A. K., Michnej, M., & Szkoda, M. (2014). LoadFix is an information system which   enhances security of the loading processes in railway transport. *Logistyka*, (5), 919-925.

Marcu, M. (2009). *Comunicare şi structuri organizaţionale*. Universitaria.

Monteiro, T. A., Giuliani, A. C., Cavazos-Arroyo, J., & Pizzinatto, N. K., Mezcla del Marketing   verde: una perspectiva teorica.

Niesyto, J., & Lovasova, R. (2015). The EU Funds are a Chance of the Regional Development in Reference to the Sport Infrastructure in Years 2007-2013. *Polish Journal of Management Studies*, 11(1), 100-112.

Pop, Tiberiu Viorel (2014). Concepte şi metode noi de abordare a gândirii specifice în design.   De la proiectarea de produs la designul de anticipare.

Rovenţa-Frumuşani, D. (2000). *Argumentarea. Modele şi strategii*. Bucureşti: Editura ALL.

Smarandache, F. (2015). (T, I, F) - Neutrosophic and I-Neutrosophic Structures. *Neutrosophic   Sets and Systems*, (8), 3-10.

Smarandache, F. (2015). Thesis-Antithesis-Neutrothesis, and Neutrosynthesis. *Neutrosophic Sets   and Systems*, (8), 64-67.

Smarandache, F. Neutrosophic Interpretation of Tao Te Ching (English-Chinese

bilingual),   Translation by Fu Yuhua.

Smarandache, F., & Christianto, V. (2005). *Multi-Valued Logic, Neutrosophy, and Schrodinger Equation*. Infinite Study.

Smarandache, Florentin, & Osman, Salah (2007). *Neutrosophy in Arabic Philosophy*. Renaissance High Press, Ann Arbor.

Stan, N. R. (2008). The relation between human dignity and human rights in the Orthodox perspective. Institut oecuménique.

Vlăduţescu, Ş. (2013). A battle with uncertainty 1 of the communication as an Academic discipline: title uncertainty. *Studies on Literature, Discourse and Multicultural Dialogue*, 493-504.

Vladutescu, Stefan; Cucui, Ion; Popescu, Delia Mioara; et al. (2010). Communication in Negative   Journalism. Edited by: Mastorakis, N; Mladenov, V; Zaharim, A; et al. Conference: 8th International Conference on Management, Marketing and Finances Location: Penang, Malaysia Date: Mar 23-25, 2010 Recent Advances in Management, Marketing, Finances: Proceedings of the 8ᵗʰ WSEAS International Conference (MMF 10)   Book Series: Recent Advances in Electrical Engineering Pages: 161-165 Published: 2010.

Voinea, D. V., Buşu, O. V., Opran, E. R., & Vlăduţescu, Ş. (2015). Embarrassments in Managerial Communication. *Polish Journal of Management Studies*, 11(2), 171-180.

Voinea, D. V., Negrea, X., & Vlăduţescu, Ş. (2014). Interpersonal communicational manipulations. *Postmodern Openings*, (04), 43-56.

Waiyaki, E. C., & Brits, A. (2015). Leveraging Telematics for Optimal Fleet Performance. *International Journal of Business*, *1*(1).