



RESEARCH AND SCIENCE TODAY

~ Scientific Review ~

~Spring~

No. 1(17)/2019
March 2019

ISSN-p: 2247 – 4455
ISSN-e: 2285 – 9632
ISSN-L: 2247 – 4455

Târgu-Jiu 2019

Cover: Batcu Alexandru

Editing: Mărcău Flavius-Cristian

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JOURNAL 245**

PARENTAL MIGRATION AS NEGLECT: THE NEGATIVE IMPACT OF MISSING PARENTS ON THE BEHAVIOUR OF CHILDREN LEFT BEHIND IN MOLDOVA

Snejana SULIMA¹

ABSTRACT:

IN THIS PAPER, WE CONCEPTUALIZE THE PHENOMENON OF CHILD NEGLECT IN A PARTICULAR CONTEXT OF PARENTAL MIGRATION AND EXAMINE WHAT ARE THE LINKS BETWEEN PARENTAL ABSENCE AND THE NEGATIVE BEHAVIOUR OF THEIR CHILDREN. OUR ANALYSIS IS BASED MAINLY ON OUR EMPIRICAL RESEARCH WITH THE PARTICIPATION OF MOLDOVAN ADOLESCENTS IN CONFLICT WITH THE LAW WHOSE PARENTS WERE OR HAD BEEN IN MIGRATION. WE FOUND THAT IN THE APPRAISAL OF THE CAUSALITY OF THE MINORS' DELINQUENCY, IT IS CLEAR THAT THE FREQUENCY AND THE QUALITY OF MAINTAINED RELATIONS WITH MIGRANT PARENT(S) AND WITH THE CAREGIVER AT HOME ARE OF CRUCIAL IMPORTANCE.

KEY WORDS: PARENTAL MIGRATION, CHILDREN LEFT BEHIND, CHILD NEGLECT, JUVENILE DELINQUENCY, REPUBLIC OF MOLDOVA

INTRODUCTION

Over the last few years, the high figures of emigration from Moldova attracted the attention of international organizations, of civil society as well as of the domestic authorities on the situation of the children left behind. According to UNICEF², one in five Moldovan children has one or both biological parents working abroad. While many migrants stay in contact with their family members, in some cases children may lose the care, the emotional support, and the guidance of one or both parents.

The issue

While some authors highlight the positive impact of remittances sent to children in Moldova by their parents working abroad³, others emphasize the negative impact of parental

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²UNICEF Moldova, „Children of Moldova,” (2014), accessed Mars 2, 2016, <https://www.unicef.org/moldova/children.html>.

³Franziska Gassmann et al. „The impact of migration on children left behind in Moldova,” UNU-MERIT Working Paper Series 43 (2013); Matthias Luecke and Tobias Stöhr, The Effects of Migration in Moldova and Georgia on Children and Elderly Left Behind: Country Report: Moldova (EuropeAid Project: DCI-MIGR/210/229-604, 2013);

migration⁴. The negative impact refers to: the unpleasant emotional state as sadness, isolation, and insecurity; the deterioration of the academic performance because of the lack of parental support and encouragement; sometimes hidden health problems; a higher risk for drug abuse, dropping out of school, precocious sexual relationships, and socially undesirable behaviour; more vulnerability to become victims of crimes; troubled relationships with the peers because of envy of better living standard of migrants' children; loneliness, isolation and lack of attention, and in most extreme cases the consequences could be attempted suicide or criminal behaviour. Some authors suggest an increased risk of abnormal conduct problems, especially for boys⁵.

The present study

By observing the situation of the children left behind in Moldova our aim was to disclose in what ways the parental migration shapes children's behaviour. Does parents' attitude while away influence their children's conduct? In what cases the migration of the parent(s) can be associated with child neglect? Which of these children are most exposed to the risk of developing negative manners?

The role of the family, of the school, and of the community all weigh into the formation of the child's and adolescent's personality. The absence of a parent cannot generally be fully compensated by other persons, however an increased attention paid to these children can make a significant difference for their future. We assume that the lack of direct parental supervision can influence negatively a child's behaviour. Yet, this assertion must be nuanced and incorporate other factors that have an impact on children's conduct in combination with their parents' migration. Many variables related to the personality of the child, his or her age and sex, his or her relationship with the caregiver at home, but also the parent's attitude while away from the household must be considered in researching the influences on the behaviour of children left behind. It appears that parental migration associated with a severe neglect has a damaging influence on the child's well-being and can lead to a deterioration of his or her conduct, leading sometimes to delinquency.

THEORETICAL FRAMEWORK

For the present study we draw on theories explaining what the neglect of a child means and when the juveniles are most at risk to develop a delinquent behaviour.

⁴ Diana Cheianu-Andrei et al., Specific needs of children and elderly left behind as a consequence of migration (2011), accessed Mars 12, 2016, <http://www.iom.md/specific-needs-children-and-elderly-left-behind-consequence-labour-migration>; Igor Dolea et al. Fenomenul delincvenței juvenile în Republica Moldova (IRP, Chisinau: 2011); Azzedine Salah „The impacts of migration on children in Moldova,” (2008) accessed February 22, 2016, [https://www.unicef.org/The_Impacts_of_Migration_on_Children_in_Moldova\(1\).pdf](https://www.unicef.org/The_Impacts_of_Migration_on_Children_in_Moldova(1).pdf); Michaella Vanore et al. „Left behind' but not left alone: Parental migration & the psychosocial health of children in Moldova,” Social Science & Medicine 132 (2015). DOI: 10.1016/j.socscimed.2014.08.040, 252-260; Liza Yanovich „Children Left Behind: The Impact of Labor Migration in Moldova and Ukraine,” Migration Policy Institute (2015), accessed February 15, 2016, <https://www.migrationpolicy.org/article/children-left-behind-impact-labor-migration-moldova-and-ukraine>.

⁵ Dolea et al. Fenomenul delincvenței juvenile; Valentin Prohntitchi, „Poverty of the Children of Moldovan Migrants,” (2007), accessed Mars 10, 2016, http://pdc.ceu.hu/archive/00006756/01/ExpertGrup2007_Poverty_of_the_Children_Left_Behind_by_Moldovan_Migrants.pdf; Vanore et al. „Left behind' but not left alone”.

Parental neglect

Reviewing the literature on the forms of neglect Miller-Perrin and Perrin⁶ identify several subtypes characterized by different kind of failure of the parents: health care neglect, personal hygiene neglect, nutritional neglect, neglect of household safety, neglect of house hold sanitation, inadequate shelter, abandonment, supervisory neglect, emotional neglect, fostering delinquency. The World Health Organization (WHO) and the International Society for Prevention of Child Abuse and Neglect (ISPCAN) provide a more developed definition of the neglect, which includes both isolated incidents, as well as a pattern of failure over time on the part of a parent or other family member to provide for the development and well-being of the child where the parent is in a position to do so. The areas of failure include: health, education, emotional development, nutrition, shelter, and safe living conditions. It is not necessarily the poverty the cause of neglect, the parents of neglected child may equally be financially well-off⁷. Researchers at Harvard University's Centre on the Developing Child highlight the aspect of deprivation associated with the neglect which is "the absence of sufficient attention, responsiveness, and protection that are appropriate to the age and needs of a child"⁸. If 'occasional inattention' probably does not meet a threshold for a social services' child protection intervention, 'chronic under-stimulation' and 'severe neglect in the family context' requires an adapted intervention, usually as rapidly as possible. A developmental perspective challenges the understanding of the neglect according to the individual needs of the child and emphasizes its effects on the development of the child⁹. A severe neglect presents a greater risk of emotional, behavioural, and interpersonal relationship difficulties later in life¹⁰.

Adolescence and delinquency

Adolescence is a propitious period for deviance, yet it only leads some youngsters to delinquency¹¹. Family plays a considerable role in the emergence of the socially adapted behaviour but also of maladjusted behaviour¹². According to several authors it is precisely the

⁶ Cindy L. Miller-Perrin and Robin D. Perrin, *Child maltreatment: An introduction* (2nd edition. Thousand Oaks, CA: Sage Publications, 2007).

⁷ World Health Organization and International Society for prevention of Child Abuse and Neglect, *Preventing child maltreatment: a guide to taking action and generating evidence* (WHO Press, 2006).

⁸ Center on the Developing Child (CDC) Harvard University, „The Science of Neglect: The Persistent Absence of Responsive Care Disrupts the Developing Brain,” Working Paper 12 (2012),

⁹ Julie L. Crouch and Milner Joel S., „Effects of child neglect on children,” *Criminal Justice and Behavior* 20(1993).

¹⁰ Ruth Gilbert et al. „Burden and consequences of child maltreatment in high-income countries,” *Lancet* 373(2009); Alexander Muela et al., „Definition, Incidence and Psychopathological Consequences of Child Abuse and Neglect,” in *Child Abuse and Neglect – A Multidimensional Approach*, ed. Alexander Muela (Rijeka: InTech, 2012), 2-20; Marije Stoltenborgh et al. „The neglect of child neglect: a meta-analytic review of the prevalence of neglect,” *Social Psychiatry and Psychiatric Epidemiology* 48(2013). DOI: 10.1007/s00127-012-0549-y.

¹¹ Michel Born, *Jeunes déviants ou délinquants juvéniles?* (Bruxelles: P. Mardaga, 1987).

¹² Michel Born, *Psychologie de la délinquance* (Bruxelles: De Boeck, 2005); Michel Born, *Pour qu'ils s'en sortent! Comment intervenir efficacement auprès de jeunes délinquants* (Bruxelles: De Boeck, 2011); Michel Born and Dominique Helin, „La résilience de délinquance dans le contexte des relations familiales,” in *Relation familiale et résilience*, ed. Jean-Pierre Pourtois and Huguette Desmet (Paris: L'Harmattan, 2000), 197-213; Eliane Bouyssi re-Catusse and Jean-Philippe Raynaud, *Adolescents difficiles: penser et construire des partenariats*. (Toulouse:  ditions  res, 2012); Carol Hayden, *Children in trouble. The role of the families, schools and communities* (New York: Palgrave Macmillan, 2007); Sebastian Roch , *La d linquance des jeunes. Les 13-19 ans racontent leurs d lits*. (Paris: Seuil, 2001).

lack of parental supervision that plays an important criminogenic factor for the adolescents¹³. ‘Supervision’ or ‘control’ means “awareness about the minors’ activities, their company, their school performances or their leisure activities”¹⁴. Fréchette and LeBlanc¹⁵ suggest that the peak in committing offences is situated in the middle of the adolescence. For many authors, age turns out to be one of the most efficient indicators to predict the ‘acceleration’ or the ‘deceleration’ of criminal behaviour in the subsequent lifestyle of the subjects¹⁶. Therefore low parental involvement at this age, weak family cohesion, and poor parent-child communication increase the risk for delinquency¹⁷.

Searching for factors predicting the abstention from engaging in delinquent behaviour, Johanson and Menard¹⁸ observed that “stronger bonds to parents” can be a positive influence. On the one hand, discipline practice applied by parents can be a strong positive predictor for desistance in young adulthood¹⁹. On the other, several studies demonstrate that exposure to neglectful parenting and inconsistent discipline can result in life-course persistent antisocial behaviour²⁰. Also, the weak monitoring and the lack of parent-child warmth can lead to the same effect²¹.

There is a quite poor research on the links between the migration of the parents and the negative behaviour of their children left behind. When the studies in Asia did not find relevant evidence that the family separation leads to an intensification of delinquency among children²²,

¹³ Catherine Blatier, *Les personnalités criminelles. Evaluation et prévention*. (Paris: Dunod, 2011); David Farrington, *Understanding and Preventing Youth Crime*. (York: York Publishing Services Ltd/ Joseph Rowntree Foundation, 1996); Marc Leblanc, „La délinquance des adolescent,” in *Traité des problèmes sociaux*, ed. Fernand Dumont et al. (Québec: Institut québécois de recherche sur la culture, 1994), 279-300; Rolf Loeber and Thomas J. Dishion, „Early Predictors of Male Delinquency: A Review,” *Psychological Bulletin* 94 (1983): 68-99; Rolf Loeber and Thomas J. Dishion, „Antisocial and delinquent youths: Methods for their early identification,” in *Prevention of delinquent behavior*, ed. John D. Burchard and Sara N. Burchard (Newbury Park, CA: Sage, 1987); Rolf Loeber and Magda Stouthamer-Loeber, „Predictions,” in *Handbook of juvenile delinquency*, ed. Herbers C. Quay (New York: Wiley & Sons, 1987).

¹⁴ Catherine Blatier, *La délinquance des mineurs. L’enfant, le psychologue, le droit* (Grenoble: PUG, 2014).

¹⁵ Marcel Fréchette and Marc LeBlanc, *Délinquances et délinquants* (Gaëtan Morin éditeur, 1987).

¹⁶ David Farrington, „Childhood origins of teenage antisocial behaviour and adult social dysfunction,” *Journal of the Royal Society of Medicine* 86(1993), 13-17; Fréchette and LeBlanc, *Délinquances et délinquants*; Joan McCord, „A Longitudinal Perspective on Patterns of Crime,” *Criminology* 19(1981); Marvin E. Wolfgang et al. *Delinquency in a Birth Cohort* (Chicago: University of Chicago Press, 1972).

¹⁷ Deborah Gorman-Smith et al., „The relation of family functioning to violence among inner-city minority youths,” *Journal of Family Psychology* 10(1996); Deborah Gorman-Smith et al., „Relation of family problems to patterns of delinquent involvement among urban youth,” *Journal of Abnormal Child Psychology* 26(1998); Gerald R. Patterson et al., „A developmental perspective on antisocial behavior,” *American Psychologist* 44 (1989).

¹⁸ Matthew C. Johnson and Scott Menard, „A longitudinal study of delinquency abstention differences between life-course abstainers and offenders from adolescence into adulthood,” *Youth Violence and Juvenile Justice* 10(2012): 278–291.

¹⁹ Sophie M. Aiyer et al. „Predicting desistance in a high-risk sample: examining the influence of individual and contextual factors,” *Journal of community psychology* 41(2013): 408–424

²⁰ Aiyer et al., „Predicting desistance”; David M. Bousha and Craig T. Twentyman, „Mother-child interaction style in abuse, neglect, and control groups: naturalistic observations in the home,” *Journal of Abnormal Psychology* 93(1984); Terrie E. Moffitt and Avshalom Caspi, „Childhood predictors differentiate life-course persistent and adolescence-limited antisocial pathways, among males and females,” *Development & Psychopathology* 13(2001): 355–375.

²¹ Kenneth A. Dodge and Gregory S. Pettit, „A biopsychosocial model of the development of chronic conduct problems in adolescence,” *Developmental Psychology* 39(2003); Gerald R. Patterson et al., „Cascading Effects Following Intervention,” *Development and Psychopathology* 22(2010). DOI: 10.1017/S0954579410000568, 949–970.

²² Maruja Asis, „Imagining the Future of Migration and Families in Asia,” *Asian and Pacific Migration Journal* 9 (2000).

others noticed an increased incidence of psychological disturbance, juvenile delinquency, and social problems among the children of migrants²³, particularly when the mother migrated²⁴. Another analysis of the emotional health of children in transnational families found that Indonesian children with migrant fathers were slightly more likely to have an emotional problem than children with both parents at home, whereas Thai children with a father abroad were slightly more likely to have a conduct problem²⁵. Additional research has suggested that it is the combination of who has migrated and who takes on caregiving roles that shapes how children cope with parental migration. Children of migrants cared for by grandparents were found to be more likely to experience severe loneliness in China²⁶ and to feel emotional distress and show delinquent or high-risk behaviour in Moldova²⁷.

METHODS

For this study we used a qualitative analysis of data based on interviews with detainee adolescents that had experienced or were experiencing at the time of our survey their parent(s)' migration due to work (23 participants). Additionally, we analysed the data provided by the Moldovan probation system which conducted a survey by questioning supervised minors in the same situation (77 persons). This data helped us bring into focus the contour of the 'children left behind' phenomenon and gain an understanding of how this situation can induce behavioural problems to these children. We also tried to assess if the concept of 'parental neglect' can be used as a tool for anticipating the possible negative outcomes for children left behind. The intersection of qualitative data with available quantitative data on the number of children with migrant parents and on the juvenile delinquency in this country helped us estimate in which situations there is an increased risk of damaging conduct of the children left behind.

RESULTS

In January 2016, 19 out of the total of 28 young boys, detainees from specialized Penitentiary (No. 10-Goian), and 4 from the other Penitentiary (No. 13) were living or had lived an experience of parental migration. By semi-directed interviews we explored these minors' own perception of two main issues: their personal relations (with the migrant parent, with the caregiver at home, with peers and other important persons to them) and their living conditions after their parent(s)' departure. Our purpose was to understand how convicted children conceptualize the impact of labour migration on their situation. After asking several general questions on their age, their living area, the reason of their conviction, the country where the absent parent(s) was/were working, and the frequency of the contacts with him/ her, we focused on minors' reflections on the absence of the parent(s) in their everyday life and on what links (if any) they saw between this absence and their own damaging behaviour.

²³ Anna Luvia D'Emilio et al., „The Impact of International Migration: Children Left Behind in Selected Countries of Latin America and the Caribbean,” Working Papers (2007), accessed Mars 15, 2016, http://www.childmigration.net/UNICEF_2007.

²⁴ Rhacel Salazar Parreñas, *Children of Global Migration: Transnational Families and Gendered Woes* (Stanford: Stanford University Press, 2005).

²⁵ Elspeth Graham and Lucy P. Jordan, „Migrant parents and the psychological well-being of left-behind children in Southeast Asia,” *Journal of Marriage and Family* 73(2011).

²⁶ Zhaobao Jia and Wenhua Tian, „Loneliness of left-behind children: a cross-sectional survey in a sample of rural China,” *Child Care Health Develop* 36 (2010).

²⁷ Dolea et al. Fenomenul delincvenței juvenile; Prohnițchi „Poverty of the Children of Moldovan Migrants”.

General statistics on young detainees left behind

The gathered statistic related to the provenience of the interviewed participants shows that the majority of them were from the rural area (78 %). The reason of the conviction was theft (in 8 cases) and/or robbery (3), sexual crimes (8), vandalism (1), or body injury (1). The age of the minor when he committed the crime varies between 13 and 16 years, and they either operated alone (13) or in groups of 2-3 persons (11). The absent parent was the mother in 9 cases, the father in 7 cases, and in the other 7 cases both parents. The age of the child at the moment of the parent's departure varies from few months to 4 years (10), 7-10 years (9), 14 years or more (4). In the majority of cases, the parent who did not migrate or the grandparent(s) were the caregivers, in some cases it was an older brother or sister, or a neighbour. The frequency of the contacts with the migrating parent(s) also varies, when some maintained a daily contact (5), some weekly or monthly (11), others did not maintain any contact with the left child (7). Almost in half of the cases the migrating parents did not return (7) or did it very rarely (3), and the others visited their children once a year.

Interviews with minors in detention

The participants to our survey had mixed feelings about their personal relations with their parents, with other caregivers, with peers, and with other persons. They appreciate the relations with their migrating parent(s) as 'normal' or 'good', or as 'bad' or 'difficult' mainly due to the aggressiveness of the father. Almost half of these children consider that the absent parent is responsible for their present situation and that the lack of interest, implication, affectivity or direct supervision is related to their negative behaviour.

Description of personal relations. The participants were asked to describe the role of the absent parent(s) in their life. The questions about the relations with the caregiver(s) at home often revealed difficulties with the father and/ or the grandparents. The youngsters sometimes mentioned negative environment and the lack of affectivity at home, bad influences of their peers or of other persons met in their life.

After my mother's depart abroad we maintained good relations. She was calling us [seven children of the family] once a month asking how we were doing. It is very difficult to live without her for all of us; it used to be different when she was home. Although I was very young when she left (3 years) I remember her being very nice to me. She has never come to visit us for the last 14 years. My father [at home] was very aggressive with us sometimes. And the grandmother wouldn't understand me. I think if mother were home maybe I would have not done what I did. Today she is not aware of me being in prison, I do not want to upset her (G., 17 years old, convicted for theft).

My mother is in Italy, my parents are divorced. When my mother leaves for work I stay with my older sisters. I was 12 years old when she left for the first time. She used to call us every day. I do not see any link between my mother's absence and my present situation. But growing with a father like mine hasn't been really easy. He doesn't care about me. [...] Those 'friends' had many times bad ideas, I was young and stupid listening to them (G., 18 years old, convicted for sexual violence).

My both parents went to work abroad, I was 9 years old when they left, first my step father, then my mother. My relationships with my parents are good; they call every day while abroad. I do not know who my biological father is. I stayed home with my older

sister and other two brothers. While both parents were abroad, a woman from our village was taking care of us. She was paid by our parents, but our relations with her were very bad, she used to take our food and money (A., 17 years, convicted for sexual violence).

You know, it was my father who convinced me to do this 'job' [theft] with him. But after that he disappeared leaving me alone to be responsible. How could I love him?! He's actually destroyed my life. Now I think he is hiding in Ukraine, I do not know if he works there, I doubt it (O., 17 years, convicted for theft).

In several cases minors brought more attention to the parents' divorce than to the migration of one of them. They underlined the father's aggressiveness towards them and their mother, assuming that it was better that he had migrated, and they would not have to face that aggressiveness anymore.

I was 3 or 4 years old when my father left for the first time for Russia to work, but I remember him being very violent with us [children and mother]. Today, me and my brother, we do not maintain any relation with him; it is better like this. Anyway, I think he is not interested in helping me and knowing how I am doing. Maybe if I had had a good father, I could have had a different situation today (O., 16 years old, convicted for theft).

I was 8 years old when my father left to find work abroad. Before his departure our relations were difficult. He used to beat us [three children] and currently we're not maintaining any relation with him. We stayed with our mother till she died, several years ago. Since that, I've lived with my older brother. The only relative interested in me today is my uncle; he calls me once a month. I think it is better that my father left (G., 17 years old, convicted for robbery).

I am quite attached to my mother, we have a good relationship. She's decided to go abroad and earn some money to help me while I am here. Our parents divorced when I was three years old. Maybe if my father had been more present in our life it would have been different today (I., 17 years old, convicted for sexual violence).

Sometimes the parent's migration turned into an abandonment of the child. Still, the minors do not see this attitude like a negative one all the time.

My mother left for Moscow when I was two and never came back. I have no brothers or sisters. I grew up with my grandparents and my father. Although my mother left me, which is a very bad thing, I tried to be good, to study and to behave well. My father is very ill and now I'm the one trying to help him, working to earn money for both of us. There is no connection between my situation and my mother's absence (E., 18 years old, convicted for rape).

My mother left for Israel when I was little. She never came back. In the first years she would call from time to time, but long ago she stopped keeping in touch with me. I think that my situation would have been different if she were with me. Even when she was informed about my situation she's never tried to contact me, she's never helped me, and never sent me money (N., 16 years old, convicted for robbery and kidnapping).

Both my parents are abroad. I was very little when my mother left for the first time (7-9 months). Then my father went to join her. I actually grew up with my grandmother. From time to time my father came to visit me, my mother never did, but I do not blame her, she is very busy working there (I., 18 years old, convicted for rape).

While some of participants see a link between the parent(s)' absence and their present situation, others do not establish such links.

My father has worked in Russia since I was 8-10 years old. I live with my mother and my grandparents. Although my father used to be aggressive with us I still maintained contact with him, he calls once a week. My father has no responsibility for my situation; there is no link between his departure and my behaviour (I., 17 years old, convicted for robbery).

My mother is abroad, I was 3 or 4 when she left for the first time. After a short time my father left too, and I remained with my aunt. My mother used to call me every day, but it was much better when they were home, with me. They have no responsibility for me being here, they've tried to be good parents all the time (P., 17 years, convicted for aggravated assault).

My father was already in Russia by the time I turned 6 years old. Then my mother left for Italy, I was 9. Although they are divorced now, I maintained contacts with both of them on Skype or by phone. My parents gave me too much liberty; they have no responsibility for my negative behaviour. I had too much money; I had all I've ever wanted. During their absence I was with my grandmother, but she didn't have much influence on me (I., 17 years old, convicted for hooliganism).

In most difficult situations children practically became orphans and did not have strong support in their life.

My parents used to work in Russia when I was little. Today I have no parents, they both passed away. I have an older brother and sister who take care of me (M., 17 years old, convicted for robbery).

I have lost my mother when I was little. When my father lost his work he went to Russia, I stayed with my grandmother for a while till she also passed away. I do not know where my father is today, we've lost connection (M., 17 years old, convicted for theft).

After my parents divorced, my mother left us with our father [two children]. I do not know where she is today. Then our father went to work in Ukraine. We maintained connection for a while but then he married another woman and was not interested in us anymore (M., 16 years, convicted for theft and murder).

Living conditions. In several cases the participants mentioned their 'good' or 'acceptable' living conditions. Others, most of the time, described their families' economic difficulties pushing parent(s) to migrate. However, sometimes, even after parent(s)'s departure abroad the situation did not change significantly, whether the migrant parent did not send remittances at all or the remittances were insufficient to cover the household needs.

Our mother [of seven children] sends us money from time to time (once a year) but it is never enough. My father does not work; he drinks a lot (G., 17 years old, convicted for theft).

It was difficult to live on our mother's salary. Our father [who's been working in Russia for years] has never sent any money, not even when we were little and he had legal obligation to provide for our raising (O., 16 years old, convicted for theft).

After my mother died it was quite difficult for us [two brothers] to live. We did not have enough money even for food. Our father [working in Russia] did not send any money (G., 17 years old, convicted for robbery).

We managed to have food but never enough money for other things. When you are young you also need to have good clothes, otherwise your peers can laugh and make fun of you (I. 17 years old, convicted for robbery).

When I had living parents we had a normal household. They used to work in Russia and send us money. After they passed away it has been very difficult for me. My older brother used to help me but after he had his family, I was on my own (M. 17 years old, convicted for robbery).

After my mother left for Israel we had no normal family. Father started drinking and we [two children] were on our own, trying to survive every day (N., 16 years old, convicted for robbery and kidnapping).

After my parents' divorce my father went to Ukraine. He's worked there but never sent me money, as he has now another family there. My mother drinks and doesn't work (M., 16 years, convicted for theft and murder).

Several participants described their 'good' or 'normal' living conditions due to their parents' working abroad or because their caregiver parent at home had a sufficient income.

Because my parents were working abroad we had enough money. I had everything I wanted and I was too spoiled (I., 17 years old, convicted for hooliganism).

Both my parents are mostly abroad. They send me money and call me from time to time. I don't have material problems (I., 18 years old, convicted for rape).

My parents are divorced. My mother works in Italy and I do not know where my father is. Mother sends us [me and my sister] enough money for a normal life (G. 18 years old, convicted for sexual violence).

The survey within Moldovan Probation System

According to Moldovan laws, an adolescent who committed for the first time a minor offence can be relieved from penal responsibility if authorities decide that his or her behaviour can be corrected by another remedy than penal sentence. In these cases, the juvenile is

monitored within probation system without being incarcerated. In early 2016, there were 153 juveniles under the monitoring of the Moldavian Probation System (MPS) across the country.

At our suggestion, the centralized Probation service from Moldova carried a survey on children submitted to probation and also left behind by their migrant parent(s). The assessment revealed a number of 77 minors in this situation, of different ages, from different regions of Moldova, living in most of the cases in very difficult conditions. Our purpose was to disclose their relations with parents, migrant or caregiver at home, and their family's living conditions. The analysis of the data provided by the MPS shows a variety of situations: from a severe parental neglect to positive relations with the migrant parent(s).

In most cases (50 cases), the child had an incomplete family because of the parents' separation or the death of one parent. Families are described by authorities as 'disorganized', 'split' or 'broken'. If a quarter of migrant parents are maintaining a regular contact with the left at home child, nearly another quarter of these children are totally abandoned by their parents. Therefore, there is quite a lot of vulnerability in the families of the children in conflict with the law, these families are rather incomplete, and very often there is a background of conflicts and disputes between parents or/ and parents and children. The minors described their relations with parents in positive, neutral or negative terms. For instance, some of them mentioned 'respectful', 'confident' or 'trustful' relations with parents. Others see these relations as 'normal', 'acceptable', 'superficial', 'weak', or 'cold', yet others emphasized the 'tension', 'hostility', 'difficulties' or even 'hate' between them and their parent(s).

In many cases the migrant parent(s) never returned or did so very rarely. The absence was very long, up to 10 years and even more. The contacts with the minor left behind was maintained by phone or internet 'every day', 'every week', 'once a month', 'sometimes during a year', or 'never'.

There is also a lot of material vulnerability in these children's households because of irregular wages of parent(s), deep poverty, and insecure housing.

The caregiver at home is mainly the grandparent(s), the mother when the father is abroad or the parents are divorced and the absent father does not maintain any contact with the child, the father when the mother is absent, another person (uncle, aunt, older brother or sister, a parent's concubine). In several cases the relation with the caregiver at home is tensioned. Often the leaving parent helps his child by sending him remittances without being concerned about his or her education. In many cases, when the caregivers are the grandparents, the relations with minors become difficult, they 'lose control' over the grandchildren and are not able to influence their behaviour.

In worst cases the situation of surveyed children is associated with school drop-out, vagabonding and begging, conduct problems and street living. Sometimes, the caregiver at home has health problems, alcoholism dependency, and/or is unemployed. There are many cases when the absent parent has been deprived of parental rights.

DISCUSSION

Summarizing the results of our investigation we see two crucial impacts on the development of the children left behind: one is produced by the attitude of the absent parent(s) and the other by the type of relationship with the caregiver at home. In many cases, the home caregiver is in charge with supervising and disciplining the child, while the absent parent(s) provide(s) only material help for him or her. In some extreme cases, when the parent(s) totally abandon(s) the child, the caregiver takes in charge the burdensome upbringing of the child. There are even more severe cases when the left behind child is also abandoned by the caregiver.

Minors' conceptualization of parents' absence due to migration

Exploring children's narratives on their parents' absence due to migration reveals different perception of the phenomenon. This perception is far from being unique and is mainly shaped by the attitude of the missing parent himself during the absence, but also before and, eventually, after his/ her return. It is also influenced by the attitude of the other parent and by the relationship between both parents. Consequently, children give different meanings to their parents' migration depending on the combination of above mentioned factors.

In many cases the aggressiveness of the parent prevails over his/ her other personality traits and induces a negative perception from the child. Sometimes, in such cases, the departure of the violent parent turns out to be the release from a problem and gains a positive meaning. Though, pushing the child to go further in discussions by telling how he/she expects his/ her parent to be, the child expresses the wish to have a 'normal', 'loving' and 'caring' parent.

As analysed data reveals, in many cases, the caregiver at home undertakes the education task while the migrant parent is the provider of the material needs. At the adolescence age, compared to the infantile age, children understand better these necessities and give rather a positive meaning to the parent's work migration, perceived as a 'bigger effort', even as a 'sacrifice' from the parent. Still, in many of our participant's cases, they have been left behind at a young age, therefore, the parent's migration is perceived more as abandonment and carelessness. Although some minors do not see any direct link between the parent(s)' absence in their everyday life and their antisocial behaviour, they consider that a more present parent could have had a positive impact on their situation.

Factors associated with negative behaviour of children left behind

According to the data of National Bureau of Statistics of Moldova (NBSM, 2016) the total number of juveniles that committed crimes in 2015 was 2706. The major part of the crimes was committed by boys (92.7%). The comparison of the convicted delinquency rates out of the total number of Moldovan children (192 out of 685 500 children = 0.03 %) with the number of convicted children among the children with migrating parents (0.07%) discloses a two times more increased risk of antisocial behaviour among the children left behind.

If the total number of children is 685500, and, according to the data of UNICEF (2014), every fifth child is left behind by at least one parent then the number of the left behind is 137100. At the time of our research, there were 93 minors convicted (in prison or monitored by probation offices) that had a migrating parent, which represents 0.07 % of the children left behind.

At the time of our survey, in Moldova there were three incarcerated girls in the specialized penitentiary for women, with a special section for minors. According to the data provided by the Direction of the penitentiaries none of these girls were affected by migration. As to the data provided by the direction of the MPS, among 77 analysed cases of surveyed children left behind only 3 were girls. This information shows that boys are exposed to a much greater risk of delinquency, in general, and also in the context of parental migration.

Proceeding from our present study, we assume that the risk of damaging behaviour of children left behind emerges in particular situations, associated mostly with deep neglect from their migrant parent(s) and/ or difficult relations with their caregivers at home. The absence of parents represents a risk factor for antisocial behaviour of minors mainly in combination with others factors like precarious socio-economic situation, conflictive family relations, and a poor quality of parental presence in the child's life. The teenagers violating the law in Moldova are in most of the cases victims of their socio-economic situation and of the specific parental neglect. Sometimes, their incapacity to use properly the remittances sent by their parents

working abroad lead them to a conflict with the law. Often, the generational gap when the adolescents are left with their old grandparent(s) can increase the risk of confrontational situations, driving them to violence.

The nature of offences

The most often committed crimes by surveyed minors are theft or robbery. They face material problems within their households and, in fact, their migrating parents do not necessarily bring them financial security. In many cases, the poverty of the family was too deep and the remittances from parents were too little to cover the necessities. Besides, the parents left their children without any support, neglecting them not only physically and psychologically but also materially. Indeed, there are studies that relate the material problems to the delinquency of the juveniles, showing a lower income *per capita* in their families²⁸.

The second most predominant crime committed by children and adolescents left behind have a sexual character. The impulsivity and the lack of emotional control frequently push the adolescents to the act²⁹. Smith and his colleagues³⁰ noticed that the family of sexual offenders “is less supportive and warm”. Based on clinical experience many sexual offenders are loners, spend significant amount of the time just hanging out, detached from meaningful relationships and without an emotional support group they can lean on when experiencing distress³¹. It is likely that juvenile sexual offending can be associated among other causes with the absence of the father or a father figure in the household, with poor parenting techniques, and with emotional neglect³².

CONCLUSIONS AND IMPLICATIONS

The case by case approach is necessary to measure the dimension of the neglect caused by parental migration. When most of the parents are maintaining strong connections with their child during their absence, some others are leaving for very long periods without trying to maintain contact with the child left behind. The parental migration can be considered a particular form of child neglect, and thus presents an elevated possibility for child deviant behaviour. It is not the parents’ migration in itself that determines the children delinquency. The neglect associated with a lack of supervision, affection and support, and the erratic discipline, all these in the context of the absence of the parent(s), can be predictors of an increased risk for delinquency of juveniles.

The theoretical framework of parental neglect, completed with some specific elements brought by the background of migration, can be applied to characterize the situation of the children left behind and to look for remedies to improve their condition. In searching for solutions to these complex situations the multilateral participation of key stakeholders (children, parents, State, and community) is crucial. There are many economic, social, and political challenges to overcome in order to achieve efficient results in protecting these children. It requires a permanent dialogue between all mentioned stakeholders.

²⁸ Born, Psychologie de la délinquance.

²⁹ Catherine Blatier, La délinquance des mineurs. L’enfant, le psychologue, le droit (Grenoble: PUG, 2014).

³⁰ Susan Smith et al., „Differences in self-report measures by adolescent sex offender risk group,” *International Journal of Offender Therapy and Comparative Criminology* 49(2005).

³¹ Philip D. Jaffé, „Child and adolescent sexual abusers – For a rehabilitative approach driven by scientific evidence,” in *Les jeunes auteurs d’actes d’ordre sexuel*, ed. Philip D. Jaffé and Jean Zermatten (Sion: IUKB & IDE, 2011).

³² Jaffé „Child and adolescent sexual abusers”.

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A COMPARATIVE ANALYSIS OF FINNISH AND NIGERIA BIOECONOMY: BIOENERGY AND TOURISM PERSPECTIVE

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Chijioke NWACHUKWU²**

ABSTRACT:

DEVELOPED AND DEVELOPING ECONOMIES NEED TO EXPLOIT THEIR BIOECONOMY CAPABILITIES TO ACHIEVE SUSTAINABLE ECONOMIC GROWTH AND DEVELOPMENT. THIS STUDY SEEK TO EXAMINE THE FINNISH AND NIGERIAN BIOECONOMY FROM THE PERSPECTIVE OF BIOENERGY AND TOURISM. WE USED SECONDARY DATA FROM FOOD AND AGRICULTURE ORGANIZATION (FAO), INTERNATIONAL ENERGY AGENCY (IEA), UNITED NATION WORLD TRADE ORGANIZATION (UN WTO) AND WORLD BANK TO DRAW INSIGHTS ABOUT THE SUBJECT. BASED ON AVAILABLE DATA, DESCRIPTIVE STATISTICS SUCH AS CHARTS AND FREQUENCIES WERE USED TO EVALUATE THE BIOECONOMY OF FINLAND AND NIGERIA. THIS STUDY REVEALS THAT BIOECONOMY IS DESIRABLE TO DEVELOPING NATIONS SUCH AS NIGERIA. FOLLOWING THE DIFFERENCES IN BIOECONOMIC ADVANCEMENT BETWEEN THE FOCUS COUNTRIES, OUR STUDY HAVE SHOWN THAT DEVELOPING COUNTRIES AND NIGERIA, IN PARTICULAR, WILL HAVE TREMENDOUS BENEFIT IF ITS PARADIGM SHIFT TOWARD BIO-BASED ECONOMY. IMPLEMENTING THE MEASURES AND POLICIES OF DEVELOPED ECONOMIES SUCH AS FINLAND WILL DRIVE NIGERIA TOWARDS SUSTAINABLE BIOECONOMY DEVELOPMENT.

KEYWORDS: BIOENERGY, TOURISM, BIOECONOMY, FINLAND, NIGERIA, NATURAL RESOURCES

INTRODUCTION

Previously and even more recently, advancement in bioeconomy has been perceived as an essential tool that facilitates development at national and global level. Bioeconomy encompasses all economy based on the conversion of renewable natural resources to fuel and other useful products. The development of bioeconomy has been stimulated by a number of factors such as reducing dependence on fossil fuel and fossil fuel products, food availability, and cut-down on greenhouse gas (GHG) effects in addition to the development of rural area. The definition of bioeconomy has extended beyond producing and using bio/based product but

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also includes a novel way of living sustainably (Luoma, Vanhanen & Tomila, 2011)³. Due to its importance, many countries are focusing on developing a bio-based economy, which can be forest or agro-allied industry-oriented bioeconomy. However, bioeconomy tends to achieve common goals; availability of raw materials to run the economy, how they are used, and conversion techniques differ from one country to another. These differences, as well as their underlying policies, has an impact on the perception of bioeconomy and the actions taken to accomplish the set goals amongst countries. Finland and Nigeria are typical countries with different level of development and application of bioeconomy for the enrichment of its economy. Finland is a knowledge-based advanced economy; rich in the forest reserve and like other European countries have been at the forefront for the pursuit of a biobased economy. On the other hand, Nigeria with one of the largest economies in Africa is still a developing nation that perceives bioeconomy from a different angle.

In light of abundant available resources and available biorefining technology, Nigeria stands to benefit from bioeconomy to becoming a leader in bioenergy production in Africa. Both countries are different in many regards ranging from population, climate, culture, level of technological advancement, so have a different approach towards accomplishing a biobased economy. Bioenergy can be evaluated based on natural resources, raw material types, energy sources among others. It is therefore not out of place to compare the two nation's bioeconomy based on their natural resources, raw material types, energy sources, tourism and sector-based contribution to economy measured by gross domestic product (GDP). The objective of this work is to analyze the different perspective of bioeconomy and the extent of its development in Nigeria and Finland. Also, to further understand the policies associated with the development of Nigeria and Finnish bioeconomy.

METHODOLOGY

This study is descriptive in nature and draws insights from a systematic review of literature and secondary data from Food and agriculture organization (FAO), International energy agency (IEA), united nation world trade organization (UN WTO) and World Bank. Bioeconomy is complex and difficult to measure directly, we have used bioenergy and tourism as measurement parameters.

NATURAL RESOURCES

Nature's endowment of any nation or community provides them it a unique identity and means of survival and revenue. Countries in general and our case study countries in particular, have differences in supplies of natural resources and utilization is unique to each. In this study, we focus on universal resources, land, and energy to afford a basis for comparison of both countries.

Land itself is a universal resource on which agricultural activities are done. Nigeria has large forest reserve with agriculture being one of the mainstays of the economy and has contributed substantially to the economy prior to the discovery of crude oil (Etumnu 2013)⁴ The percentage of total land area covered by forest decreased steadily from 18.9% in 1990 to 7.6% in 2015. The observed steady decrease in forest lands has been attributed to several factors such as forest encroachment, poor management as well as climate change (FAO, 2015)⁵.

³ Luoma, P., Vanhanen, J., and Tomila, T. 2011. Distributed Bio-based Economy- Driving sustainable Growth. Helsinki: Sitra.

⁴ Etumnu, Tolulope Odetola and Chinonso. 2013. "Contribution of agriculture to economic growth in Nigeria." African econometric society (AES). Accra, Ghana. 1-28.

⁵ FAO. 2015. Global Forest resources assessment: country report (online), Nigeria. Rome: FAO publisher.

Majority of the people (50.6%) live in the rural area and statistical data available from world bank 2016, shows that 78% of total land is used for agriculture purposes, 8% for forest and 14% for other purposes (figure 1). The decline in the agricultural sector development observed, is partly due to the abundance of petroleum which accounts for over 90% of the country's revenue from the export of petroleum products. Following the crash in the global price of crude oil, the potential of other sectors such as agriculture is being harnessed. In 2015, the agricultural sector accounted for 20.85% of 15,546.302 US\$ total gross domestic product (GDP)/capita of the country with higher potential when properly managed.

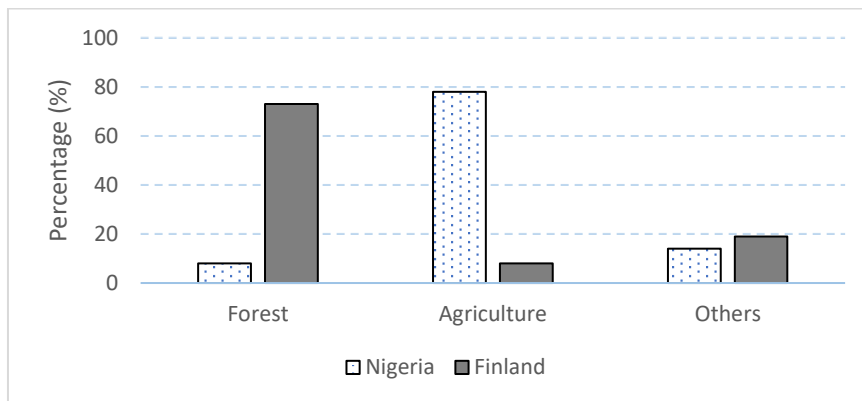


Figure 1. Land use distribution of Nigeria (left) and Finland (right). (World Bank, 2016)⁶

Finland on the other hand, reportedly has 73% of its total land area covered by forest, 8% agriculture and 19% for other use (figure 1). Due to its natural reservoir of the forest, Finland is classified as forest and wood-based rather than agricultural based economy even though agriculture contributed 2.5% of 40,978.871 US\$ GDP/capita in 2015 (Worldbank, 2016)⁷. Agricultural contribution to GDP though small is stable as opposed changes observed in Nigerian agriculture for the period under consideration (Fig 2). Urban dwellers account for 85% as opposed to 49% in Nigeria. (FAO 2017)⁸

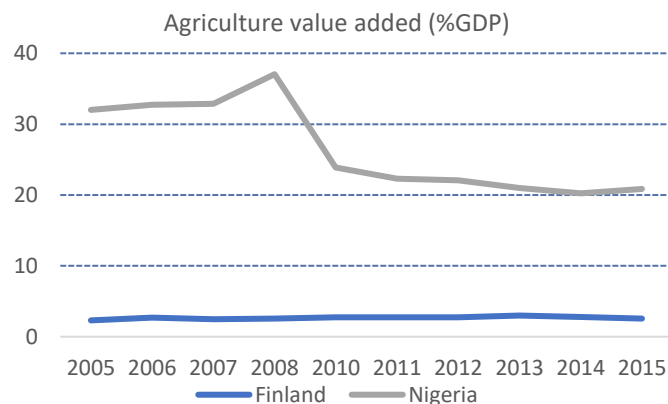


Figure 2. Trend of agricultural contribution to % GDP Nigeria and Finland 2005-2015 (www.worldbank.org)⁹

⁶ World bank, 2016

⁷ World Bank. 2016. www.world bank.org.

⁸ FAO, 2017

⁹ www.worldbank.org

BIOMASS RESOURCES

Though biomass is defined as the lignocellulosic component of plant and plant materials, it simply includes plant and animals matter as well as algae that can be transformed into useful products such as fibers, chemicals, and fuel. Development in the use of micro and macro algae as a biofuel feedstock is slow compared to energy crops, there is, the however prospect of producing important chemicals from them. The absence of land competition with food or energy crops constitute added advantage for the use of algae as an energy feedstock. (Wijffels 2010)¹⁰. Its potential in biodiesel production has been well described (Mata T. M. 2010)¹¹. Land Biomass can be classified into woody biomass and agricultural product biomass (herbaceous biomass and biomass from seeds and fruits). Renewable biomass materials can be directly burned (thermochemical conversion) to generate energy in the form of heat or converted to an array of biofuel products and other biobased chemicals. Wood which remains the common and abundant biomass can be directly burned to generate heat for cooking, heating, or energy. Direct combustion of wood is a common phenomenon in rural areas of Nigeria used in cooking compared to Finland where heat generated is mainly used for keeping homes warm during the winter period. High dependence on wood fuel for energy is discouraged because of its adverse effect on forest biodiversity. (Bouget, 2012)¹². The adverse effect of forest logging on saprophytes, for example, is a known truth, quantifying the extent of its effect is, however, cumbersome. (Jonsell, 2007)¹³. Hiron et al 2017 in their study reveal that stump removal have a more detrimental effect than slash removal. In addition, their study suggests that mono-specie forest would promote biodiversity regardless of the harvest type used. (Hiron 2017)¹⁴. The process of the logging for firewood, not only affect the saprophytic and non-saprophytic community but also influences the soil structure and leads to loss of nutrients. Replenishing of soil nutrient can be achieved using ashes from combusted woody material (Brunner, 2004)¹⁵ and allowing logging residues lie fallow. (Gunnarsson et al, 2004)¹⁶. Dependence on fuelwood may not be completely abolished, but the use of short rotation trees not only provide wood but also improves on biodiversity when managed properly.

Finland depends on its large deposit of woody biomass obtained from its forest whereas Nigeria, is focusing more on the agricultural products and waste as a source of biomass for the biofuel production. A potential that needs to be harnessed considering a large amount of waste generated because of its teeming population (Oladeji 2011)¹⁷. The cultivation of non-edible energy crops such willow plants is becoming of interest considering their potential and

¹⁰ Wijffels, R. H., Barbosa, M.J. 2010. "An outlook on microalgal biofuels." *Perspective* (5993): 796-799.

¹¹ Mata T. M., Martins, A. A, Caetano, N. S. 2010. "Microalgae for biodiesel production and other applications: A review." *Renewable and sustainable energy reviews* 14 (1): 217-232

¹² Bouget C., Lassauce A., Jonsell M. 2012. "Effect of fuelwood harvesting on biodiversity-a review focused on the situation in Europe." *Can. J. For. Res.* 42: 1421-1432.

¹³ Jonsell, M. 2007. "Effect of biodiversity of forest fuel extraction, governed by processes working on a large scale." *Biomass and bioenergy* 31 (10): 727-732.

¹⁴ Hiron, M., Jonsell, M., Kubart, A., Thor, G., Schroeder, M., Dahlberg, A., Johansson, V., Ranius, T. 2017. "Consequences of bioenergy wood extraction for landscape-level habitat for dead wood-dependent organisms." *Journal of environmental management* 198: 33-42.

¹⁵ Brunner, I., Zimmermann, S., Zingg, A., and Blaser, P. 2004. "Wood-ash recycling affects forest soil and tree fine-root chemistry and reverse soil acidification." *Plant Soil* 267 (1-2): 61-71

¹⁶ Brunner, I., Zimmermann, S., Zingg, A., and Blaser, P. 2004. "Wood-ash recycling affects forest soil and tree fine-root chemistry and reverse soil acidification." *Plant Soil* 267 (1-2): 61-71

¹⁷ Oladeji, J. T. 2011. Agricultural and forestry wastes and opportunities for their use as an energy source in Nigeria- An overview. *World rural observation.* 107-112

increasing need for food and feed for the growing population (Mola-Yudego, 2014)¹⁸. Example of potential biomass feedstock for production of bioenergy in Nigeria includes sorghum, cassava, sugarcane, and Jatropha. These biomass feedstocks are mainly agricultural product. This, however, raises concerns due to their alternative use as food and animal feeds alike. This has however led to research into other crops, which are non-edible to prevent competition for available food and promote sustainability. The generation of waste from household and industries in the world today is inevitable and conserve a huge potential contribution to bioeconomic growth (Allen, 2015)¹⁹. Such can be termed secondary raw material when exploited could contribute to Nigerian as well as Finnish bioeconomy. Waste from livestock and human wastes have shown to have great potentials for microbial conversion to biogas. (Ben-Iwo et al., 2016)²⁰.

BIOENERGY FROM RENEWABLE SOURCES.

According to FAO, ‘bioenergy is energy from biofuel’. Biofuels are fuels from biological plants and animal materials or remains. The need to reduce dependence on fossil fuels such as coal, petroleum, and their products is essential to mitigate the amount of greenhouse gas GHG released into the atmosphere while providing sufficient food for the growing population. Furthermore, ashes generated from bioenergy production have shown potential application (Steenari et al. 1997)²¹, thus leading to a complete cycle with minimum waste. These have a contribution to the concerns about utilizing renewable sources for energy production. For example, Nigeria’s CO₂ emission from petroleum consumption in 2014 was estimated to be 40 million metric tons whereas Finland produced only about 26 million metric tons for the same year. (International Energy Agency, 2014)²². Statistical data provided by IEA shows that 82% of the electricity used in 2014 emanated from burning of natural gas in Nigeria and only 18% of renewable energy that was majorly hydropower. For the same year, energy consumed in Finland came from diverse sources with only 8% of natural gas as well as renewable sources such as biofuel accounting for 17% of total energy (figure 3).

¹⁸ Mola-Yudego B, et al. 2014. "A conceptual framework for the introduction of energy crops." *Renewable energy* 29-38.

¹⁹ Allen B., Nanni S., Schweitzer J., Baldock D., Watkins E., Withana S., Bowyer C. 2015. *International review of bioeconomy strategies with focus on waste resources*. London: Institute for European environmental policy.

²⁰ Ben-Iwo, J., and et al. 2016. "Biomass resources and biofuels potential for production of transportation fuels in Nigeria." *Renewable and sustainable energy reviews* 172-192.

²¹ Steenari, B. M., Linqvist, O. 1997. "Stabilisation of biofuel ashes for recycling to forest soil." *Biomass and bioenergy* 13 (1-2): 39-50.

²² IEA. 2014. *CO₂ Emissions from consumption of petroleum*. International Energy Statistics Press.

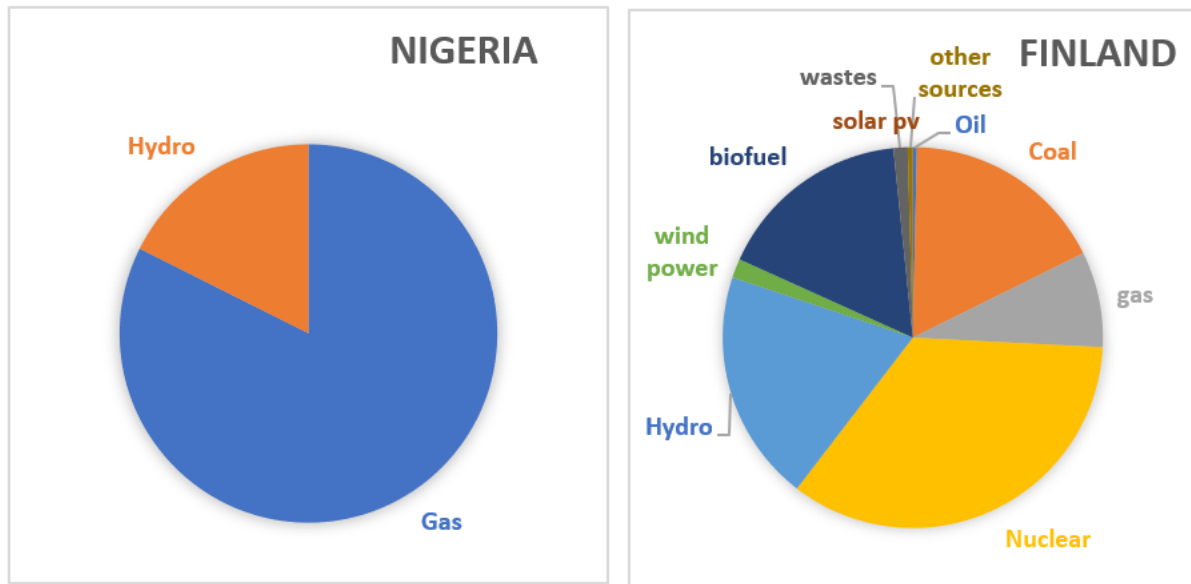


Figure 3. Energy sources and their proportion for Nigeria (left) and Finland (right) 2014, based on the data provided by International Energy agency (IEA). Source: IEA statistical report accessed 6.1.2017

Developing countries such as Nigeria and advanced European countries, like Finland are both working towards achieving bioeconomy goal but from different viewpoints especially based on the kind of raw material, biomass available. In the interest of maximizing the heat value and transportation costs has led to the technology of conversion of woody and agricultural biomass feedstock to more condensed biomass pellets for the generation of energy. (Malik B. 2015)²³ Pelletizing technology is increasingly growing in developed countries and its application is well known. Finland represents a major producer of pellets in Europe and FAO estimated a total of 302ktons of wood pellets produced in 2015. (FAOSTAT, 2016)²⁴. Of the wood pellets produced, the percentage quantity exported was approximately 17% and 30% between 2012 and 2015. (Table 1). This is, however, a new technology for Nigeria where its application has failed to be reported.

Table 1. Wood fuel in the form of wood pellets production and exportation value in Finland 2012 to 2015. (FAOSTAT, 2016)²⁵

Year	Wood Pellets (values in tons)		
	Production	Export	Approx. % Exported
2012	252370	61184	24
2013	270000	78239	29
2014	324000	55970	17
2015	302000	59812	20

Nigeria has a wide range of raw biomass material needed to propel the growth and development of bioenergy generation, which is an aspect of bioeconomy. The production of crops for biofuel which remains Nigerian’s focal point for developing its bioeconomy (Agro &

²³ Malik et al. 2015. Biomass Pellet Technology: A Green Approach for Sustainable Development

²⁴ FAOSTAT. 2016. Forestry production and trade data. FAO.

²⁵ FAOSTAT. 2016. Forestry production and trade data. FAO.

Ogie 2012)²⁶, is still at the developmental stage and an estimated (1100kt of oil eq.) of biofuel was produced in 2014. On one hand, the production of biofuel in Nigeria is mainly done through enzymatic conversion of agricultural biomass to liquid biofuel, bioethanol. In table 2 below, is selected biomass which has potential in the production of bioethanol as well as biogas and biodiesel in Nigeria. Generation of woody biomass in the form of plantation especially in the tropics can be encouraged; the negative effect of biomass harvest may increase with shorter rotation year. (Onyekwelu et al 2006)²⁷.

Table 2. Biofuel production from selected potential raw materials and industrial feasibility in Nigeria.

Biofuel	Potential raw material	Industrial feasibility in Nigeria
Bioethanol	Sugarcane, sweet sorghum, cassava	Developing
Biodiesel	Jatropha, oil palm, soybeans	Under investigation
Biogas	Municipal solid waste, manure, sewage	Good

Adapted (Ben-Iwo et al., 2016)²⁸

Pyrolysis is another biomass conversion technology that is of importance to the Nigerian bioenergy production. Pyrolysis of wood biomass to produce charcoal has been a lucrative activity which provides employment and source of income for the rural dwellers because of its high demand as a source of energy. In 2014, biofuel produced in Finland was 7,773 (100kt of oil equivalent) (IEA, 2016)²⁹. Advancing this technology to produce liquid fuel with high calorific value would proffer alternative source of fuel, bio-oils for agricultural and other applications (Tiilikkala et al., 2010)³⁰. This has been achieved but optimization is required to obtain the desired property.

Combined Heat Power (CHP) plant technology

In the combined heat and power plant technology, waste released in the form of heat from industrial processes is utilized in nearby homes as a source of heat and electricity. Finland and other European countries have embraced the process in general, thus promoting the share of green energy in the energy pool. This facilitates the reduction in greenhouse gas emission associated with global warming.

Finland and Sweden are examples of countries that have participated in developing both small and large scale combined heat power (CHP) plants system. It has been reported that CHP plants provide about 70% energy in district heating for locals residing around these industries and about 11% electricity to run its processes (Salomon et al. 2011)³¹. Biowastes such as rice husk have presented raw material potential in CHP systems (Chang et al. 2019)³². This

²⁶ Agro B. E., Ogie N. A. 2012. "A comprehensive review of biomass resources and biofuel production potential in Nigeria." *Research journal in engineering and applied sciences* 1 (3): 149-155.

²⁷ Onyekwelu, J.C., 2006. "Productivity, site evaluation and state of nutrition of Gmelina arborea plantations in Oluwa and Omo forest reserves, Nigeria." *Forest ecology and management* 229 (1-3): 214-227.

²⁸ Ben-Iwo, J., and et al. 2016. "Biomass resources and biofuels potential for production of transportation fuels in Nigeria." *Renewable and sustainable energy reviews* 172-192.

²⁹ IEA. 2014. CO2 Emissions from consumption of petroleum. International Energy Statistics Press.

³⁰ Tiilikkala et al. (2010) History and use of wood pyrolysis liquids as biocide and plant protection product.

³¹ Salomon et al. (2011). Small-scale biomass CHP plants in Sweden and Finland.

³² Chang et al. (2019). Thermo-economic analysis of a taiwanese combined CHP system fueled with syngas from rice husk gasification

technology have a huge possible effect on the bioeconomy of developing nations which are yet to adopt this sort of technology. Waste constituting mayhem in such countries like Nigeria can be diverted into important use for generation of electricity from this platform. Previous study by Lamidi et al. (2017) have identified potential application of biogas CHP in rural communities of Nigeria reducing dependence on fossil fuel electricity (Lamidi et al. 2017)³³. Thus, provides energy and mitigate the amount of gaseous industrial waste discharged into the atmosphere.

National policies influence bioenergy/bioeconomy growth

There exists a fundamental correlation between national policy and bioeconomy development. In comparison, this factor for different countries, caution must be observed as different policy have different source and interpretation. (Kröger 2017)³⁴. National and local Policy likewise play a very crucial role in developing the bioeconomy and specifically the extent to which biobased energy contributes to the pool of a country or nation's energy sources. The Nigerian government in 2007, released the "biofuel policy and incentives" which connects the agricultural sector to the petroleum sector to foster the generation of renewable energy. Following the directive of the government, the Nigerian National Petroleum Corporation (NNPC) developed the first bioeconomy strategy with the aim of improving bioenergy production while creating more job opportunities. Though the policy overall focused on bioeconomic growth, it is specifically associated with bioethanol and biodiesel produced from agricultural products. (German bioeconomy council, 2015)³⁵.

Finnish "bioeconomy strategy – sustainable growth from bioeconomy" which has been adopted for the development of Finland's bioeconomy is a more holistic strategy which was established in 2014.

It considers bioeconomy development beyond bioenergy production but to include food production, products, and services based on renewable resources. Besides the glaring benefits of bioeconomy, the Finnish bioeconomic policies also aimed towards modifying the lifestyle of people towards appreciating sustainable living. (Luoma et al., 2011)³⁶. Amongst other objectives of the strategy, the Finnish bioeconomy strategy focuses on diversification of products and considers water important in the development of a sustainable bioeconomy. (German bioeconomy council, 2015)³⁷. Ease of improving the Finnish bioeconomy as well as any other depends not only on its national policies and implementation but also on global bioeconomy platform. (Kröger 2017)³⁸ The policies implementation towards bioeconomy development in Nigeria and Finland, have also incorporated measures such as incentives and tax-waiver to encourage the growth of the sector.

³³ Lamidi et al. (2017). "Evaluation of CHP for Electricity and Drying of Agricultural Products in a Nigerian Rural Community."

³⁴ Kröger, M., Raitio, K. 2017. "Finnish forest policy in the area of bioeconomy: A pathway to sustainability?" *Forest policy and economics* 77: 6-15.

³⁵ German bioeconomy council. 2015. "Bioeconomy policy (Part II) Synopsis of National Strategies around the world.

³⁶ Luoma, P, J Vanhanen, and P Tomila. 2011. *Distributed Bio-based Economy- Driving sustainable Growth*. Helsinki: Sitra.

³⁷ German bioeconomy council. 2015. "Bioeconomy policy (Part II) Synopsis of National Strategies around the world.

³⁸ Kröger, M., Raitio, K. 2017. "Finnish forest policy in the area of bioeconomy: A pathway to sustainability?" *Forest policy and economics* 77: 6-15.

Tourism as an aspect of bioeconomy

Tourism plays an important role in the growth of the world's economy and in 2015, travel and tourism constitute a total contribution of 10.2% to GDP in 2016. (WTTC, Travel and tourism Economic impact 2017).³⁹ In the past, tourism has received less attention with respect to its contribution to the overall economy. Nonetheless, it is a growing sector and has been recognized as a major source of income for nations and as a source of foreign currency in Africa. Conversely, in Europe and Nordic countries development of tourism perceived as an essential ingredient towards the industrial development of biobased products (OECD, 2015)⁴⁰. Based on periodic analysis by United Nations world trade organization (UNWTO), Finland had more visitors than Nigeria. Nevertheless, the total number of visitors increased by approximately 52 % and 24 % for Finland and Nigeria respectively from 2011 to 2012 (Figure 4). In addition, 55 % of 7,636 million total arrivals accounted for overnight visitors, whereas only 10% of the total 4,673 million visitors make up for tourists in Nigeria for the year 2012 as seen in figure 6. (World tourism organization, 2015)⁴¹.

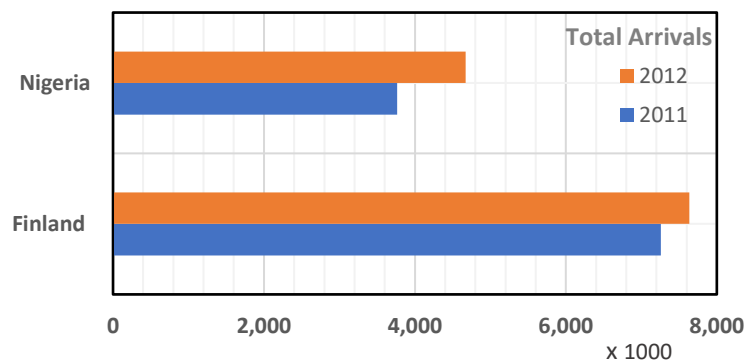


Figure 4. Two year-overall foreign arrivals into Nigeria (top) and Finland (bottom). Arrivals include visitors and tourists, or otherwise called overnight visitors. (United Nations World Trade Organization website 2016)⁴²

In view of the benefits associated with tourism, Nigeria as well as other African countries recently signed and adopted the African charter on sustainable and responsible tourism which focuses on promoting tourism. In addition to tourism, the charter also aims at addressing climate issues through preservation of the environment, and respect for biodiversity of each African country. The main target is to promote sustainability in the tourism sector for the national economic growth and rural development of its member states upon following the guiding principles of the charter. (UNWTO, 2015)⁴³. In Nigeria, statistical data showed that in 2014, tourism contributed 4.1% of total GDP expecting to rise by 1% in 2025. It, however, accounted for 2,198,500 jobs making up 3.6% of total employment. (WTTC, Travel & Tourism Economic Impact (online), 2015)⁴⁴. Finland's tourism sector is nowadays considered to include activities such as fishing, hunting, as well as other activities such as camping; people enjoy doing at leisure times. In this respect, the rich forest reserve of Finland not only provide raw

³⁹ WTTC. 2017. Travel and tourism Economic impact 2017 world. World travel & tourism council

⁴⁰ OECD, 2015

⁴¹ 2015. "World tourism organization." World tourism organization web site. April 6. <http://statistics.unwto.org>

⁴² UNWTO. 2015. African sustainable and responsible charter (online). United Nations world tourism organization press

⁴³ UNWTO. 2015. African sustainable and responsible charter (online). United Nations world tourism organization press.

⁴⁴ WTTC. 2015. Travel & Tourism Economic Impact (online). World travel and tourism council press.

material and food for its population but is also associated with nature itself ‘‘nature’’ tourism. Thus, proper management of the forest has been identified as the way forward towards the development of the tourism industry. Dietz et al (2018)⁴⁵, observed that the policies implemented do not consider in full the risk associated with the development of national bioeconomy. Nonetheless, it is important to adopt an all-inclusive approach to the development of sustainable bioeconomy. In view of the importance of direct government involvement to bioeconomy, variation in advancement amongst developed nation exists (Bosman R., 2016)⁴⁶

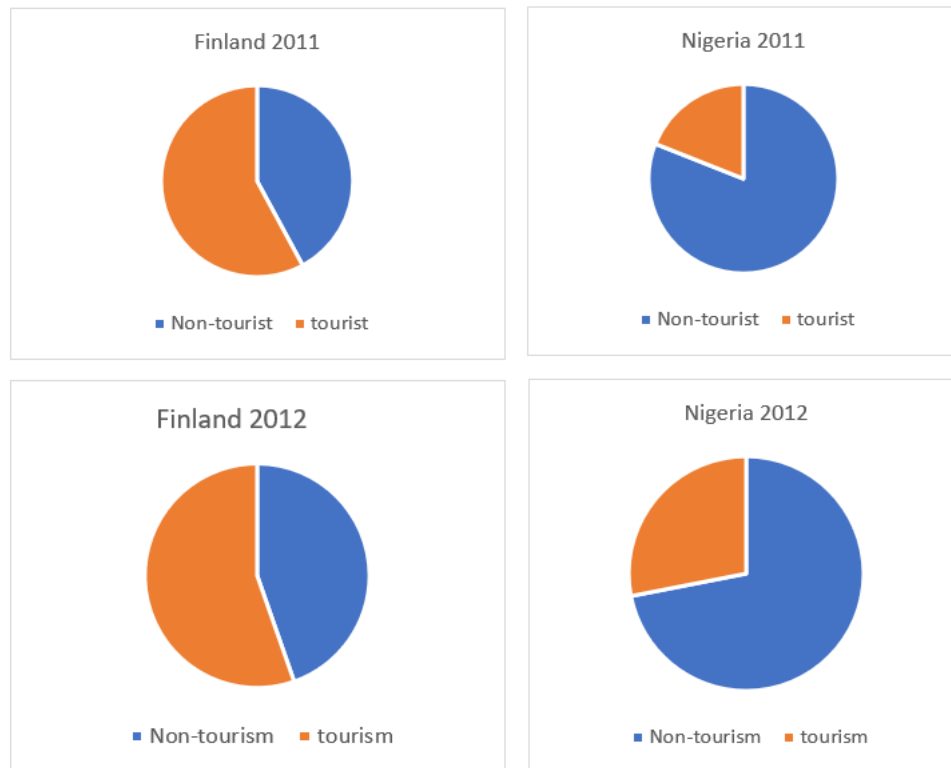


Figure 5: A comparison of percentage overall foreign tourist (overnight visitor) and other visitors in Nigeria (right) and Finland (left) for two years; 2011 and 2012.

The higher number of tourists in Finland (Fig 4 & 5) can be attributed to the well managed natural resources and more stable and inclusive policies towards achieving the proper management of resources compared to Nigeria. In addition, instability in economy and policies increases uncertainty and could possibly explain the observed differences in the number of tourists into Finland and Nigeria. This phenomena difference impact on tourism sector contribution of overall GDP of both countries. (Figure 7)

⁴⁵ Dietz T., Börner J., Förster J. J., Braun V. J. 2018. "Governance of the bioeconomy: A global comparative study of national bioeconomy strategies." Sustainability 10 (9). doi:doi:10.3390/su10093190.

⁴⁶ Bosman R., Rotmans J. 2016. "Transition governance towards a bioeconomy: A comparison of Finland and the netherlands." sustainability 8 (10). doi:10.3390/su8101017.

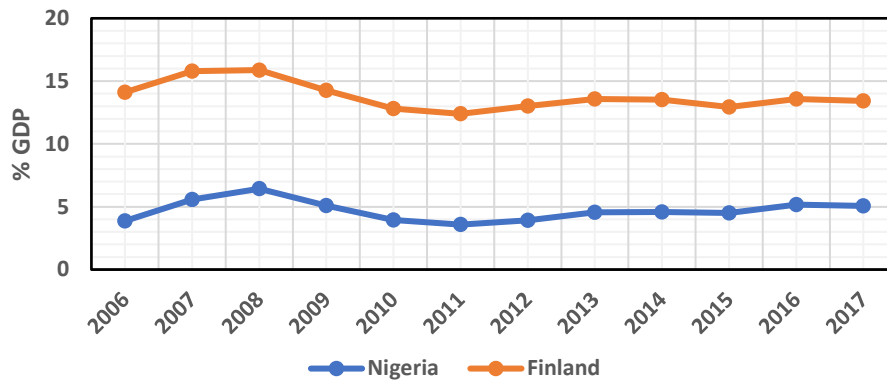


Figure 7. Tourism overall contribution to Nigeria and Finland national GDP for 11 years. (WTTC, 2018)⁴⁷

The total contribution of tourism to GDP has been forecasted to grow from 6.5% of GDP in 2014 to 7.3% of total GDP in 2025. While the total contribution to employment accounting for 6.8% of total employment is expected to increase to 8.6% of the total employment. (WTTC, Travel & Tourism Economic Impact (online), 2015)⁴⁸

CONCLUSION

Development of bioeconomy or bio-based economy has been highlighted as important to developing and developed nations. The holistic description of bioeconomy is, however, ambiguous. For this reason, bioenergy which is the earlier target of bioeconomic growth and tourism have been chosen to provide a yardstick to evaluate bioeconomy in the current study. In this study, based on secondary data, we have evaluated the Finnish and Nigerian bioeconomy. We have been able to demonstrate that the untapped resources of Nigeria from the perspective of bioeconomy development can be exploited if the government consciously make it a priority by revisiting the policies in line with global policies. Thus, Finland is a good example of a nation with less dependence on fossil fuel reserve and emulating its strategy is not out of place.

Finland has taken a conscious and active step towards developing its bioeconomy sector through a combination of science (research and development) and strong policies. Finland serves as a good example of a viable economy with a strong focus on improving its bioeconomic aspect of its economy. In the case of Nigeria, stakeholders and government need to set up a defined and coherent policy that can drive the development of bioeconomy. Thus, circumventing fluctuations on its economic stability, which depends largely on crude oil reserves. Embracing bioenergy will also benefit developing nations towards remediation of greenhouse gas (GHG) pollution; create job opportunity and a robust economy. By extension, this transforms the tourism industry that could connect Nigeria to countries with developed bioeconomy such as Finland. A trustworthy channel between Nigeria and bio-economically advanced nations can be a reality if the tourism sector is given attention. Suffice to say, issues such as safety of tourists and the nationals, when dealt with is a positive marker in the path to a sustainable and robust bioeconomy in the case of developing nation. With the potentials identified, it have become important for developing countries, Nigeria in particular to take the bull by the horn and consciously navigate the economy in the right direction.

⁴⁷ WTTC. 2018. world & tourism council. accessed 19.01.2019

⁴⁸ WTTC. 2015. Travel & Tourism Economic Impact (online). World travel and tourism council press.

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CONSIDERATION REGARDING NATO AND EUROPEAN UNION RELATIONSHIP

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ABSTRACT:

THE EUROPEAN UNION (EU) AND THE NORTH ATLANTIC TREATY ORGANIZATION (NATO) SHARE LONGSTANDING MUTUAL INTERESTS AND FACE COMMON THREATS, BUT DEVELOPING THE EU-NATO RELATIONSHIP WHILE RESPECTING THE INDEPENDENT NATURE OF BOTH ORGANISATIONS HAS BEEN AN ONGOING CHALLENGE. SHARING STRATEGIC INTERESTS AND SIMILAR PURPOSES LIKE PROVIDING POLITICAL STABILITY TO ITS MEMBER THROUGH SECURING DEMOCRACY, NATO AND THE EUROPEAN UNION COOPERATE ON ISSUES OF COMMON INTEREST AND ARE WORKING SIDE BY SIDE IN CRISIS MANAGEMENT, CAPABILITY DEVELOPMENT AND POLITICAL CONSULTATIONS.

HAVING A MAJORITY OF MEMBERS, COMMON VALUES AND PURPOSES PROVIDE A STRONG ARGUMENT TO ENHANCE THE COOPERATION BETWEEN NATO AND THE EU.

KEYWORDS: NATO, EUROPEAN UNION, COOPERATION, COMMON SECURITY

DEVELOPING A STRATEGIC PARTNERSHIP

Strengthening the NATO-EU² strategic partnership is important in the current security environment, in which both organizations and their members are facing the same challenges to the east and south.

The latest effort to establish a framework for cooperation was at the July 2016 NATO Summit in Warsaw, when the EUNATO Warsaw Joint Declaration was signed. Enhanced consultations at all levels and practical cooperation in operations and capability development have brought concrete results. The Warsaw Joint Declaration outlines a series of actions for the two organizations intend to take together in concrete areas, including countering hybrid threats, enhancing resilience, defense capacity building, cyber defense, maritime security, and exercises³. However, UE tasked the North Atlantic Council to review the implementation of these proposals and to report to foreign ministers by December 2016.

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² Ina Raluca Tomescu, Flavius-Cristian Mărcău, "COORDINATES OF NATO – EU COOPERATION", in proceedings "Strategic changes in Security and International Relations", 2014, pp. 258-265

³ NATO Summit Warsaw 2016 available at: http://www.nato.int/cps/en/natohq/events_132023.htm

On 6 December 2016 the Council of the EU and the NATO Ministers of Foreign Affairs simultaneously endorsed a set of 42 concrete proposals for the implementation of the declaration.

The proposals aim to implement the EU-NATO Joint Declaration in a practical and concrete manner, and to boost EU-NATO cooperation. Moreover, those proposals describe how NATO and the EU can work together including on countering hybrid threats, cyber defense, and making their common neighborhood more stable and secure⁴. The Global Strategy aims to guide EU external action within the current security and political landscape, and promotes a comprehensive and collective response to challenges such as the conflict in Syria, sanctions on Russia, fragility across Africa, or the fight against terrorism and hybrid threats. As the EU and NATO cooperate closely on a number of these issues, the two documents are intrinsically relevant to each other. The implementation plan for the joint declaration was presented only weeks after the Implementation Plan on Security and Defence which sets out proposals to implement the EU Global Strategy, and a week after the presentation of the European Defence Action Plan. The three initiatives combined constitute a defence package aimed at reinforcing European cooperation in this area, to move towards more effective and efficient European security and defence. The three plans have been submitted to the European Council of 15 and 16 December 2016 .

NATO's current Strategic Concept, issued in November 2010, clearly states that an active and effective EU contributes to the overall security of the Euro-Atlantic area⁵. The EU's Lisbon Treaty (in force since end 2009) provides a framework for strengthening the EU's capacities to address common security challenges⁶.

NATO AND EU COOPERATION

Close cooperation between NATO and EU is an important element and requires the effective application of all means. NATO and the EU meet on a regular basis to discuss issues of common interest. Meetings take place at different levels including at the level of foreign ministers, ambassadors, military representatives and defense advisors. There are regular staff-to-staff talks at all levels between NATO's International Staff and International Military Staff, and their respective EU interlocutors (the European External Action Service, the European Defense Agency, the European Commission and the European Parliament).

NATO and UE cooperation refers to: combating illegal trafficking in humans in the Aegean and the Central Mediterranean, the Western Balkans, the former Yugoslav Republic of Macedonia, Bosnia and Herzegovina, Kosovo, Afghanistan, Darfur, Piracy, political consultation, capabilities, terrorism⁷ and weapons of mass destruction proliferation⁸.

Regarding combating illegal trafficking in humans in the Aegean and the Central Mediterranean, NATO defense ministers decided on February 2016 to deploy ships to the Aegean Sea to support Greece and Turkey, as well as the European Union's border agency Frontex in their efforts to tackle the refugee and migrant crisis. Standing NATO Maritime

⁴ Kristin Archick, Paul Gallis, NATO and the European Union, January, 2008, available at: <https://fas.org/qsp/crs/row/RL32342.pdf>

⁵ NATO relations with the European Union, available at: http://www.nato.int/cps/en/natohq/topics_49217.htm

⁶ EU and NATO concerted approach for the western Balkans, available at: http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressdata/en/er/76840.pdf

⁷ Flavius Cristian Mărcău și Mihaela Andreea Ciorei, "THE ROLE OF INTELLIGENCE IN THE FIGHT AGAINST TERROR", European Scientific Journal, January 2013 edition vol.9, No.2

⁸ Kristin Archick, Paul Gallis, NATO and the European Union, January, 2008, available at: <https://fas.org/qsp/crs/row/RL32342.pdf>

Group 2 (SNMG2) is conducting reconnaissance, monitoring and surveillance in the territorial waters of Greece and Turkey, as well as in international waters. In October 2016, ministers agreed to extend NATO's deployment in the Aegean Sea and also decided that NATO's new Operation Sea Guardian will support the EU's Operation Sophia in the Central Mediterranean with NATO ships and planes, ready to help increase the EU's situational awareness and provide logistical support⁹.

EU and NATO have agreed on a concerted approach on security¹⁰ and stability in the Western Balkans and in July 2003, it was published the "Concerted Approach for the Western Balkans". The EU and NATO partnership has been key to bringing an end to conflict and stabilizing the region¹¹.

As for the former Yugoslav Republic of Macedonia, on 31 March 2003, the EU-led Operation Concordia took over the responsibilities of the NATO-led mission, Operation Allied Harmony. This mission, which ended in December 2003, was the first "Berlin Plus" operation in which NATO assets were made available to the EU¹².

Building on the results of Concordia and following the conclusion of the NATO-led Stabilization Force (SFOR) in Bosnia and Herzegovina, the EU deployed a new mission called Operation Althea on 2 December 2004. The EU Force (EUFOR) operates under the "Berlin Plus" arrangements, drawing on NATO planning expertise and on other Alliance's assets and capabilities¹³.

In Kosovo NATO has been leading a peacekeeping force (KFOR) since 1999. The EU has contributed civil assets to the UN Mission in Kosovo (UNMIK) for years and agreed to take over the police component of the UN Mission. The European Union Rule of Law Mission (EULEX) in Kosovo, which deployed in December 2008, is the largest civilian mission ever launched under the Common Security and Defense Policy (CSDP)¹⁴. The central aim is to assist and support the Kosovo authorities in the rule of law area, specifically in the police, judiciary and customs areas. EULEX works closely with KFOR in the field.

In Afghanistan, NATO and the EU have played key roles in bringing peace and stability, as part of the international community's broader efforts to implement a comprehensive approach to assist the country. The NATO-led International Security Assistance Force (ISAF) helped create a stable and secure environment in which the Afghan government as well as other international actors could build democratic institutions, extend the rule of law and reconstruct the country. NATO welcomed the EU's launch of a CSDP Police (EUPOL) in June 2007¹⁵. The EU also initiated a programme for justice reform and helped to fund civilian projects in NATO-run Provincial Reconstruction Teams that were led by an EU member country. Cooperation continues following the completion of ISAF's mission in December 2014 and the launch of a

⁹ Kristin Archick, Paul Gallis, NATO and the European Union, January, 2008, available at: <https://fas.org/qsp/crs/row/RL32342.pdf>

¹⁰ Flavius Cristian Marceau, Mihaela Andreea Ciorei, "The vision about international security at the beginning of the XXI century", in European Scientific Journal, april 2013 edition vol.9, no.11, 301-311

¹¹ The Warsaw declaration on transatlantic security, available at:

http://www.nato.int/cps/en/natohq/official_texts_133168.htm?selectedLocale=en

¹² Kristin Archick, Paul Gallis, NATO and the European Union, January, 2008, available at: <https://fas.org/qsp/crs/row/RL32342.pdf>

¹³ Kristin Archick, Paul Gallis, NATO and the European Union, January, 2008, available at: <https://fas.org/qsp/crs/row/RL32342.pdf>

¹⁴ A global Strategy for the European Union's Foreign and Security Policy, available at: https://europa.eu/global/strategy/sites/globalstrategy/files/full_brochure_year_1.pdf

¹⁵ A global Strategy for the European Union's Foreign and Security Policy, available at: https://europa.eu/global/strategy/sites/globalstrategy/files/full_brochure_year_1.pdf

follow-on, NATO-led mission to train, assist and advise the Afghan forces and defense and security institutions. EUPOL Advisers at the Afghan Ministry of Interior and the Afghan National Police are supporting the reform of the ministry and the development of civilian policing. The EUPOL mission's mandate ran until the end of 2016¹⁶.

In Darfur, Sudan, both NATO and the EU supported the African Union's mission in particular with regard to airlift rotations¹⁷.

Since 2008, in the coast of Somalia, NATO's naval forces deployed under Operation Ocean Shield and EU naval forces (Operation Atalanta) worked side by side with other actors for anti-piracy missions¹⁸.

In terms of political consultation, the range of subjects discussed between NATO and the EU has expanded considerably over the past two years, particularly on security issues within the European space or its immediate vicinity. Since the crisis in Ukraine, both organizations have regularly exchanged views on their respective decisions, especially with regard to Russia, to ensure that their messages and actions complement each other. Consultations have also covered developments in the Western Balkans, Libya and the Middle East.

Together with operations, capability development is an area where cooperation is essential and where there is potential for further growth. The NATO-EU Capability Group was established in May 2003 to ensure the coherence and mutual reinforcement of NATO and EU capability development efforts. Following the creation, in July 2004, of the European Defense Agency (EDA) to coordinate work within the EU on the development of defense capabilities, armaments cooperation, acquisition and research, EDA experts contribute to the work of the Capability Group.

Among other issues, the Capability Group has addressed common capability shortfalls in areas such as countering improvised explosive devices and medical support. The Group is also playing an important role in ensuring transparency and complementarity between NATO's work on Smart Defense and the EU's Pooling and Sharing initiative¹⁹.

As for the combating terrorism²⁰ and the proliferation of weapons of mass destruction (WMD), both NATO and the EU are committed. They have exchanged information on their activities in the field of protection of civilian populations against chemical, biological, radiological and nuclear attacks. The two organizations also cooperate in the field of civil emergency planning by exchanging inventories of measures taken in this area²¹.

NATO-EU cooperation not only constitutes an integral pillar of the EU's work aimed at strengthening European security and defence, as part of the implementation of the EU Global Strategy, but it also contributes to Trans-Atlantic burden sharing. A stronger EU and a stronger NATO are mutually reinforcing.

¹⁶ Kristin Archick, Paul Gallis, NATO and the European Union, January, 2008, available at: <https://fas.org/qsp/crs/row/RL32342.pdf>

¹⁷ Kristin Archick, Paul Gallis, NATO and the European Union, January, 2008, available at: <https://fas.org/qsp/crs/row/RL32342.pdf>

¹⁸ Kristin Archick, Paul Gallis, NATO and the European Union, January, 2008, available at: <https://fas.org/qsp/crs/row/RL32342.pdf>

¹⁹ A global Strategy for the European Union's Foreign and Security Policy, available at: https://europa.eu/global/strategy/sites/globalstrategy/files/full_brochure_year_1.pdf

²⁰ Flavius Cristian Mărcău și Mihaela Andreea Ciorei, "THE ROLE OF INTELLIGENCE IN THE FIGHT AGAINST TERROR", European Scientific Journal, January 2013 edition vol.9, No.2

²¹ Kristin Archick, Paul Gallis, NATO and the European Union, January, 2008, available at: <https://fas.org/qsp/crs/row/RL32342.pdf>

EU-NATO cooperation continues to take place on the basis of the following principles: openness, transparency, inclusiveness and reciprocity, in full respect of the decision-making autonomy and procedures of both organisations without prejudice to the specific character of the security and defence policy of any Member State.

NATO AND EU POSITION ON THE THREATS

In the first ever NATO summit taking place in Poland, NATO is insisting on its mission of *defense and deterrence* while explicitly stating that it *poses no threat to any country*. This mission will consist of the persevering in the objectives outlined already in the Readiness Action Plan adopted in Wales at the previous NATO summit in 2014²². The exertion to boost security in and around Europe is based on two key pillars: protecting its citizens through modern deterrence and defense, and projecting stability beyond its borders. In June 2016, the EU published its Global Strategy, a document in which the EU re-stated that “NATO remains the primary framework for most Member States”²³. At the same time, the EU stressed the complementarity of NATO and of its own security mechanism, because the cooperation will not prejudice the security and defense policy of those Members which are not in NATO. The EU will therefore deepen cooperation with the North Atlantic Alliance in complementarity, synergy, and full respect for the institutional framework, inclusiveness and decision-making autonomy of the two²⁴.

The concerns that appear from the Warsaw declaration reflect the most prominent items on the foreign policy agenda of all great western powers. These are the three partly interrelated issues of the fight against terrorism²⁵, the behavior of Russia, and unrest in Middle East.

After major terrorist attacks have been carried out on European soil, the EU sees as pivotal increasing investment on countering on counter-terrorism. With this aim, it encourages greater information sharing and intelligence²⁶ cooperation between Member States and EU agencies²⁷. NATO as well shares the concern. In 2001, after a terrorist attack, the mutual collective defense clause of the North Atlantic Charter was invoked for the first time by the US. In 2006, NATO recognized that ‘terrorism, increasingly global in scope and lethal in results, and the spread of weapons of mass destruction are likely to be the principal threats to the Alliance over the next 10 to 15 years’. NATO’s Strategic Concept, adopted at the Lisbon Summit in November 2010, recognizes that terrorism poses a direct threat to the security of the citizens of NATO countries. At the Chicago Summit, NATO leaders endorsed new policy guidelines for Alliance work on counter-terrorism, which focus on improved threat awareness, adequate capabilities and enhanced engagement with partner countries and other international actors²⁸.

Key areas of cooperation with Russia, before the 2014 Ukrainian crisis escalated to the point that dialogue was suspended, included state-building and training counter-narcotics in

²² NATO Strategic Concept 2010 available at: http://www.nato.int/cps/en/natohq/topics_82709.htm

²³http://www.europeanleadershipnetwork.org/securing-the-eastern-european-flank-a-joint-eu-nato-endeavour_3101.html

²⁴http://www.europeanleadershipnetwork.org/securing-the-eastern-european-flank-a-joint-eu-nato-endeavour_3101.html

²⁵ Flavius Cristian Mărcău și Mihaela Andreea Ciorei, “THE ROLE OF INTELLIGENCE IN THE FIGHT AGAINST TERROR”, European Scientific Journal, January 2013 edition vol.9, No.2

²⁶ See Flavius Cristian Mărcău și Mihaela Andreea Ciorei, “THE ROLE OF INTELLIGENCE IN THE FIGHT AGAINST TERROR”, European Scientific Journal, January 2013 edition vol.9, No.2

²⁷http://www.europeanleadershipnetwork.org/securing-the-eastern-european-flank-a-joint-eu-nato-endeavour_3101.html

²⁸ NATO Summit Warsaw 2016 available at: http://www.nato.int/cps/en/natohq/events_132023.htm

Afghanistan, as well as overall coordination on fighting terrorism²⁹, and on limiting proliferation of arms and weapons of mass destruction this institutional set up, however, NATO has strongly condemned Russian actions and rhetoric in several recent occasions. This was the case after Russia intervened militarily in Georgia in 2008, and in Ukraine in 2014. Now, after the escalation of the Crimean crisis, all practical civilian and military cooperation between the two actors is suspended, with only political dialogue ongoing in the NATO-Russia council. In NATO's narrative, Russia has breached with its action its commitments, and with that it has nullified two decades of efforts at cooperating³⁰. In view of this shift in its borders, NATO is also concerned for Russia's military activities not just in Ukraine but also on NATO borders. Another area of conflicting interests is in Syria, where NATO has called on Russia to immediately cease their attacks on the Syrian opposition and civilians, to focus its efforts on fighting so-called Islamic State, and to promote a solution to the conflict through a political transition. As far as Middle East is concerned, the war in Syria is a top concern for NATO. As mentioned, an issue of contention is Russia's increasing involvement in supporting the regime of Assad. In Syria and Iraq, the US-led coalition is progressing against ISIS, which is losing ground.

On terrorism and hybrid threats, EU and NATO agreed on a strategy to counter Hybrid Warfare, to be implemented with mutual coordination. They also agreed on concrete measures to increase situational awareness and better respond to hybrid attacks, "where a broad, complex, and adaptive combination of conventional and non-conventional means, and overt and covert military, paramilitary, and civilian measures, are employed in a highly integrated design by state and non-state actors to achieve their objectives"³¹.

Russia's destabilizing actions have prompted NATO to reaffirm its decisions to enhance its deterrence and defense posture, including by a forward presence in the eastern part of the Alliance, and to suspend all practical civilian and military cooperation between NATO and Russia.

CONCLUSION

Institutionalized relations between NATO and the EU were launched in 2001, building on steps taken during the 1990s to promote greater European responsibility in defense matters.

The 2002 NATO-EU Declaration on a European Security and Defense Policy (ESDP) set out the political principles underlying the relationship and reaffirmed EU assured access to NATO's planning capabilities for the EU's own military operations³².

In 2003, the so-called "Berlin Plus" arrangements set the basis for the Alliance to support EU-led operations in which NATO as a whole is not engaged.

At the 2010 Lisbon Summit, the Allies underlined their determination to improve the NATO-EU strategic partnership and the 2010 Strategic Concept committed the Alliance to working more closely with other international organizations to prevent crises, manage conflicts and stabilize post-conflict situations.

²⁹ Flavius Cristian Mărcău și Mihaela Andreea Ciorei, "THE ROLE OF INTELLIGENCE IN THE FIGHT AGAINST TERROR", European Scientific Journal, January 2013 edition vol.9, No.2

³⁰ <http://www.atlanticcouncil.org/>

³¹ Luigi Lonardo, EU-NATO Relations in the Era of Trump and of the European Defence Union, February, 2017, available at:

http://www.e_ir.info/2017/02/17/eu-nato-relations-in-the-era-of-trump-and-of-the-european-defence-union

³² Ina Raluca Tomescu, Flavius-Cristian MARCAU, "COORDINATES OF NATO – EU COOPERATION", in proceedings "Strategic changes in Security and International Relations", 2014, pp. 258-265

At the NATO Summit in Warsaw in July 2016, the two organizations outlined areas for strengthened cooperation in light of common challenges to the east and south, including countering hybrid threats, enhancing resilience, defense capacity building, cyber defense, maritime security, and exercises. Over 40 measures to advance NATO-EU cooperation in agreed areas were approved by NATO foreign ministers in December 2016.

Romania has consistently supported the development of a strong partnership between NATO and the European Union, respecting the autonomy of the two organizations and multiplying the effects of their policies and actions. A number of defining principles such as complementarity, avoidance of duplication, and transparency are important in the conduct of NATO and EU activities, enabling both organizations to respond to citizens' expectations and multiple challenges in a complex security environment³³. Moreover, both organizations are interested in ensuring stability and security at international level, so that the cooperation between them is, from a national perspective, crucial and natural. Interaction and cooperation between the two partners must be as closely linked to international developments as adaptability and rapid response to crisis situations are essential to their management and to maintaining credibility.

³³ Flavius Cristian Mărcău, Mihaela Andreea Ciorei, "The vision about international security at the biggining of the XXI century", in European Scientific Journal, april 2013 edition vol.9, no.11, 301-311

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ACCESSIBILITY OF RURAL PUBLIC INFRASTRUCTURES AND FOOD SECURITY AMONG RURAL HOUSEHOLDS IN KERSA DISTRICT, SOUTH WESTERN ETHIOPIA

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ABSTRACT:

PUBLIC INFRASTRUCTURES SUCH AS ROADS, AGRICULTURAL EXTENSION SERVICES, ELECTRICITY, ICT, PROTECTED WATER SOURCES, IRRIGATION, EDUCATION CENTERS, AND HEALTH CENTERS ARE ESSENTIAL FOR ECONOMY AND SOCIETY TO OPERATE PROPERLY. THE OBJECTIVE OF STUDY WAS TO EXAMINE THE ACCESSIBILITY OF THESE RURAL PUBLIC INFRASTRUCTURES IN RURAL AREAS AND THEIR POSITIVE INFLUENCE ON RURAL PEOPLE'S FOOD SECURITY. THIS STUDY BORROWED THE PRAGMATIST RESEARCH PHILOSOPHY THAT ADVOCATES ONTOLOGICAL AND EPISTEMOLOGICAL MIXES IN AN EFFORT TO MINIMIZE THE GAPS NOTED ON THE EMPIRICAL KNOWLEDGE. ACCORDINGLY, QUANTITATIVE AND QUALITATIVE APPROACHES WERE EMPLOYED. DATA ANALYSIS HAS FOLLOWED A CONVERGENT DESIGN THAT COMBINED DESCRIPTIVE AND INFERENTIAL TECHNIQUES WITH THE THEMES EMERGING THROUGH QUALITATIVE DATA. CONSEQUENTLY, THE FINDINGS OF THE RESEARCH REVEALED THAT PUBLIC INFRASTRUCTURES HAVE A SIGNIFICANT ASSOCIATION RURAL PEOPLE FOOD SECURITY. SPECIFICALLY, THERE WERE SIGNIFICANT ASSOCIATIONS WHEREBY HOUSEHOLDS WHO HAVE AN ACCESS TO AN ASSUMED INFRASTRUCTURE MORE LIKELY IMPROVE THEIR FOOD SECURITY THAN HOUSEHOLDS WHO HADN'T ACCESS TO RESPECTIVE RURAL PUBLIC INFRASTRUCTURES. THUS GOVERNMENT AND OTHERS RESPONSIBLE BODIES ARE NEEDED TO INVEST MORE ON PUBLIC INFRASTRUCTURES TO REACH OUT TO RURAL PEOPLE TO IMPROVE THEIR FOOD SECURITY.

KEY WORDS: PUBLIC INFRASTRUCTURE, FOOD SECURITY, ACCESSIBILITY TO PUBLIC INFRASTRUCTURE, HOUSEHOLD

1. INTRODUCTION

1.1 BACKGROUND OF THE STUDY

The beginnings of construction public infrastructures can be traced as far back as the Roman Empire two thousand years ago. The industrialization in Europe of the 19 century brought rapid urbanization and expansion of public infrastructures such as transport (railways,

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tramways, metropolitan), water supply and sewerage and energy. Nowadays cross the globe, infrastructure is the life blood of prosperity and economic confidence. Public infrastructures includes irrigation and public water facilities; transport facilities; storage facilities; marketing and export facilities; processing facilities; utilities; agricultural research and extension services; communication and information services; soil conservation schemes; credit and financial institutions; and education and health facilities⁴.

Public infrastructure is decisive means for agriculture, agro-industries and overall socio-economic and political development. It also, incidentally, provides basic amenities that improve the quality of life which is most of the time manifested in enlightening food security. It plays a key role in reaching the large mass of poor people particularly in rural areas where food insecurity is pervasively experienced. When public infrastructure has deteriorated or is non-existent, the poor live a worsened life. Poor public infrastructure also limits the ability of the traders to travel to and communicate with remote farming areas, limiting market access from these areas and eliminating competition for their produce⁵.

Because of well documented importance of rural public infrastructures to promote the above listed and other advantages for rural people, either national governments or international aid agencies seem to prioritize investments in the construction of new public infrastructures and maintenance of existing infrastructures⁶. The UN Millennium Project (2005) has re-emphasized the need for a 'big push' strategy in public investment to help poor countries and groups of people break out of their poverty trap and meet the MDG goals. Besides it was believed in improving the food security of households so as to achieve expected social development⁷.

While the state of public infrastructure varies widely among developing countries, most lower-income developing countries suffer severe public infrastructure deficiencies. Africa's infrastructure networks increasingly lag behind those of other developing countries and are characterized by missing regional links and stagnant household access. Deficiencies in transportation, energy, telecommunication, and related infrastructure translate into poorly functioning community which would have adverse impacts on the food security of households particularly in rural areas in developing countries⁸.

A large share of Africa's infrastructure is domestically financed, with the central government budget being the main driver of infrastructure investment⁹. Thus, African governments need further scientific researches for the purpose of bringing a food security in selection, funding, implementing, monitoring and evaluating the projects of rural public infrastructural development¹⁰.

⁴ Chowdhury, Shyamal K. "Impact of infrastructures on paid work opportunities and unpaid work burdens on rural women in Bangladesh." *Journal of International Development*, 2010.

⁵ Satish, P. "Rural infrastructure and growth: an overview." *Indian Journal of Agricultural Economic*, 2007.

⁶ Chaminuka, P., et al. "A factor analysis of access to and use of service infrastructure amongst emerging farmers in South Africa." *Agrekon*, 2008.

⁷ Bourguignon, François. "Rethinking Infrastructure for Development." Closing remarks at the Annual World Bank Conference on Development Economics, Tokyo, 2006.

⁸ Llanto, Gilberto M. The impact of infrastructure on agricultural productivity. No. 2012-12. PIDS Discussion Paper Series, 2012.

⁹ Foster, Vivien, and Cecilia M. Briceño-Garmendia, eds. *Africa's infrastructure: a time for transformation*. The World Bank, 2009.

¹⁰ Vivien, Foster, and Morella Elvira. "Ethiopia's Infrastructure: A Continental Perspective." *The International Bank for Reconstruction and Development/The World Bank. Country Report*, 2010.

Improved rural public infrastructure leads improvement of food security, social participation, female participation, and job opportunities¹¹. We have selected only eight public infrastructures (all-weather roads, health centers, education centers, protected water sources, irrigation, ICT, electricity and agricultural extension infrastructures), for the purpose of this study, on which government of Ethiopia has been spending huge budget with huge objectives of which improving the food security is the leading.

1.2. PROBLEM STATEMENT

Ethiopia is the second-most populous country in Africa with a population of more than 100 million. According to CSA¹² it has lowest level of public infrastructure particularly in rural areas of which an estimated 80 percent of the country's population lives. She is one of the most food-insecure and famine affected countries. A large portion of the country's population has been affected by chronic and transitory food insecurity. The food security situation in Ethiopia deteriorated sharply in 2017. The estimated food insecure population increased from 5.6 million in 2016 to 8.5 million in 2017¹³. Nowadays, insufficient and unequal access and protection of public infrastructure in rural areas is deemed as the foremost causes of food insecurity in Ethiopia¹⁴. As a result international community in general and Ethiopia government in particular are promoting basic services program at a national and local levels to improve access to and quality of public infrastructures such as education, health, water supply, rural roads, agricultural extension services, and electricity¹⁵.

Researchers such as Dubale¹⁶; Tirkaso¹⁷; and Kedanemariam and Sanjay¹⁸ studied the role of a given specific infrastructures in improving the life of rural people in socio-economic and political aspects. They all come up with the findings that improvement in a given public infrastructure improves the livelihood outcomes in general and food security in particular among rural households.

Dubale¹⁹ stated that telecommunication has an indispensable role in increasing productivity for the rural people. Tirkaso²⁰ conducted on the impact of ICT on the poverty reduction in Hossana district, southern parts of Ethiopia and argued that ICT plays a significant

¹¹ Fosu, K. Yerfi, et al. Public goods and services and food security: theory and modelling approaches. Unknown Publisher, 1995.

¹² CSA. Population B- Projection, 2015

¹³ Mohamed, Abdusalam Abdulahi. "Food security situation in Ethiopia: a review study." International Journal of Health Economics and Policy, 2017.

¹⁴ Fekadu, N. "Determinants of household food security the case of Bulbula in Adami-Tulu Jido Kombolcha, Oromia Region." Diss. M. Sc. Thesis, Addis Ababa University, Ethiopia, 2008.

¹⁵ Woldeyes, F., B. Lanos, and A. Mas Aparisi. "Analysis of public expenditures in support of food and agriculture in Ethiopia, 2014.

¹⁶ Dubale, Taye Estifanos. "Telecommunication in Ethiopia." Multi-year expert meeting on services, development, and trade: The regulatory and institutional dimension. 2010.

¹⁷ Tirkaso, Wondmagegn Tafesse. "Information communication technologies and poverty reduction in rural ethiopia." 2011.

¹⁸ Kedanemariam, Aklilu Kahssay, and Sanjay Mishra. "Community Development through Hydroelectric Project: A Case Study of Gilgel Gibe III Hydroelectric Power Project in Ethiopia." International Journal of Community Development, 2013.

¹⁹ Dubale, Taye Estifanos. "Telecommunication in Ethiopia." Multi-year expert meeting on services, development, and trade: The regulatory and institutional dimension. 2010.

²⁰ Tirkaso, Wondmagegn Tafesse. "Information communication technologies and poverty reduction in rural ethiopia." 2011.

role in poverty reduction of rural people. Kedanemariam and Sanjay²¹ studied an impact of hydroelectric project on community development and concluded that hydroelectric project development is positively correlated with the improvement of rural households' food security. Demenge et al.²² based on fieldwork conducted in 2014 in the semi-arid region of Tigray, Ethiopia, explores the opportunities and potential for multifunctional roads and argued that improving road connectivity could result in improving the livelihood of rural people.

Although many studies were done so far on the impacts of public infrastructure on the livelihood outcomes, there are still gaps that this study anticipated to fill. We also endeavored to show the association between food security among rural households and accessibility of selected public infrastructures. Finally, this research employed triangulation (both qualitative and quantitative) in understanding the issue under study unlike some of the researchers we had reviewed.

1.3. OBJECTIVES OF THE STUDY

The specific objectives of the study are the following:

- To assess accessibility of selected rural public infrastructures
- To describe the situations of selected rural public infrastructures
- To examine an association between selected rural public infrastructures and rural households food security

2. RESEARCH METHODS

2.1 Study Setting and Population

The study area is in the Oromia National Regional State (ONRS) of Ethiopia, Jimma Zone administrative area. According to the CSA²³ census, the Oromia regional state has a population of 33, 692,000 of which 4,880,000 is urban dwellers and 28, 812,000 is rural dwellers. Jimma Zone is purposively selected from the zones of Oromia region. The total population of Jimma zone is 2,986,957 of which 1,498,021 are male and 1,488,936 are female. Kersa is one of the woredas in the Jimma Zone of the Oromia Region of Ethiopia. It is bordered in South by Dedo, Southwest by seka chekorsa, West by Mana, North by Limmu kosa, Northeast by Tiro Afata and Southeast by Omo Nada. The altitude of this woreda ranges from 1740 to 2660 meters above sea level, and it encompasses mountains like Sume, Gora, Kero, Folla and Jiren.

2.2 Research Design

The study deployed a mix of both quantitative and qualitative approach. The philosophical foundation of the study is pragmatism. The reasons for the selection of pragmatic approach are: to use variety of data sources, to use multiple methods in the study at the same time or one after the other and to use multiple perspectives to interpret the results. Approximating longitudinal survey with cross-sectional design was employed. The researchers selected this study design because there were no baseline data in the study area and to get the advantages of both cross-sectional and longitudinal survey design.

²¹ Kedanemariam, Akilu Kahssay, and Sanjay Mishra. "Community Development through Hydroelectric Project: A Case Study of Gilgel Gibe III Hydroelectric Power Project in Ethiopia." *International Journal of Community Development*, 2013.

²² Demenge, Jonathan, Rossella Alba, Katharina Welle, Kebede Manjur, Alemu Addisu, Lyla Mehta, and Kifle Woldearegay. "Multifunctional roads: the potential effects of combined roads and water harvesting infrastructure on livelihoods and poverty in Ethiopia." *Journal of Infrastructure Development*, 2015.

²³ CSA. *Population B- Projection*, 2015.

2.3 Methods and Instruments of Data Collection

Household survey, in-depth interview, key informant interview and observation were used to collect data. The collected data were about accessibility to a given infrastructures, contexts of rural public infrastructures, and food security. In-depth interview was employed in collecting detailed information to substantiate quantitative data and to offer a complete picture. In the opinion of Bernard (2006), key informants are groups of people with whom the researcher talks and communicates extensively over a lengthy of duration. The key informant interview method was held with key individuals on all selected sectors of public infrastructures. The main data-generation instruments were structured questionnaires and semi-structured checklists.

2.4 Sampling Methods and Sample Size

Simple random sampling technique was used, since it was possible to access the lists of the residents from the respective study *kebeles*. From thirty one rural Kebeles, four kebeles (Tolikarso, Bulbuli, Babo and kallacha) were randomly selected. Thereby 255 households were selected through lottery method of sampling and proportionally to the selected kebeles. The sample size was determined depending on the formula of Yamane (1967:886) because it's the simplified in the case of finite population. The formula considers 95% of confidence and 5% margin of error. The formula is $n = N / [1 + N (e)^2]$; where n is the sample size, N is the population size, and e is the level of precision.

Furthermore, *kebeles'* elders – 16 individuals (four from each *kebele*) were purposively selected and deeply interviewed assuming that they have experience on issues under study and can provide profound on the issues under study. Finally, the head of all respective infrastructures (sectors) bureaus at district level – 16 individuals (two each) from office of health, education, water, electricity (power), irrigation, transportation, agricultural, and ICT were interviewed.

2.5 Reliability and Validity

The aspects of inter-rater technique of reliability proved its usefulness in the context of the pilot testing. It assessed the reliability of research instruments by utilizing four interviewers per site (Tolikarso, Bulbuli, Babo and kallacha). Internal consistency of instruments was assured by the split-half correlation. The two halves of an instruments provided similar result of ($r = .88$). Subsequently, instruments had strong internal consistency. The researchers believed that the items on the instrument captured the concepts that are essential in the research.

2.6 Methods of Data Analysis

The analysis applied a mixed design. Quantitative analysis uses the numeric data gathered through the sample households applying both the techniques of descriptive and inferential statistics. The descriptive analysis follows and emphasizes on percentages, central tendencies and graphic presentations. Consequently, the interpretations follow presentations made through these techniques. The results confer the prevailing relationships among the variables compared through column percentages. In addition, binary logistic regression was used to explain the strength and direction of association wherever the data appeared apparent. The qualitative data were transcribed, categorized, interpreted and schematized based on their respective contents and themes. The meanings, words, symbols and argumentative texts have formed basic premises in the structures of reporting the sub-titles and sections.

2.7 Ethical Considerations

In conducting this study all expected research ethics were considered. Before going to the field the letter from Ethical review board of the college of Social Sciences and Humanities was taken and given and/or shown to all responsible bodies. After we went to the field and contacted with respondents, the purposes and importance of the study were explained for the participants of the study and informed consent was obtained. Participants were given full right to withdraw at any time. Generally, confidentiality and anonymity of information were strongly maintained.

3. RESULTS AND DISCUSSION

This section deals with data analyses and presentation of the objectives of the study. Specifically, it includes about the presentation of: (a) socio-demographic background of respondents; (b) assessment of selected public infrastructures accessibility; (c) description about the situations of selected public infrastructures (all season road, formal health centers, formal education centers, ICT, protected water sources, agricultural extension services, electricity, and irrigation); and (d) rural public infrastructures linkages with food security among rural households.

3.1. Socio-demographic Background of Respondents

This sub-section presents socio-demographic backgrounds of respondents like sex, age, religion, educational status, and marital status.

Table 1: Sex, age, religion, educational status, and marital status of respondents

Variables	Category	Frequency	Percent
Sex	Male	218	85.5
	Female	37	14.5
Age	<30	3	1.2
	31-40	20	7.8
	41-50	99	38.8
	51-60	33	12.9
	61-65	80	31.4
	>65	20	7.8
Religion	orthodox	31	12.2
	Islam	199	78.0
	Protestant	17	6.7
	Other	8	3.1
Educational status	Can't read and write	99	38.8
	Grade 1-8	96	37.6
	Grade 9- 10	45	17.6
	Grade 11 - 12	9	3.5
	Diploma holder	3	1.2
	Degree and above holder	3	1.2
Marital status	Married	192	75.3

Divorced	16	6.3
Widowed ²⁴	47	18.4

Source: Household Survey 2016

Table 4.1 shows that the majority of the respondents were male (85.5 percent) and the rest were female. Concerning age, majority of respondents were fall under a category of 41-50 (38.8 percent) and followed by 61-65 (31.4 percent), 51-60 (12.9 percent), 30-40 (7.8 percent), > 65 (7.8) and <30 (1.2 percent) respectively.

Regarding religion of respondents the majority of respondents were Muslims (78.2 percent), followed by Orthodox (12.2 percent), Protestant (6.7 percent), and other²⁵ (3.1 percent) respectively. On the subject of educational status of the survey respondents, the majority of the respondents 99 (38.8 percent) were those who can't read and write. The second largest were those between grade one to eight 96 (37.6 percent). An accumulation of respondents below grade eight were 76.4%. The smallest were those who hold diploma and who hold degree and above each of 3 (1.2 percent). To conclude, the mainstream of the sample households 192 (75.3 percent) were married; followed by widowed 47 (18.4 percent) and divorced 16 (6.3 percent) respectively.

3.2 Accessibility of Public Infrastructures in Rural Areas and Its Situations

This sub-section assesses and describes accessibility and situations of selected public infrastructures in Kersa *woreda*. Accordingly, description about all-weather roads, any formal health centers, any formal education centers, protected water sources, electricity, ICT, irrigation and agricultural extension infrastructures were discussed below.

A district has a total coverage of 481 kilometers of which 50 kilometers is asphalt, 181.5 kilometers is all-weather road and 249.5 kilometers is only winter road. Among 31 rural *kebeles* of a district, only eleven *kebeles* have all-weather roads with averagely 14.5 kilometers. Likely, Foster and Morella (2010) argue that rural road accessibility is very low in Ethiopia. According to a GIS-based analysis, only 10 percent of Ethiopia's rural population lives within two kilometers of an all-weather road. This is only half of the benchmark level for low-income countries in Sub-Saharan Africa.

Nevertheless, to improve the situations of lack of accessibility to all weather roads government at different levels have been working on it. One expert from transportation office claimed that, "we are working to enhance all-weather road within five kilometers to connect all *kebeles* of a district." The transportation officer also said "We are enlightening all-weather road by pressing all-weather road for all rural people as slogan, because we believe that households' access to all-weather roads improve food security."

Health centers are another pivotal public infrastructure. Officer from health office confirmed that 'district has thirty four health posts with maximum distance of five kilometers among them and seven are health center catchment. All rural *kebeles* have at least one health post. It is assumed as five thousand people to one health extension worker ratio." One of 55 health extension workers also said that "there is substantially improvement of health centers and services in our district. However, there are also people out of five kilometers' coverage of health posts."

²⁴ Majority of widowed respondents (84.8 percent) were female; it needs further research to answer the Question; 'why?'

²⁵ Waaqeffannaa and Catholics constitute this category

Regarding education centers, Kersa district has 73 primary schools of which 71 are found in rural *kebeles* with a minimum of three kilometers among them. There are also three secondary schools of which two are in rural *kebeles* with a minimum of seven kilometers among them and one preparatory school in Serbo town (Education office of Kersa district 2016). As one education expert stated standard of three kilometers was adopted from federal education ministers. The intension was that children should not go more than it since it decreases dropouts and school age children out of school. However, all respondents believe that there are high dropouts and school age children out of schools because of others related public infrastructures like all-weather road and electricity.

The other central infrastructure, on which a district's responsible bodies are effectively and efficiently have been working, is protected water sources. Consequently, 60% of a district is getting protected water sources. District has 193 protected spring sources and 129 pump water. In other words more than half of the rural people in the study area are believed to have an access to protected water sources with time for collecting and waiting at the point was ≤ 15 and \leq five minutes respectively. These guidelines value have been recommended by WHO in 1983. Inconsistently with this finding, Kedanemariam and Sanjay²⁶ stated as the majority of Ethiopia's population relies on unimproved water and sanitation; 68 percent use surface water and 62 percent practice open defecation. Officer from water, energy and mineral office described:

Rural water supply projects take different forms ranging from simple protected springs to surface water systems with piped distribution of treated water system. The design and implementation of the simple schemes such as hand-dug wells, protected spring on spot, and spring with rural pipe scheme are being conducted. Simple schemes designed and implemented by the Woreda are known as Woreda Managed Projects (WMPs) and that of by the community are known as Community Managed Projects (CMPs).

Regarding irrigation data from district irrigation office indicates that sixty seven percent (18,540) of households are using irrigation on 0.5 hectare for each household. However, they weren't allowed to irrigate on more than 0.5 hectare unless with certain conditions. Generally, about 9,945 hectares were irrigated last year of which 7,226 hectares through traditional irrigation, 140 hectares through modern irrigation, 445 hectares through underground water irrigation, and 2134 hectares through pump irrigation. Of 18,540 (67%) of households who use irrigation: 13,630 use traditional irrigation, 253 use modern irrigation, 1,580 use underground water irrigation, and 3140 use pump irrigation. Another expert from irrigation office also added "nowadays, modernized irrigation systems are mostly used which works based on the pressurized energy system. The sprinkler and drip irrigation systems are of this type of water application systems." Finally, head of the office assured that government has been effectively and efficiently working on this sector so as to increase production and bring sustainable productivity.

Another selected public infrastructure is agricultural extension services. Kersa district has sixty four agricultural extension workers of 2-3 workers for each *kebele*. It has three groups: (plant extension workers - 36, animal extension workers – 17 workers, and cooperative workers- 11 workers). According to the sector officer, these groups (groups of agricultural extension services) have their own respective duties though they might work cooperatively with each other. Always they should be in rural areas. They give services through various

²⁶ Kedanemariam, Aklilu Kahssay, and Sanjay Mishra. "Community Development through Hydroelectric Project: A Case Study of Gilgel Gibe III Hydroelectric Power Project in Ethiopia." International Journal of Community Development, 2013.

mechanisms. Among those going house to house and giving training through organized zones of each kebele twice per month are the most invaluable mechanisms. There are households who frequently contact and consult agricultural extension workers while there are also others who participate once per month or twice per month or never attend the trainings.

Regarding ICT and electricity, availability and accessibility is very low. Data from survey indicated that 51% and 78.4 hadn't access to them respectively which is consistent with the finding of Demenge et al.²⁷ which indicates as Coverage of ICT services in Ethiopia is the lowest in Africa. GSM signals cover barely 10 percent of the population, compared with 48 percent for the low-income country benchmark; and the GSM subscription rate is only 1.6 percent of the population in Ethiopia, compared with 15.1 for the low-income country benchmark.

Depending on the standardized criteria of each sector, we summarized the respondents' response about their access to selected public infrastructures in the following table. For the purpose of this research, the researchers have used the following criteria (demarcation line) as households might have access to selected public infrastructures or not respectively. Those are: (a) five kilometers between household's house and all-weather road – for road infrastructure, (b) five kilometers between health posts or health centers catchment and home of households – for health centers, (c) three kilometers between (formal) education centers and household's house – for education infrastructure, (d) Fifteen and five minutes for collecting and waiting at the point respectively – for water infrastructure, (e) having modern and pump irrigation – for irrigation, and (f) participating on training and contacting with extension workers twice or more than it per month. Generally, the described demarcation line in this section were used in the following section where binary logistic regression model was employed to analyze association between selected public infrastructures and rural people food security status.

Table 2: Respondents Response about Accessibility of Selected Public Infrastructures

Variables	Category	Frequency	Percent
Sex	Male	218	55.5
	Female	37	14.5
Age	<30	3	1.2
	31-40	20	7.8
	41-50	99	38.8
	51-60	33	12.9
	61-65	80	31.4
	>65	20	7.8
Religion	orthodox	31	12.2
	Islam	199	78.0
	Protestant	17	6.7
	Other	8	3.1
	Can't read and write	99	38.8

²⁷ Demenge, Jonathan, Rossella Alba, Katharina Welle, Kebede Manjur, Alemu Addisu, Lyla Mehta, and Kifle Woldearegay. "Multifunctional roads: the potential effects of combined roads and water harvesting infrastructure on livelihoods and poverty in Ethiopia." *Journal of Infrastructure Development*, 2015.

Educational status	Grade 1-8	96	37.6
	Grade 9- 10	45	17.6
	Grade 11 - 12	9	3.5
	Diploma holder	3	1.2
	Degree and above holder	3	1.2
Marital status	Married	192	75.3
	Divorced	16	6.3
	Widowed ²⁸	47	18.4

Source: Household survey 2016

Depending on the standards given in the section before table, the respondents who have not or limited access to all-weather roads were 55.7 percent, electricity were 78.4 percent, protected water sources were 51.8 percent, ICT were 51 percent, health centers were 56.5 percent, education centers were 46.3 percent, irrigation were 91.8 percent, and agricultural extension services were 37.6 percent. Except an access to education centers and agricultural extension services more than half of respondents have not accessibility to public infrastructures. This implies that the level of public infrastructures in rural areas is at infant stage. The interviewed respondents from all sectors also witnessed as coverage of respective public infrastructures is at low rate in a district. They also argued as responsible bodies need to be increase proportionally high infrastructures funding and careful handling of public investments so as to reach infrastructures' targets within a reasonable time.

3.3 Public Infrastructures in Rural Areas and Food Security

The focuses in food security by measuring the protein, micronutrients, food quality and safety have to be treated as value judgments²⁹. Thus for the purpose of this study, the researcher asked respondents almost subjective responses depending on the indicators of food security explained - the physical availability of food, the ability of household to access the available food and the ability of individuals (particularly those susceptible to food deficits such as women, infants and children) to secure entitlement to it throughout a year. If household head responded as these three elements are satisfactory; it has been considered as household has food security. Consequently, food security as a dependent variable, assumes the value of Y= 1 if a household is food secure, 0 otherwise.

Accordingly, majority of respondents (64.3 percent) were food insecure while only 35.7 percent were food secure. Majority of those who have access to a given public infrastructures have food security and vice versa. The result of survey shows that 70.8 percent of 113 households who have access to all-weather roads; 45.1 percent of 111 households who access to any formal health centers; 51.1 percent of 137 households who have access to any formal education centers; 52.8 percent of 123 households who have access to protected water sources ; 60 percent of 125 households who access to ICT; 54.08 percent of 159 households who have access to agricultural extension services; 90.9 percent of 55 households who have access to electricity ; and 95.2 percent of 21 households who have access to irrigation had food security throughout a year respectively.

²⁸ Majority of widowed respondents (84.8 percent) were female; it needs further research to answer the Question; 'why?'

²⁹ Maxwell, Simon, and Marisol Smith. "Household food security: a conceptual review." Household food security: Concepts, indicators, measurements, 1992.

Contrastingly, 99.1 percent of those who have no access to all-weather roads, 78.5 percent of those who have no access to any formal health centers, 88.1 percent of those who have no access to any formal education centers, 98.4 percent of those who have no access to protected water sources, 88.8 percent of those who have no access to ICT, 92.5 percent of those who have no access to agricultural extension services, 88.8 percent of those who have no access to electricity, and 67.1 percent of those who have no access to irrigation were food insecure throughout a year.

The following (figure 1) shows the feeling of households that either an intervention (accessibility) of respective infrastructures could improve their food security or not. Middle-of-the-road of respondents who have access to all-weather roads (73.4 percent), irrigation (96 percent) and agricultural extension services (98.1 percent) responded that accessibility to these respective infrastructures could improve their food security status. Unswervingly, Hussein³⁰, Bedeke³¹, Mitiku, Fufa, and Tadesse³², Kidane, Zerihun, and Godfrey³³, and Fekedu³⁴ strongly argue that an accessibility to one or more of public infrastructures can be a mechanism of improving rural households food security in one or another way. Rural households' food security is intractably linked with an advancement of rural public infrastructures³⁵. Consequently, they recommend investment in public infrastructures particularly on road and agricultural extension services for better improvement of rural households' livelihood.

³⁰ Hussein, B. "Major causes of household food insecurity in Wuchale-Jidda Woreda, Oromiya national regional state." PhD diss., MA Thesis, Addis Ababa University, 2006.

³¹ Bedeke, Sisay Belay. "Food insecurity and coping strategies: a perspective from Kersa district, East Hararghe Ethiopia." Food Science and Quality Management, 2012.

³² Mitiku, Amsalu, Bekabil Fufa, and Beyene Tadese. "Empirical analysis of the determinants of rural households food security in Southern Ethiopia: The case of Shashemene District." Basic Res J Agric Sci Rev, 2012.

³³ Kidane, Habtom, Zerihun Gudeta Alemu, and Godfrey Kundhlande. "Causes of household food insecurity in koredegaga peasant association, Oromiya Zone, Ethiopia." Agrekon, 2005.

³⁴ Fekadu, N. "Determinants of household food security the case of Bulbula in Adami-Tulu Jido Kombolcha, Oromia Region." PhD diss., M. Sc. Thesis, Addis Ababa University, Ethiopia, 2008.

³⁵ Bedeke, Sisay Belay. "Food insecurity and coping strategies: a perspective from Kersa district, East Hararghe Ethiopia." Food Science and Quality Management, 2012.

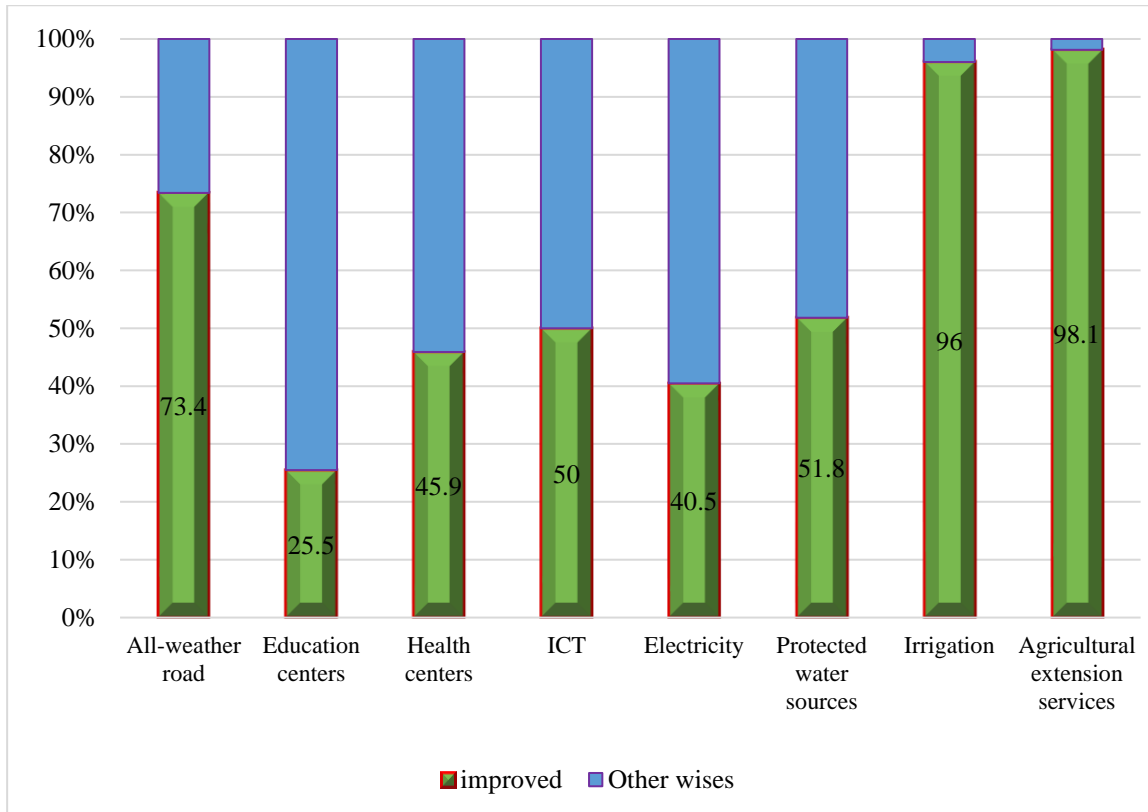


Figure 1: Households' feeling about food security and public infrastructures
Source: Household survey, 2016

Data from the qualitative methods also consistently supports the findings from quantitative data. For example, if they have access to all weather roads they save their time for engaging production and productivity which would have direct and indirect associations with rural households' food security. Access to ICT also helps rural households to get information which they utilize in improving their food security status and decreasing risks. Getting health centers and education centers improves the quality of human capital which explicitly triggers in diversifying livelihood strategies and leads to food security. The same is true for all selected public infrastructures. Generally, data from interview, FGD, and key informant interview indicates that rural public infrastructures have both direct and indirect associations with food security among rural households. Besides to the above descriptive finding, binary logistic regression was computed and the result was put as the follows.

Table 3: Binary logistic regression output about an accessibility of public infrastructures and households feeling about food security

Public Infrastructures	Categories	Frequency	Percent
All season road	Accessible at ≤ 5 km	113	44.3
	Lak of access	142	55.7
Electricity	yes	55	21.6
	No	200	78.4
Protected water sources	Accessible at ≤ 1 km	123	48.2
	Lak of access	132	51.8
ICT	Accessible	125	49
	Lak of access	130	51
Health centers	Accessible at ≤ 5 km	111	43.5

	Lak of access	144	56.5
Education centers	Accessible at ≤ 3 km	137	53.7
	Lak of access	118	46.3
Irrigation	Yes	21	8.2
	No	234	91.8
Agricultural extension	Yes	159	62.4
	No	96	37.6

Source: Household Survey, 2016

The above (table 3) shows access among other selected public infrastructures to all- weathers roads and agricultural extension services have significant and positive possible effects on the food security of households at $p < 0.01$. Consequently, the odds ratio tells us that the households who have an access to all- weathers roads were 25 times and who have access agricultural extension services were 43 times more likely responded that they have food security throughout a year than households who have not an access to these infrastructures respectively. Majority of respondents who have an access to all- weather roads and agricultural extension services were very happy. One respondent from interview stated that after they got all- weather road and agricultural extension services they have hardly facing the problems of food insecurity.

In addition an expert from transport office detailed the relationship between all- weather roads and food security as enhancing road has its own role in increasing food security of rural households. *Woreda's* agricultural office officer also added that rural people food security status is increasing satisfactorily as a result of getting an agricultural extension services. An expert from water office also witnessed that as it is usual without water everything is impossible. Protected water sources played a great role in ensuring food security of rural households. It helps them in producing quality food and increasing their production and productivity. To sum up, almost all of interviewed and key informants from all selected sectors believe that improvement in a given public infrastructure could directly or indirectly play a great role in the improvement of rural people food security.

4. CONCLUSION AND RECOMMENDATION

Conclusions entail empirical knowledge generated on the two inter-related key components of the study: an accessibility of public infrastructures and households' feeling of food security. Public infrastructures coverage in rural parts of Ethiopia is at infant stage though a large number of people live in rural areas. The demand of rural people about public infrastructures couldn't be answered. As a result a large number of rural households are food insecure in Ethiopia. An accessibility of public infrastructures and food security are directly related with each other. As there is low level of access to public infrastructures, there is food insecurity. Studying one of them separately from another is problematic. Therefore, studying instantaneously about the possible effects of public infrastructures on the complex and changing food security have a decisive role. Finally, we recommend government and others responsible bodies to upsurge their engagement in advancing pillar public infrastructures to reach out to where majority of Ethiopian people live (rural area) without having access to all those an indispensable public infrastructures.

ACKNOWLEDGEMENTS

Above all, we would like to express our gratitude to Jimma University for its financial support to carry out the fieldwork particularly. We are grateful for the time and information

shared by respondents. Finally, we are also grateful for all our friends who have suggested and commented for the successful accomplishment of this study.

COMPETING INTEREST

The authors declare that there is no competing interest among authors. This manuscript has not been published and is not under consideration for publication elsewhere.

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DOCUMENTARY INCASSO

Costina SFINTEȘ¹

ABSTRACT:

THE UNIFORM RULES ESTABLISHED THROUGH THE UNDERSTANDING BETWEEN THE STATES PARTICIPATING IN THE INTERNATIONAL DIVISION OF LABOR ARE CHANGING AND ADAPTING TO THE NEEDS OF INTERNATIONAL PAYMENTS RESULTING FROM THE EVOLUTION OF THE WORLD ECONOMY, THE EVOLUTION OF INTERNATIONAL ECONOMIC COOPERATION RELATIONS AND, IN PARTICULAR, THE EVOLUTION OF INTERNATIONAL TRADE.

KEYWORDS: DOCUMENTARY INCASSO, INTERNATIONAL TRADE, INTERNATIONAL PAYMENT, MONEY, BANK, EXPORTER, IMPORTER, GOODS.

Documentary Incasso is the method of payment by which the exporter sends the importer to collect, by bank, the contractually agreed documents, attesting to the fulfillment of his obligations. These documents include the invoice, the transport document, the certificate of origin, the insurance policy (in specific cases).

In a documentary cassette operation the following parts are involved: the exporter; the receiving bank of documents; correspondent bank abroad; the importer.

Incasso is a simple and inexpensive way to pay, when it comes to the fact that the services provided by the two banks are cheap because they do not hire them and the importer does not see himself obliged to immobilize his money such as documentary credit.

At the same time, it should be noted that the exporter receives with some delay the price of the sold goods, from the date of dispatch, to the possibility that the documentary credit offers him to collect the price shortly after the shipment. The biggest inconvenience for the exporter is that documentary incasso does not guarantee that he will recover his external debt, relying exclusively on confidence in the debtor's ability to pay. In fact, the exporter uses this payment method under the following conditions:

- Belongs to the integrity of the importer that is recognized worldwide, and the importer, for reasons of saving bank charges, insists for payment in this way;
- the merchandise is hard to sell, it is being used at low low-priced prices, the level of which would be further reduced if high bank fees were to occur;
- the law of the importing country requires the use of the documentary incense.

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International rules on international payments are based on uniform rules established by the understanding between the states participating in the international division of labor. These rules are modified and adapted to the needs of international payments resulting from the evolution of the world economy, the evolution of the international economic cooperation relations and, in particular, the evolution of international trade.

An international monetary system can therefore be defined as a set of rules on the institutionalization, realization and circulation of money on an international scale. Since each state has its own monetary system, theoretically, the national monetary systems should be the foundation of the international monetary system. This is almost impossible to achieve because of the different levels of national economies, national legislative particularities, the diversity of interests on different stages of state evolution, the diversity of national political and social regimes, etc. That is why, in practice, the formation of the international monetary system relies mainly on monetary systems of the big states based on objective economic laws with a high economic potential².

At the core of the international monetary system should be a single monetary standard, so it would be impossible to correlate the monetary units of the states. A single monetary standard means the amount of standardized materials embedded in a monetary unit or as a hedge behind this monetary unit. Over the years, different products have been used as standard, especially metals, especially precious metals.

It is noteworthy that the national monetary system based on precious metals was known until the end of the nineteenth century in two forms: the monometalist system and the bimetalist system. In the monometal system the states based on their monetary units gold or silver, and in the bimetallic system has established both metals, with an exchange ratio established between them. Gradually, the monometalist system based on gold was gradually changed. Both in one system and the other, precious metals were used in two ways: each monetary unit put into circulation had a certain amount of the precious metal incorporated; in circulation were made monetary units made of inferior metals or paper, in the deposits of the issuing banks, keeping the precious standard metal as cover. Upon request, the monetary unit in circulation could be exchanged with precious metal, the issuing banks being legally obliged to make the exchange³.

The exchange ratio between the precious melange content of a national currency unit and the content in the same precious metal of another national currency unit is known as monetary parity. It follows that the monetary unit so formed is the result of a social agreement, it is an institution.

Given the existence of a single monetary standard and the possibility of converting national currencies into gold corresponding to the definition of monetary parities, national currencies can be used as a means of payment in international trade. But in the global world economy, national currency units no longer have gold coverage theoretically, as defined by law.

Therefore, although at the base of the national monetary units is gold, theoretically, in fact, the purchasing power of these units resides in commodity production and labor productivity.

Defining elements of documentary incasso

Incasso⁴, as a payment technique used in international economic exchanges, is governed by the document entitled "Uniform Rules for incasso", also known as Publication 522/1995 of

² Stoian, John, Pencea, Radu, Brotac, Leonida, International Trade Techniques, to prepare the importer and exporter, vol. 2, Bucharest, 1992, p. 3.

³ ibidem, pag.4.

⁴ Foreign Legal Legal Dictionary, Scientific and Enciclopedic Publishing House, Bucharest, 1986.

the Paris International Chamber of Commerce with effect from 01.01.1996 . According to Article 2 of this document, "incasso" means the treatment by banks of commercial and / or financial documents, in accordance with the instructions received, in order to:

- Accept and / or pay;
- Delivers commercial documents against acceptance (D / A)
- and / or, as the case may be, against payment (D / P);
- handing out documents under other conditions

It follows from this definition that the transaction is a simple circulation of documents, the obligation of the banks involved in the provision of a service under the conditions imposed by the instructions received from the exporter and the rules of Publication no. 522. In this context, banks are nevertheless obliged to verify the conformity (apparentness) between the documents submitted by the exporter and those mentioned in the order for collection by advising him of any inconsistencies or shortcomings, executing the exporter's instructions regarding the transmission of the documents and notifying the exporter, as soon as possible, indicating the reasons, on the importer's refusal or non-payment.

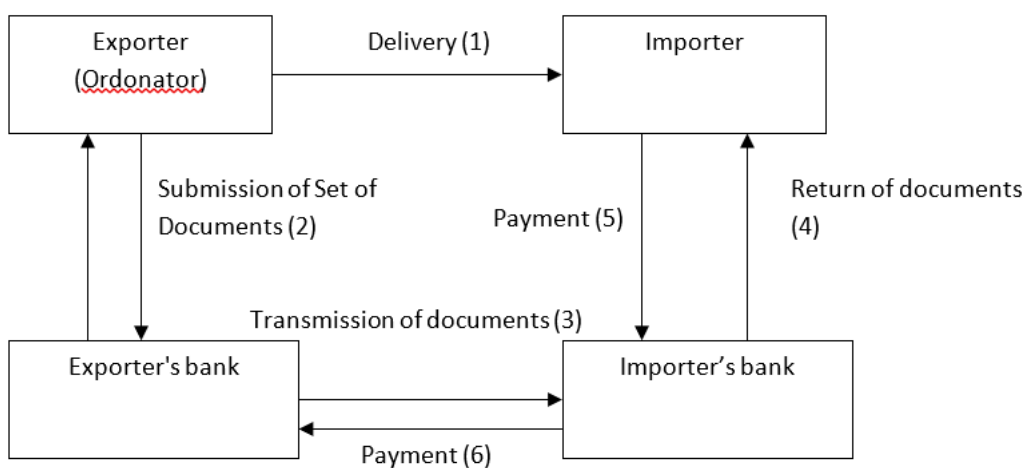
The parties involved in running an incasso, according to Article 3 of the same publication, are:

- the authorizing officer - the exporter who entrusts the collection order with his bank documents;
- the remittance bank - the exporter's bank
- bank responsible for collecting (collectors) - any bank other than the remitting bank, which intervenes in the incasso operation;
- the presenter bank - the bank responsible for presenting the documents of the draw.

The cashing bank and the presenter bank can in practice be the same bank if the exporter's bank corresponds to the importer's bank.

The indrawn - the importer whose documents must be presented for acceptance or payment.

Running incasso operations involves the following steps⁵, as shown below.



⁵ Moxohon, Henry, The technique of international transactions, new publication University, Paris, 1969.

1. the conclusion of the international commercial contract, through which the partners have agreed to pay by documentary registration;
2. the delivery of the goods in strict accordance with the delivery terms and the conditions regarding the goods agreed in the contract;
3. after the delivery of the goods, the exporter obtains the documents proving the fulfillment of the obligations under the international commercial contract: financial documents (bills of exchange, promissory notes, checks, receipts, etc.) and / or commercial documents (invoices, transport documents).

Depending on the type of these documents, there are two types of incasso:

- simple - is a collection of financial documents, not accompanied by commercial documents;
- documentary - is a collection of commercial documents that may or may not be accompanied by financial documents.

The set of documents accompanied by the order of payment to the incasso (collection order) is presented by the exporter to his bank (the remitting bank). It is advisable for the documents to arrive as soon as possible to the importer, preferably prior to receiving the goods. The arrival of the goods well in advance of the documents presents several disadvantages for the exporter in the sense that it extends the credit granted by the importer to the warehouse, contrasts, etc.

The payment order⁶ at incasso clearly and precisely specifies the conditions under which the importer's documents (for payment, acceptance or other conditions) will be handed over, the name of the documents and the number of copies (original and copies) to be handed over. It is the responsibility of the party preparing / drawing up the order for recovery (the ordering party) to ensure that the terms and conditions for the release of the documents are clearly stated, without ambiguity; otherwise, banks will have no responsibility for any consequence arising from it. Out of those elements, the document also contains the following:

- the full name and address of the importer (trasfer);
- the name and address of the banks involved;
- the name and address of the incasso recipient (the exporter);
- The exact name of the goods and their description (quantity, quality, unit price, etc.);
- if the goods have to be stored and insured, if the documents are not taken over at the arrival of the goods. This clause is known as "store and insure". Under this clause, if the importer does not pay or accept the bill, the bank will receive instructions for storage and merchandise insurance. The cost of these operations will be claimed from the exporter's bank, who will debit his client's account. If consignment notes indicating the importer as consignee are used, that clause becomes superfluous.
- details of transport and delivery (transmissible and non-admissible transshipments and deliveries, the age of vessels admitted to chartering, etc.);
- the value of the incasso with the currency of payment indicated;
- whether partial payments are permitted or not. Banks may accept partial payments only in the case of simple bills and only if the regulations in force at the place of payment do not prohibit this. In the case of the importer's refusal to pay the documents in full, the exporter may give instructions to the bank to issue the

⁶ Deteşan, Alexandru, Rucăreanu, Ion, Ştefănescu, Brânduşa, International Trade Law, Economic Review, 1976.

documents without receiving the difference (if the exporter pays the importer) or may instruct the bank to keep the documents at the disposal of the remittance bank until the difference is collected, which adds extra costs.

- explanations regarding the bill of exchange that accompanies the documents, namely: its maturity; instructions to the bank, in the case where the importer does not accept the bill, regarding the preparation of formalities for protest of non-payment or non-acceptance; the billing circuit to maturity in the sense that it must be returned to the exporter or kept in the cashing bank or in a trustee bank and if, in the case of dishonest bills, the bank abroad should contact an agent of the exporter in that country case of need clause);
- whether or not interest will be charged, including the interest rate, the period for which interest is calculated (the covered period) and the basis of calculation (360 or 365 days, as the case may be);
- whether bank or other charges should be charged in addition to the amount of bills or not;
- the designation of the party paying the fees and commissions. If the draw refuses to pay them, they will be charged automatically by the ordering party.

The commercial invoice must be presented in the number of copies provided in the basic contract and include the corresponding data taken from the transport document, insurance document, etc.

Transport documents must be issued in such a way as to ensure that the exporter's control over his goods is ensured by the importer. For shipping, the bill of lading must be borrowed in white at the remittance bank's order. For other modes of transport, it is recommended that the documents be addressed in the name of an international forwarding house with precise instructions not to release them to the importer other than proof that they have paid or accepted the payment commodity.

The blank policy or blank insurance policy in the CIF and CIP delivery terms.

The Promissory Note⁷ is a precautionary payment measure for incasso. Unlike bills under documentary letters of credit, incasso bills are drawn directly to the importer and the beneficiary may be the exporter himself or his bank. Bills can be spot-paid (the importer pays them when the documents are taken over) or with payment at maturity (the importer accepts them when the documents are taken over).

Other documents issued and drafted in accordance with the conventions and provisions of the basic contract.

Documentary Incasso:

a) Documents for payment

The bank in charge of the collection (the presenter bank) is not allowed to deliver documents until the bill has been paid. However, this payment instrument should only be used if the business relationship between the two partners is stable and trust is reciprocal. If the buyer refuses to honor his commitments, the seller is often very difficult to re-enter the goods without incurring large losses.

b) Documents Against Acceptance

This is another type of documentary incasso. As a rule, the bank of the seller transmits the bank's documents to the importer with instructions not to issue them except for accepting the

⁷ The Romanian Civil Code of 1859

effect presented. Acceptance is most often done by the buyer, but it may also be necessary to guarantee the effect by looking for a bank.

The inconvenience of this process is that it allows the buyer to take possession of the goods before they are paid. There is, of course, a claim, but this is not always easy to recover in the country of the importer.

The revocable Letter of credit

It may be modified or canceled at any time by the issuing bank without prior notification to the beneficiary, provided the automatic bank does so.

Irrevocable letter of credit not confirmed by the notifying bank

The issuing bank (usually the buyer's bank) assumes the seller's commitment to make the payment if documents conforming to the terms and conditions of the letter of credit are submitted within the specified time limit. There is no involvement of another bank, which can raise certain issues when it comes to countries with high political or high-risk risks. The solvency of the issuing bank plays a predominant role in this case.

The irrevocable letter of credit confirmed by the notifying bank

If the conditions of the letter of credit are met, the payment is responsible, in addition to the issuing bank, for a second, confirming bank. For the seller, this form of payment in most cases removes the country's risks and confidence inherent to unconfirmed letters of credit. (Country risks = the danger that foreign assets and claims can not be repatriated by customary methods due to events on which the government as a power may have some influence but which are completely outside the sphere of influence of private and private businesses Country risks include political and transfer risks).

Warranty in case of non-payment

With this guarantee, the bank undertakes to make the payment to the exporter at the first request, if it gives him a remission of payment. It is often used together with the payment method in time and is especially suitable for the commodity trade.

Letter of credit "stand by"

It is a non-payment guarantee instrument, subject at the same time to the uniform rules and guidelines for documentary letters of credit (RUU). Payments are generally made against the handing over of copies of cargo shipments, including sight-paying negotiations, when required, as well as a statement by the payee stating that the amount owed to him has not yet been paid.

This type of letter of credit with a warranty character is mainly used in the United States of America.

Synoptic picture of types of bank guarantees,
illustrated by an example of export⁸

Problem data	The bank guarantee
1. Motorcycle Factory Creator S.A. in Geneva wants to get a contract proposed by Energy Supply Ltd. Osaka. In order to eliminate the less serious or unqualified tenderers, the buyer only accepts offers accompanied by a warranty.	In order to guarantee its offer, Creator SA requires the bank to provide the required bond (bid bond)
2. Creator S.A. has obtained the contract and establishes details of execution and delivery with Energy Supply Ltd.	In order to guarantee delivery and benefits, the bank establishes a factory performance guarantee.
3. To begin manufacturing the ordered motorcycles, Creator S.A. requires an advance from Energy Supply Ltd	The Bank establishes the order of the Creator S.A. a guarantee of repayment of the advance payments guaranteed, which is executed but the delivery is not performed.
4. Creator S.A. provides the services with other consortium members or subcontractors but is solely responsible for Energy Supply Ltd. as a general contractor.	From the Creator S.A. the bank issues guarantees for the entire amount (consortium collateral), including passwords of other consortium members or subcontractors. In order to limit its commitment to its own part, Creator S.A. requires the other members of the consortium or subcontractors to sub-guarantee the corresponding partial amounts. In order for other members of the consortium or subcontractors to benefit from the security of payment in the form of a letter of credit opened by the buyer's bank in its favor, Creator S.A. either ask the bank to make one or more L / C transfers or to open one or more back-to-back letters of credit in favor of the other members of the consortium or subcontractors, or establish with the other members of the consortium or with subcontractors a proportional assignment of rights of the receivable by virtue of the documentary letter of credit.
5. Creator S.A. finances delivery by an export credit covered by GRE (Federal Export Insurance Guarantee under Swiss law).	The Bank grants the export credit provided that, under the provisions in force and the elective requirements, the Federal Export Guarantee Guarantee (GRE) has been granted in advance.
6. Creator S.A. and Energy Supply Ltd. have agreed that the payment for a specified part of the deliveries is to be done by documentary evidence.	Creator S.A. mandates the Union of Banks Suisses (UBS) to issue the documentary incaso. This (UBS) transmits the bank's documents to the buyer, who in turn transfers them to Energy Supply Ltd. for payment or against the acceptance of an exchange swap (order).
7. Creator S.A. and Energy Supply Ltd. have agreed to pay for the principal delivery by documentary letter of credit.	The Issuer of the Order - Energy Supply Ltd. asks its bank (the issuing bank) to open a documentary letter of credit in favor of Creator S.A. depending on the needs of the trading partners, the L / C will be revocable, irrevocably confirmed or irrevocably confirmed (possibly transferable) and most often notified by a corresponding bank (eg UBS) in the country of the seller. The documents provided in the document are sent by the beneficiary (Creator S.A.) to the notifying bank, which sends them to the issuing bank, to be returned to the ordering authority (Energy

⁸ Cristureanu, Titus, Statistics of Foreign Trade, Bucharest, 1971.

	Supply Ltd.). Payment will be made at sight or on time, depending on the terms of the L / C.
8. Creator S.A. can not sell abroad unless the country of destination can deliver goods in return for Creator S.A. or for a third party.	In order to guarantee barter, compensation and "switch" operations, documentary letters of credit can be opened and their adjustment made through a compensated account.

Consequently, an analysis of international trade relations reveals that the most important place today is documentary credits and documentary incasso. Thus, these payment documents are able to adapt both in terms of increases in trade volumes and when there are restrictions on this volume.

The role and significance of documentary incasso, appreciated by the frequency of its use as an important means of payment in international trade, should be emphasized.

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HINDERING THE PROCESS OF DEMOCRATIZATION IN ROMANIA AS A CONSEQUENCE OF THE SOCIAL PROTESTS IN THE EARLY 90s

Flavius Cristian MĂRCĂU¹

ABSTRACT:

THE CASE OF ROMANIA - AT THE BEGINNING OF THE 90S – SHOWED A PARTICULARITY AS COMPARED TO THE REST OF POST-COMMUNIST STATES IN CENTRAL AND EASTERN EUROPE, DUE TO THE FACT THAT THE CHANGE OF THE TOTALITARIAN COMMUNIST REGIME DID NOT ACHIEVE THE QUIETNESS REQUIRED BY THE DEMOCRATIC CONSTRUCTION. IT IS A PECULIAR CASE IN THE FORMER SOVIET BLOC BECAUSE OF THE CONTINUATION OF THE SOCIAL PROTESTS AGAINST THE NEW PROVISIONAL GOVERNMENT (FOLLOWING THE REVOLUTION OF DECEMBER 1989). WE WILL GIVE A CHRONOLOGICAL PRESENTATION OF THE 1990 EVENTS AND WE WILL HIGHLIGHT BOTH THE NEGATIVE ASPECTS BEHIND THESE PROTESTS AND THE WAYS OF AVOIDING THEM.

KEYWORDS: COMMUNISM, DEMOCRATIZATION, DEMOCRACY, ROMANIA, PROTESTS

INTRODUCTION

The new post-communist leaders of Romania demonstrated a well-defined incapacity regarding the comprehension of the rules imposed by a democratic regime, and the consequences were felt by those who manifested against the provisional government.

The events succeeding the Romanian Revolution will give us the opportunity to demonstrate that the new provisional government was not prepared to develop a necessary framework for political pluralism nor to consider the dissatisfaction of its sympathizers. However, we are mentioning that social protests can initially be similar, to a certain extent, to political protests. We are referring to the fact that an anti-government coalition composed of the political parties, the National Christian-Democratic Peasant Party (PNTCD), the National Liberal Party (PNL) and the Social Democratic Party (PSDR) was formed in early 1990.

With the tough measures adopted by the new leaders, tens of thousands of people were mobilized. Their repression led to the death of six people and injured 746 others, according to the official data provided by the parliamentary committees of inquiry.

Initially, discontent with the new post-communist government could be noted among the three parties; then, due to the mismanagement of the situation and the uninspired measures, there was a significant mobilization of the citizens who proved to be indignant with the brutality with which the new leaders acted.

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METHODOLOGY

It is natural to ask a few questions about the events going on in the early 1990s in Romania. The discontent that made the anti-governmental protests possible found their roots in the former communist regime, and the hatred accumulated over the years was exposed and directed against new leaders proclaiming themselves democrats.

Thus, it is necessary to create a set of questions from which we can start the discussions:

- 1) Why were the anti-government protests possible?
- 2) Could the actions of the new leaders fall within the typology of democracy?
- 3) Did the protests of the early 1990s create negative effects on the scene of international relations?
- 4) Was there an increase in the process of democratization?

The research methodology used in this study was based on the rigorous examination of bibliographic sources, using the comparison method to obtain the most accurate information, but we did not minimize the importance of studying and analyzing the official documents having been the basis for constituting various analysis reports of the events following the period of the revolution of December 1989. Attention was directed to a clear and coherent study, drawing on the descriptive analysis, the deductive and inductive method, but without minimizing the qualitative hermeneutics researching the different situations.

THEORY

In this article we are focusing on finding the arguments that support or refute the hypothesis that Romania has undergone a slowdown in the process of democratization due to the protests that followed the bloody event of 1989.

We have extensively dealt with the stages of democratization in another article², so here we will only present the chart that describes the stages through which a state is forced to go through in order to establish democracy. It is worth mentioning that in this study we developed a pattern of democratization following the evolution of the post-communist states in Central and Eastern Europe.

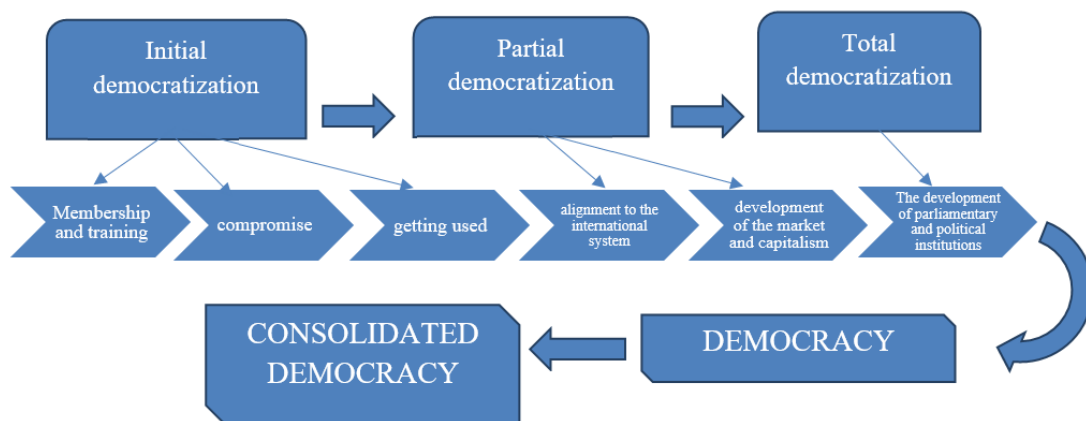


Chart 1. Necessary stages in the democratization of a state³

² Flavius Cristian Mărcău, „Central and Eastern Europe – necessary stages of democracy construction”, Research and Science Today, No. 2(8)/2014, November 2014, 93-102

³ Flavius Cristian Mărcău, *Central and Eastern Europe – necessary stages of democracy construction...*, 99

DISCUSSIONS

The catalyst of the street protests was based on the intentions of the National Salvation Front (FSN) of participating in the first free elections, although its leaders had previously stated they would only consider the organization of the poll. However, on the 31st of December 1989, Silviu Brucan stated in an article published in *Romania Libera* that: "So FSN is entering the electoral battle."⁴ These statements made possible the first anti-governmental events of January the 28th, 1990, held in Victoriei Square in Bucharest by PNTCD, PNL, PSDR, but also others, attended by people dissatisfied with the FSN's decision to enter the electoral race.

In our endeavour, we want to highlight the tendency of slowing down the democratization process of post-communist Romania, resulting from the serious deficiencies of understanding and application of human rights as well as the inability to adjust the provisional government to the measures imposed by a democratic system.

This research is done "in rem", so it is not our priority to nominally determine who were responsible for the repressions of 1990 (although our study is based on the official charges drawn up for the trial of various political characters).

What should be mentioned is that in November 2012 Romania lost the trial in the European Court of Human Rights (ECHR) initiated by the President of the *December 21, 1989 Association*, regarding the delay of the dossier on the Mineriada. According to the ECHR's decision, "all the evidence in this case indicates the constituent elements of a crime against humanity committed by officials of the Romanian state, including members of the Government and military men with important ranks."⁵ Also, the same court also demanded Romania to reopen the case for the dossier on the Mineriada of June 1990.

1) *The course of events*

Following the announcement made by FSN leaders regarding the election, it attracted the resignation of some of the personalities who had been co-opted to the Front more decoratively in order to speculate their image of anticommunist fighters: this is especially about Doina Cornea and Ana Blandiana, who resigned as a protest against the new decisions of the postcommunist leaders. The decision of the three parties (PNTCD, PNL, PSDR) to organize their first joint political action directed against the provisional government consisted of issuing a joint press release and organizing a protest on the 28th of January, measures which led to a response from CFSN by organizing a countermanifestation to balance to a certain extent the discontent, but also to point out that only a small part of the protesters are against the policies implemented by the governors.⁶

The first violent incidents occurred on the 29th of January following the extension of the anti-governmental demonstrations and the deployment of the first "Mineriada", which resulted in violence due to some people who used bats and chains against their opponents. There is also evidence revealing that there were people equipped with walkie-talkies who dealt with the co-ordination of those who participated in the countermanifestation⁷.

⁴Flavius Cristian Mărcău, „13-15 iunie 1990 – urmare a revoluției din '89”, în volumul de publicări „*Sententia*”, ediția I, (Targu-Jiu:editura Academica Brâncuși, 2010), 253

⁵ <http://www.asociatia21decembrie.ro/2014/09/revista-presei-13/> , accessed at 05.03.2019

⁶ See Catherine Durandin, Zoe Petre, *România post 1989*, (Institutul European, Iași, 2010), 161

⁷ 2007 Indictment, drawn up by the magistrate Viorel Siserman and confirmed by the magistrate-general Dan Voinea of the Military Prosecutors' Section, for bringing to trial the military defendants for killing and injuring some people on the 13th of June, 1990, p. 1

www.mineriada.org/doc/rechizitoriu_chitac.rtf, accessed on 03.07.2015

This is the moment when the first of the three *mineriades* took place, orchestrated by the leaders who wanted to be democrats, but their actions of bringing miners from the Jiu Valley and using them against the demonstrators is a serious violation of the democratic principles. It is incomprehensible nowadays how workers could be used as lawyers, and the institutions designated for the protection of the population to watch indifferently when the miners became aggressive.

Similar incidents occurred on the 18th of February, 1990, on the occasion of a peaceful anti-government demonstration, which was labeled as a *coup d'état* by the provisional head of the state. This time, however, some of the demonstrators acted in a way that was not just peaceful, since they forced their entrance into the Government's headquarters, causing material damage. And on this occasion the troops used for repression were made up of miners coming from the Petroșani basin. This is the second "*Mineriada*" that generated a march organized by the Independent Group for Democracy (GID) on the 25th of February.

Instead of a conciliation of the elites for achieving political stability, the NSF's propaganda apparatus preferred to launch a virulent attack against the other political parties and their leaders. On the 28th of January, a strong disparagement was attempted, offering the audience arguments that outlined the opposition's desire to steal the power. Catherine Durandin and Zoe Petre, in their book *Post- 1989 Romania*, describe the methods by which the propaganda apparatus poisoned the population with slogans to the leaders: "*Coposu-the bone gnawer*" was a very successful slogan or Doina Cornea's being accused that she wanted to seize entire industries and take them abroad, but without explaining how she could do it. Such poisoning has induced the pro-FSN protesters the idea that those in the opposition want to steal the power from the provisional government and sell the country to foreigners. Here, the slogans were born: "*We do not sell our country!*", "*Down with the foreigners!*" And "*Down with the sons of the kulaks and legionaries! Down with the landowners!*"⁸

The events began to hasten with the start of the electoral campaign on the 25th of March, 1990, and with the desire of discrediting the FSN opponents. After that, opposition rallies took place in order to highlight the authoritarian and undemocratic attitudes of the provisional government as well as pointing to the betrayal of the ideals of the 1989 revolution. Some characters (known or not) spoke to thousands of participants during these demonstrations, but without any positive outcome from the post-communist leaders in the government. The latter did nothing but respond to the miners' union demands for large wage increases with the aim of producing a strong impact on them, but also from the desire to turn them into a maneuvering mass capable of *restoring* quietness⁹.

By the time of the first free elections (May the 20th, 1990), the media did not objectively presented the demonstration in the Square. The presentation was done in a manner that wanted to distort the truth, given the fact that the public was not offered the desiderata and the magnitude of the events, although this manifestation was the longest anti-communist rally in history (52 days). Through this party practice, the slogan "*Television is lying the nation!*" was reconfirmed.

The presidential election was won by former communist party activist Ion Iliescu (85%), and parliamentary elections were won by the FSN by 66%. As a result of learning the winners enrolled in the electoral race, the events in the University Square began to go away, remaining there only the People's Alliance, the Association of 16-21 December, the Romanian

⁸ Catherine Durandin, Zoe Petre, *România post 1989...*, 166

⁹ 2007 Indictment, 1

Antitotalitarian Group, some of the members of the Association 21 December 1989 and those who had entered the hunger strike.¹⁰

The Mineradiada of June the 13th-15th, 1990, can be fall within the typology of repressions practiced by the totalitarian regime. If during the communist era the repressive measures were led by militia, security or army (except the latter), the post-communist regime in Romania (since the early 1990s) demonstrated a particular capability in managing a potential crisis. Together with the authorities of the state responsible for maintaining public order, the protection of citizens and the rule of law, it was also possible to intervene in a separate category not previously mentioned: *the miners*. Ion Iliescu himself, upon receiving the miners, asked them to intervene for the liberation of the Square¹¹.

Also, the official indictments that concern the Mineradiada dossier contain information that reveal the reality (or at least part of reality) of those days. Magistrate Dan Voinea, who dealt with the case on the events of 13th-15th of June 1990, stated in an interview given to *Adevărul* newspaper (November the 27th, 2006) that: "terrorism was intended (...). It was a terrorist act by involving these forces in a violent action that was not justified by political circumstances. This is precisely the criminal nature of the action - unjustification. They were violent against a group that was not aggressive."¹²

2) Echoes in the Western press and their effect

Western media played a crucial role in the decline of Romania's foreign policy in the early 1990s, and this was due to the repressions organized by the Romanian post-communist government in 1990, pre-eminently emphasizing the repression of the demonstrators in June, the 13th-15th.

The Western countries, through the mass media present on the territory of the Romanian state, observed the events of that period by disseminating images that drew attention to the miners' violence and the fact that the state leaders used the groups of miners to suppress the anti-government protests that drew attention to the authoritarian leadership.

For example, German TV ZDF, while broadcasting films during the Mineradiada, reported the following: "Before these events, President Iliescu accused the government of acting too hesitantly in repressing demonstrations in University Square," and a UK television pointed out the fact that: "*This is how the miners defended the Romanian citizens (while there were images in which the miners were beating mercilessly, different people on the street, including women.) Nobody escaped: old or young, men or women.*"¹³

Mihaela Toader, an expert at the Institute for the Investigation of Communist Crimes and the Memory of Romanian Exile, declares that if we were to list a few headlines in the Western press referring to the events of 13th-15th of June 1990, we would understand that Romania was presented as a country with a government that defended itself politically through

¹⁰2007 Indictment, 37

¹¹ Dear miners, I am addressing you, thanking you for the work solidarity response you have given this time too, to our call. The delegation of miners, headed by Mr. Cozma, will go to University Square, which I want you to reoccupy. We have to deal with fascist elements, incited elements, many of them drugged ... (Ion Iliescu, about the Mineradiada in June 90: "Miners deserved thanks. They were solidarity with the capital's population", in the *Adevărul* newspaper, http://adevarul.ro/news/eveniment/ion-iliescu-de-mineriada-iunie-90-minerii-meritau-ultumiri-fost-solidari-population-capital-1_54fdd474448e03c0fd64656a/index.html, accessed 05/07/2015

¹² Statement of General-Magistrate Dan Voinea given to journalist Andrei Badin and published in the *Adevărul* newspaper on November 27, 2006 "in the Indictment Report on the fratricide of 13th-15th of June 1990 elaborated by the Association 21 December 1989 in partnership with the Institute for the Investigation of Communist Crimes and The Memory of the Romanian Exile, 29.

¹³ Transcript from the video documentary "The Mineradiada of June the 13th-15th 1990"

the use of excessive force and bats. The foreign public opinion was indignant about the course of events and the brutal force which was used, and the first consequence was the delay in concluding the Association Agreement with the European Union until February 1, 1993, compared to the other decommunized states of Central and Eastern Europe.¹⁴

The second consequence is based on the accession of Romania to the Council of Europe. This was possible as a result of *"a difficult process of diplomatic action and internal democratization efforts. While Romania's Central European neighbors entered the Council of Europe from 1990-1991, Bucharest obtained one of the central points of the stage of Romania's coming out of isolation, which was caused by the miners' intervention in University Square in June 1990"*¹⁵.

Also, The State Department of the United States of America gave a statement on the 15th of June, 1990, saying: *"(...) Awaiting the restoration of the process of democratization, the United States decided to end any non-humanitarian aid that could have been granted to Romania. Ambassador Alan Green, who was in Washington this week for consultations, has been instructed to return to Bucharest to communicate to the Romanian leadership the seriousness of our concern about the recent events in Romania."*¹⁶

3) Hindering the process of democratization

Considering the events that occurred, we can say that Romania, due to the defective governance of the early 1990s (especially since 1990), has faced a number of problems. The post-communist governors, instead of enrolling Romania on the path of democratization and going through the stages of this process in order to establish democracy, generated an effect of slowing down the process. When stating these we take into account the compulsory steps for a state in order to be able to establish democracy, namely: 1) establishing affiliation and preparedness; 2) compromise; 3) habit; 4) alignment with the international system; 5) the development of the market and capitalism and 6) the development of parliamentary and political institutions. But as we are talking about for the first year of transition, we can not discuss all the steps we have previously described, but we will summarize the first two and we will point out the negative effects that have made the next ones difficult.

The question from which we have to start is the following: *where did the governors go wrong and how should they have acted?*

We will start from the first stage of democratization, namely the establishment of affiliation and preparedness. This was done to a certain extent (leaving aside those who were not determined) at the beginning of 1990. The population of Romania was politically represented in one of the groups present on the electoral stage. Observing the percentage that the FNS obtained on the 20th of May 20, 1990 elections, we understand that most of them sympathized with this political group.

The problems of the transition process began in the second stage, the compromise, so that the electoral competition that had to sift the best ideas turned into what was a *struggle* between power and opposition. In the case of Romania, the leaders in the provisional government did not prove a sense of compromise, so the arguments of others were not recognized. This led to the Minerias of 1990 and to the bloody repression of 13th-15th of

¹⁴ " Mihaela Toader, „Echoes of the Minerias in the foreign press ”,

http://mineriade.iiccmer.ro/dezbateri/ecoul_mineridelor_in_presa_straina/, accessed on 06.07.2015

¹⁵ Florin Abraham, *Transformarea României: 1989-2006. Rolul factorilor externi*, (Institutul Național pentru Studiul Totalitarismului, București, 2006), 148

¹⁶ Statement of The State Department of The United States of America of the 15th of June 1990, http://www.mineriada.org/Mineriada_Reactii.asp, accesat la 06.07.2015

June 1990. The compromise phase became more difficult to achieve because the leaders of the moment were former Communist rulers who were not accustomed to the idea of having and accepting an opposition.

Romania faced difficulties in the second stage. Without the success of establishing *compromise*, the *knowledge* phase can not be implemented, but the events that achieved momentum in 1990 created an almost perfect socio-political space for instability. The change of Petre Roman's government with that of Stolojan's produced the necessary framework for the *compromise* phase, followed almost immediately by the one of *knowledge*.

Regarding the hindering of the next stages of democratization, the events of 1990 have developed a slowdown in the phase of *alignment to the international system*, and this was due to the negative impact of the Mineriada of the 13th-15th of June 1990 on the international system and the way in which Romania was perceived by the Western countries after these repressions orchestrated by the post-communist government.

Inclusively the stage of *development of the market and capitalism* faced the difficulties coming from the collective mentality, given the attempts of Petre Roman's government to induce the people the idea of selling the country to foreigners, which resulted in the slogan "We do not sell our country!" used in the early 1990s.

CONCLUSIONS

The Romanian Revolution of December 1989 created the ideal framework for Communist Romania to replace the totalitarian regime with a democratic one. The events that followed the revolution in 1990 did nothing but hindered the desire to establish political pluralism and democracy.

We noticed how the new postcommunist government, through the measures they adopted, tried to remove any attempt of political opposition - by using a group of workers (miners) to take the opposition parties out of the game. The intention was clear, considering that the miners devastated almost all the parties' headquarters. It is worth mentioning that NSF leaders were involved, through state authorities, in organizing the transport of miners from their working places to the capital of Romania.

There is not a lot of room for interpretation of the events of the 1990s or of the desperate desire of the governors to suppress any form of political opposition. If the other countries of Central and Eastern Europe, newly decommunized, resorted to negotiations between the new post-communist political parties in order to define the new way in the democracy of the states, Romania chose, through its governors, not to take into account the views of the opposition and of those dissatisfied with the abusive mode of government.

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THE COMMUNIST REGIME OF TWO PERSPECTIVES: THE REALITY OF THE DISSIDENTE DOINA CORNEA VERSUS THE REALITY OF THE PRESIDENT OF THE GREAT NATIONAL ASSEMBLY, NICOLAE GIOSAN

Paula MUREȘAN¹

ABSTRACT:

IN ROMANIA, THE COMMUNIST REGIME WAS A REALITY THAT MARKED THE DESTINY OF THE PEOPLE FOR 50 YEARS. THE REGIME, WHILE TOTALITARIAN, HAD ITS FOLLOWERS AND DISSIDENTS. OUR INTENTION IS TO MAKE A COMPARATIVE ANALYSIS BETWEEN TWO DISCOURSES, OF AN ADEPT AND A DISSIDENT, FOR THE AWARENESS OF THE RECENT PAST AND THE ALIGNMENT WITH EUROPEAN VALUES.

KEY WORDS: DISCOURS, COMMUNISM, DISSIDENCE, DICTATOR

INTRODUCTION

La période communiste en Roumanie a opéré des transformations essentielles pendant presque 50 ans, c'est-à-dire durant la période 1948-1989.

Le professeur Adrian Cioroianu considère que bien que le premier congrès des communistes roumains ait eu lieu en mai 1921, on peut parler du parti communiste roumain après la Seconde Guerre mondiale : « Le nombre des communistes roumains n'a jamais dépassé 2000 membres - quand le parti a été interdit - et moins de 1000 pendant la Seconde Guerre mondiale »². Deux événements notables ont aidé les communistes à accéder au pouvoir, car le contexte international leur est devenu favorable : le changement de l'alliance le 23 août 1944 et la signature de l'armistice de septembre 1944. Ainsi, Petru Groza a pris le pouvoir et a formé le gouvernement³. Les dates qui ont changé le destin de la Roumanie ont été : le 19 novembre 1946, la falsification des élections, où les communistes ont pris le pouvoir législatif ; à travers le *Traité de paix de Paris* de 1947, la présence des troupes russes sur le territoire

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² Adrian Cioroianu, The face of repression, consulté le 5.10.2018.

http://www.forma12.com/archiveofpain/main_the_project_works_text_adrian.htm 2000.

³ Keith Hitchins, « Desăvârșirea națiunii române » in *Istoria României*, (Bucarest: Corint, 2004), 399.

roumain a été légalisée sans délai et le roi Mihai a abdiqué en décembre 1947, lorsqu'on a proclamé la République populaire roumaine⁴.

Du point de vue du développement du parti communiste, Cosmin Popa divise la période communiste en quatre étapes, chacune avec ses particularités bien saisies. Ainsi : « la première d'entre elles surprend la lutte pour la confiance et couvre la période 1948-1952. La période commence avec le lancement des réformes communistes et s'achève par la suppression du groupe antiparti d'Ana Pauker. La deuxième étape a été la consolidation du groupe interne, entre 1952 et 1965, date à laquelle Gheorghe Gheorghiu-Dej est devenu président du Conseil des ministres. La troisième période couvre la période 1965-1974, entre l'arrivée au pouvoir de Nicolae Ceaușescu et sa nomination à la présidence. Enfin, nous mentionnons la période comprise entre 1974 et 1989 : autarcie économique, renforcement du rôle de l'appareil répressif, partialité absolue dans tous les domaines, contrôle total sur le parti, absence de toute opposition organisée, nationalisme, ethnisme, culte de la personnalité conduit à l'extrême et politique étrangère purement conjoncturelle sont des caractéristiques qui le qualifient ainsi. »⁵

Cet article est une comparaison entre deux discours donnés par Doina Cornea, en septembre 1988, en tant que dissidente du régime communiste, et Nicolae Giosan, en 1985, adepte du régime communiste.

La lettre de Madame Cornea, intitulée *La lettre ouverte adressée à Nicolae Ceaușescu, président du Conseil d'État, sur la nécessité des réformes*, est connue comme la *Lettre du 23 août 1988*.⁶ Elle a été écrite à l'initiative de deux ouvriers, Iulius Filip et Dumitru Alexandru Pop, et a été diffusée à la radio *Europe Libre*. Elle représente son programme politique.

Le discours délivré par monsieur Giosan, Président de la Grande Assemblée nationale, a eu lieu pendant la réélection de Nicolae Ceaușescu au poste de président de la République socialiste de Roumanie - *Hommage au président de la République socialiste de Roumanie, Nicolae Ceaușescu, par la Grande Assemblée nationale, présenté par le camarade Nicolae Giosan, président de la Grande Assemblée nationale*.⁷

Tout en utilisant un modèle à quatre motifs, les motivations des discours, les buts des discours, les accusations versus les éloges du régime dégagés des discours, les actions à entreprendre versus les réalisations du régime communiste, nous nous concentrerons sur les questions de recherche suivantes : Y a-t-il des éléments de continuité entre les deux discours ? Quels sont les éléments de discontinuité ? Quel est le message de chaque discours ?

LES MOTIVATIONS DES DISCOURS

La motivation de la lettre ouverte est, en fait, une réponse aux anomalies que le régime communiste pratiquait, *au fur et à mesure que les abus, la répression, la corruption, les injustices, les mensonges, l'inquiétude, le chagrin et l'insécurité de la population augmentaient*. Madame Cornea militait pour le dialogue, le considérant extrêmement

⁴ Denis Deletant, « România sub regimul comunist: decembrie 1947-decembrie 1989 » in *Istoria României*, (Bucarest: Corint, 2004), 407- 408.

⁵ Cosmin Popa, « Regimul comunist din România » in *Istoria României*, (Cluj Napoca: Institutul Cultural Român, Centrul de Studii Transilvane, 2004), 621.

⁶ Doina Cornea, « Scrisoare deschisă adresată Președintelui Consiliului de Stat, Nicolae Ceaușescu (cu privire la necesitatea unor reforme) », consulté le 10.10.2018.

<http://www.revistamemoria.ro/wp-content/uploads/2017/08/31-doina-cornea-scrisoare-deschisa.pdf>.

⁷ Nicolae Giosan, « Omagiul adus Președintelui Republicii Socialiste România, tovarășul Nicolae Ceaușescu, de către Marea Adunare Națională, prezentat de tovarășul Nicolae Giosan, președintele Marii Adunări Naționale », consulté le 1.11.2018.

<https://lege5.ro/Gratuit/g44tgmjq/in-numele-marii-adunari-nationale-discurs-1-1985?dp=ge2tmmjzhezgtg>.

nécessaire et en même temps une forme de respect civilisé, mais étant consciente que le régime pourrait utiliser la force contre ses adversaires, une fois que ceux-ci l'auraient critiqué.

Elle voulait se délimiter totalement de Ceaușescu et de son entourage, et en plus, elle ne voulait pas *consentir au mal*. Elle y entrevoyait un espoir, bien que la population le nie. Être honnête par rapport à la situation dans laquelle se trouvait le pays pourrait être la salvation, c'est-à-dire, en mettant un diagnostic réel. *Nous comprenons à quel point il est difficile de diriger un État. Mais en continuant à assister passivement à ces effondrements, c'est consentir à une complicité avec le mal. Beaucoup de citoyens pensent que la situation est devenue tellement grave que rien ne peut être fait. Nous espérons toutefois que l'état des choses pourra être rectifié, à condition qu'il établisse d'abord le diagnostic correct.*

Il était caractéristique, d'usage, de féliciter l'élection ou la réélection d'un dirigeant communiste. Par conséquent, le président de l'Assemblée nationale, le forum législatif du pays, a confirmé avec grand plaisir la réélection de Nicolae Ceaușescu *dans une parfaite unanimité et solennité - pour la quatrième fois, à la fonction suprême de l'État, président de la République socialiste de Roumanie.*

LES BUTS DIAMÉTRAUX OPPOSÉS : LA RENONCIATION AU POUVOIR DE CEAUȘESCU/RÉFORMATION DE SON SYSTÈME VERSUS LA RÉÉLECTION DE CEAUȘESCU

Doina Cornea a fait appel à des mesures immédiates et a proposé deux options : soit Ceaușescu et sa nomenclature renoncent au pouvoir, soit il réforme le système. Pourquoi estimait-elle que ces actions soient nécessaires ? Parce que le peuple était sans espoir, sans avenir. La situation dans laquelle se trouvait la Roumanie était tellement cruelle. Dans le premier scénario, l'auteur invoquait un élément émotionnel en disant que pendant les années '60, Ceaușescu était perçu comme un sauveur.

Dans le deuxième scénario, celui de la réforme politique, administrative et sociale, de l'octroi des droits et des libertés réels, et non seulement sur le papier, l'élément rationnel est dominant.

a) soit vous renoncez, avec la nomenclature qui vous soutient, à la direction du pays, si vous ne voulez pas abandonner la ligne de gouvernement adoptée pour reconnaître qu'elle est fautive ; ce serait un acte qui vous donnerait un sentiment de responsabilité et d'abnégation, et le peuple roumain vous en serait reconnaissant, tout comme vous l'avez fait lorsque, dans les années 1960, vous avez donné une sorte de souffle, d'espoir ;

b) soit vous engagez des réformes - à commencer par le principe du pluralisme démocratique, la séparation du pouvoir administratif et juridique du pouvoir du parti, par la compétence et de la moralité dans le choix du personnel responsable, indépendamment de son affiliation politique, jusqu'à la libéralisation de la société, de l'économie, des institutions et de la culture.

À l'opinion de Giosan, la réélection de Ceaușescu en tant que Président de la République représente le désir du peuple roumain, de la nation roumaine tout entière et sa *contribution incommensurable à la nouvelle vie* est vue en termes de reconnaissance, appréciation et gratitude de celui qui pour plus de 50 ans a dédié sa vie en luttant pour *la libération sociale et nationale, pour le triomphe de la vérité et de la justice, pour le progrès et la prospérité de toute la nation, pour l'édification du socialisme et du communisme sur nos terres millénaires*. Sa réélection est donc juste, normale, car il a milité pour le bien-être et le bonheur de son peuple, pour son indépendance et sa souveraineté pour qu'il bénéficie du progrès et de la civilisation au niveau le plus élevé. Il n'a pas de terme de comparaison avec les autres leaders du pays. Il est unique. Il est le seul. Depuis 20 ans, grâce à sa capacité de conduire, la vie de chaque habitant du pays a changé en bien et son « règne » est vu comme la

période la plus lumineuse de l'histoire. Toutes ses actions ont eu à la base trois caractéristiques : *la profondeur, la justice et le réalisme*. Grâce à sa capacité de prévision, à son esprit lucide, l'économie nationale est sur une base technique solide, et cela *a généré la croissance tumultueuse des forces productives*.

LES ACCUSATIONS DU RÉGIME VERSUS LES ÉLOGES

Quatre sont les accusations que la signataire de la lettre a apportées à Ceaușescu et à son régime. Ainsi, en les synthétisant dans la politique intérieure, extérieure, économique et sociale, avec des conséquences graves sur l'avenir de peuple roumain, Doina Cornea considérait que l'intégrité physique, morale et spirituelle de la population était en danger.

Les accusations apportées à Ceaușescu affluaient constamment pour tous les domaines de la vie de la population. Le fait que Ceaușescu avait accepté une camarilla incompétente autour de lui a nui au peuple. *Au fil des années, vous voulez être le seul facteur décisif dans tous les domaines, sans tenir compte de l'avis des spécialistes de bonne foi, ce qui vous aurait exempté de certaines erreurs de conception. Au lieu de cela, vous avez seulement encouragé les collaborateurs qui vous pilotaient. Mais vos collaborateurs étaient et sont scrupuleux, seulement intéressés par les récompenses. Aujourd'hui, à côté d'eux, vous êtes responsable des dommages ou de l'épuisement des principaux actifs et ressources du peuple, par leur mauvaise gestion.*

La destruction de l'être humain est la principale accusation. En détruisant et en ruinant l'être humain, le régime communiste a détruit en fait la Roumanie entière. *Les gens - traités comme des objets, dénués de dignité, entraînés dans des structures existentielles qui ne leur conviennent pas, paralysés par la peur devant un appareil répressif et écrasant - finissent par se comporter comme des objets. Quand on détruit l'être humain on détruit l'humanité. On détruit tout : de l'économie à l'agriculture, du secteur médical à la spiritualité du pays. Mais vous êtes responsable de la faiblesse physique des millions d'individus, parce qu'ils sont frappés par la privation : la nourriture, la chaleur, la médecine. La dégradation de l'être humain (la perte des valeurs, l'égoïsme, la corruption), au-delà des causes politiques et économiques, a conduit à la désintégration des institutions, à l'échec de l'industrie, à la ruine du commerce et de l'agriculture.*

L'uniformité des citoyens, leur transformation en robots, la destruction de l'esprit de l'être humain est la mauvaise prémisse à partir de laquelle le système communiste avait commencé. La loi de l'esprit est celle qui diversifie, celle qui apporte l'unicité de l'être humain, qui engendre le progrès et le bien-être. La diversité du monde doit être respectée, car elle apporte compétition, idées, liberté. *Ne pensez-vous pas que vous ayez besoin de nous, de notre diversité, de notre intelligence, de nos aspirations et de notre liberté dans la grande compétition avec le monde ?*

D'autre part, quatre sont les éloges que le président de la Grande Assemblée nationale a apportés à Ceaușescu : sa brillante pensée politique, son activité pratique, son énergie et sa force de travail. Ceaușescu est transformé en un leader providentiel. *C'était le créateur d'un concept profondément scientifique, adapté aux réalités roumaines, visant l'amélioration de la production et les relations sociales, l'organisation, la direction et le développement unitaire harmonieux de la société, l'approfondissement de la démocratie ouvrière révolutionnaire, le renforcement continu du rôle et des fonctions de l'État et, dans ce contexte, l'amplification de l'activité de la Grande Assemblée nationale.* Les principes de l'éthique et de l'équité socialiste sont à la base du fonctionnement du pays.

Dans tous les discours des adeptes du communisme, Elena Ceaușescu était une présence constante. Ses mérites étaient liés à l'activité politique prodigieuse qu'elle a manifestée dans

la gestion du parti et de l'État, à son incontestable contribution au développement de la science, éducation et culture socialiste, à la mise en œuvre de la politique du parti, matérialisée dans un niveau de vie très élevé du peuple et dans l'internationalisation du pays.

En guise de reconnaissance pour les Ceaușescu, les représentants du peuple roumain dans le forum législatif assumaient d'une manière totale et sans équivoque les intérêts de la nation roumaine, tels qu'ils avaient été exprimés dans le programme de développement multilatéral de la patrie et approuvés au XIII^{ème} congrès du parti. Le but final : *la réalisation sans équivoque de la politique intérieure et extérieure de la Roumanie socialiste*. Fermeté et sagesse, voilà les deux caractéristiques définitives de la personnalité que le peuple invoque pour Nicolae Ceaușescu, *pour accomplir le triomphe du socialisme et du communisme sur le sol roumain*.

LES ACTIONS/DEMANDES À ENTREPRENDRE VERSUS LES RÉALISATIONS DU RÉGIME COMMUNISTE

Il était absolument nécessaire de réformer le système à partir de la vérité historique (y inclus *la liberté, la responsabilité individuelle non collective*), de la religion (*la liberté des cultes religieuses*, en insistant sur les deux églises majeures, l'orthodoxe et la catholique)⁸, de la politique extérieure (les relations surtout avec la France et les États-Unis), de l'éducation, (la période communiste a été marquée par des idées totalement opposées à l'entre-deux-guerres; les préoccupations des partis politiques étaient centrées sur la décentralisation et la dépolitisation de l'éducation, sur l'eupéanisation de l'école universitaire roumaine)⁹ de la justice (*la libération des prisonniers politiques*), de l'information (liberté et non coercition), du pluralisme politique (vu en tant que fondement de la vie sociale), des droits constitutionnels (*la liberté d'opinion, la libre circulation, la liberté de voyager*), de la liberté de la presse et d'un système social correct (des pensions de retraite en fonction des cotisations sociales, la reconversion professionnelle, des syndicats libres). *La vérité, la justice, la liberté et la croyance et confiance en les êtres humains* sont les piliers autour desquels la nouvelle société roumaine devait se construire. Ce sont les valeurs européennes que les pays d'Europe occidentale ont assumées et autour desquelles ces nations se sont développées. En d'autres mots, tout devait être réformé.

En ce qui concerne le rapport de Ceaușescu avec les citoyens, Doina Cornea considérait qu'il était nécessaire d'arrêter le culte de la personnalité, car il paralysait tout le pays, d'initier le dialogue et les échanges avec les Roumains du pays et avec les exilés, avec des experts dans les domaines de l'économie, de la technologie, de la science, de la pensée philosophique et de la politique. Elle a proposé et milité pour une économie capitaliste (*la décentralisation de l'économie, la libéralisation et la transition partielle, progressivement, sous contrôle privé, fondée sur la propriété et l'initiative individuelle*). Ainsi, pour l'industrie, elle avançait une série de mesures ayant pour but de relancer le domaine : *le démantèlement des entreprises non rentables, la création des entreprises plus mixtes et rentables avec des équipements et des spécialistes étrangers, de préférence du monde occidental, afin de stimuler l'industrie locale, l'arrêt de la méritocratie dans l'occupation des fonctions de gestion publique, la liberté des entreprises d'État de conclure des contrats directs avec des entreprises locales et étrangères et de décider la quantité des produits ainsi que des investissements*, la revitalisation du

⁸ Adrian Corpădean, « Le statut de l'Église gréco-catholique en Roumanie pendant la période communiste. Impact identitaire, construction politique, réactions occidentales » in Actes du Colloque « Intégration et désintégration en Europe Centrale et Orientale », eds. Sergiu Mișcoiu, Nicolae Păun, (Strasbourg : L'Harmattan, 2016), 61-75.

⁹ Diana Gabriela Reianu, *Modernizarea României în primul deceniu interbelic: învățământul românesc în presa partidelor politice*, (Cluj-Napoca : EFES, 2014), 325.

commerce intérieur et extérieur (le respect pour le client roumain en matière de politique sanitaire des produits). Pour l'agriculture, les mesures visaient la dissolution des coopératives agricoles de production qui n'étaient pas rentables et la réhabilitation des foyers individuels. La loi de l'offre et de la demande devait être celle qui réglementait le marché. Elle a milité pour que la population rurale ait la possibilité d'emprunter de l'argent pour l'acquisition des machines agricoles modernes. D'autres mesures font référence à l'arrêt immédiat de la destruction des villages et de la dislocation forcée de la population. *La maison paysanne a sa signification psychologique ; elle est l'une avec l'âme de l'homme qui l'a construite.* Les paysans étaient la catégorie qui avait souffert pendant 40 ans. Démolir leurs maisons *serait un grave abus de pouvoir.*

Pour Doina Cornea, la lettre adressée à Ceaușescu n'était pas une lettre de courage, mais plutôt une démarche normale, d'une citoyenne qui avait des droits et aussi des responsabilités, et qui devait s'impliquer dans la vie de la société, afin de soutenir ses idées. Elle demandait du respect en termes de travail. *En tant que citoyens, nous avons contribué par notre travail au maintien de la société. Nous avons le droit de profiter des fruits de notre travail, nous avons le droit de savoir comment les produits que nous avons produits sont administrés ; nous avons le droit à la stabilité et à la sécurité sociale comme base de l'existence quotidienne ; nous avons le droit à un climat de confiance et de fraternité avec notre peuple.*

Selon Giosan, grâce à ses qualités, la Roumanie pouvait faire face à chaque pays industriel, car elle bénéficiait d'une économie très développée, transformant le pays dans *un pays industriel doté d'une industrie agricole forte, moderne et socialiste en pleine activité.* Tous les secteurs de la vie des Roumains, à partir de la science jusqu'à l'art, la condition humaine par son *affirmation plénière, et la qualité de la vie du pays,* étaient à des niveaux maximaux, *dans une patrie libre et prospère.*

À son avis, Ceaușescu avait d'autres mérites extraordinaires : celui *d'avoir mis fin à l'aberration de la course aux armements,* l'édification du nouvel ordre économique et politique mondial, la lutte pour la non-ingérence dans les affaires intérieures des pays, le non-recours à la force et à la menace, le droit de tout peuple de se développer librement, sans aucune ingérence extérieure. Il a lutté pour la paix en Europe et dans le monde entier, car tout être humain a le *droit à la paix, à une existence libre et digne,* et cela a été une raison pour laquelle le peuple roumain l'avait réinvesti en ses fonctions. Le respect pour la souveraineté nationale et l'indépendance de chaque pays étaient deux autres choses que Ceaușescu avait transformées en idéaux. Il était considéré un novateur en matière politique, surtout pour la politique étrangère, car il avait demandé un renforcement du rôle des parlements et des parlementaires dans l'amélioration de la connaissance et du rapprochement entre les peuples, afin d'entamer des amitiés durables. Dans le milieu politique, de diverses personnalités éprouvaient de l'estime envers Ceaușescu parce qu'il avait gagné du prestige international. Le but final de la République socialiste de Roumanie - l'avancement vers le communisme - était presque réalisé, grâce à ses capacités et aptitudes de conduire le pays, ayant une idéologie politique qui était fondée sur *la liberté et l'indépendance des peuples, vers un monde meilleur et plus juste sur notre planète.*

CONCLUSION

On peut tirer quelques conclusions en ce qui concerne les deux discours :

L'instrument de dispersion des discours est différent : l'un est clandestin, faisant appel à une radio qui se trouvait sur le territoire de l'Allemagne, et l'autre est délivré depuis la tribune de l'Assemblée nationale.

Les deux discours ont eu un but performatif, c'est-à-dire ils ont voulu influencer l'opinion publique. Le pathos a été le seul fil commun des deux discours, leurs contenus étant diamétralement opposés ; il n'y a aucun point commun en soi.

La réalité de Doina Cornea est totalement différente de celle de Nicolae Giosan.

On remarque l'utilisation de la langue de bois dans le discours de Giosan. Or, *la langue de bois ne communique ainsi aucune pensée nouvelle ; elle ne décrit rien*¹⁰. D'autre part, il est à remarquer l'utilisation d'un langage affectif de Doina Cornea.

Doina Cornea est le prototype du dissident qui réclame sans peur les anomalies et les atrocités d'un régime qui annule les droits et les libertés fondamentaux des citoyens, en détruisant l'État de droit et en interdisant les partis politiques. Ce régime totalitaire, caractérisé par le monopartisme, était un régime anti-démocratique et anticapitaliste. Gouverné par la terreur avec l'aide des organes de contrôle (la Securitate, la milice et la gendarmerie), le système a créé ses institutions de répression. Or, pour Doina Cornea, la liberté de pensée et la liberté d'expression représentaient des valeurs morales essentiellement humaines, mais aussi le moyen de promouvoir les principes d'une société démocratique. Le courage et la souffrance ont été les deux caractéristiques du prototype du dissident roumain.

Nicolae Giosan est l'archétype d'un propagandiste du régime qui reprend les idées de Ceaușescu et les assume en nom de la nation. Le but de son discours est de diffuser l'idéologie communiste vers les masses populaires et d'annuler une réalité cruelle dans laquelle la population vivait. En connaissant la réalité telle qu'elle était, la réalité de Doina Cornea, Giosan ne peut que la dissimuler, tenant compte de ses fonctions. Il y a une seule autorité d'où émane la vérité : le parti, quel qu'en soit l'émetteur du message.

Les valeurs morales de Doina Cornea sont complètement différentes des valeurs morales de Nicolae Giosan.

¹⁰ Françoise Thom, *La langue de bois*, (Paris : Julliard, 1980), 225.

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IMPORT PROCEDURES RELATED TO EU FINANCIAL LOSSES

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ABSTRACT:

GOODS/PRODUCTS THAT ENTER THE EUROPEAN MARKET FROM OUTSIDE THE EU ARE SUBJECT TO COMMUNITY CUSTOMS CONTROLS³ PERFORMED BY MEMBER STATES BEFORE BEING RELEASED FOR FREE CIRCULATION WITHIN THE EUROPEAN UNION. IN A 2017 SPECIAL REPORT, THE EUROPEAN COURT OF AUDITORS (ECA)⁴ EXAMINED WHETHER MEMBER STATES AND THE EUROPEAN COMMISSION ENSURE THE FACT THAT IMPORT PROCEDURES AND LEGISLATION PROTECT THE FINANCIAL INTERESTS OF THE EU. SIGNIFICANT GAPS AND DEFICIENCIES WERE FOUND, THIS GENERATING AN ADVERSE EFFECT TO EU FINANCES AND INDICATING INEFFECTIVE APPLICATION OF CONTROLS. CUSTOMS CONTROLS CAN'T ENSURE THAT THE FINANCIAL INTERESTS OF THE EU ARE PROTECTED UNLESS THEY ARE BASED ON A COMMON SET OF RULES AND ARE APPLIED BY THE MEMBER STATES IN A STANDARDIZED AND HARMONIZED MANNER.

KEYWORDS: IMPORT PROCEDURES, CUSTOMS CONTROLS, FISCAL LEGISLATION, CUSTOMS PROCEDURE 42, VAT.

2018 was the year that marked EU's celebration of the 50th Customs Union anniversary. The term "customs union" refers to the elimination of quotas and customs duties between Member States, at their internal borders, along with establishing common customs duties regarding imports from third countries.

The Common Commercial Policy, together with the Customs Union are exclusive EU competence⁵ areas and constitute the framework for defining most of customs policy and

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³ Customs controls = specific acts/activities performed by customs authorities aiming at ensuring compliance with the legislation in customs matters and other legislative acts regarding the entrance, transit, exit, storage, movement and the end-use of merchandise/goods that are moved between the EU customs territory and territories or countries outside that area.

⁴ The European Court of Auditors, established in 1977, examines the legitimacy and regularity of entries and exits in the European Union and oversees the sound financial management of the EU budget. ECA is composed of one citizen per Member State, appointed by the Council of the European Union with a six-year mandate that can be renewed. Since January 1, 2007, the Court has 28 members.

https://ro.wikipedia.org/wiki/Curtea_European%C4%83_de_Conturi .

⁵ Treaty on the Functioning of the EU (TFEU), art. 3, (OJ C 202, 2016, 47).

adopting customs legislation. However, the implementation of customs legislation is a responsibility that primarily lies with the Member States⁶.

Even with the elimination of European internal borders, goods originated from third countries are submitted to customs controls, along to being subject to any customs duties payment before being released within the EU for free circulation.

The release for free circulation of the imported goods means that they can circulate freely in the EU single market, just like any other product with EU origin⁷.

Therefore, when the goods enter the customs territory of the Union, the customs administration of the importing Member State must require the importer to pay the customs duties applicable to the imported goods or a guarantee to that effect⁸.

CUSTOMS PROCEDURE⁹

When the goods (products/merchandise) are imported into the EU, they are (as a common procedure) released for free circulation, this meaning that import formalities are conducted in order to allow goods to be sold on the Community market under similar procedures applicable to products originated from the EU.

The procedure applicable when goods enter the European market involves a customs declaration¹⁰ (the Single Administrative Document – SAD¹¹). This task is performed, in general, by the person who owns the goods, or has control over them. Also, a legal representative, acting on behalf of the owner of the goods may perform this task.

When goods are physically imported and, at the same time, released for free circulation in the same Member State¹², the fiscal implication related to VAT (chargeable event) occurs in that specific Member State. However, in the case where, after importation, goods are in a transit situation (the final destination being another Member State), the tax obligation regarding the payment of VAT can be suspended. In this latter case, the VAT will be due in the Member State of subsequent destination.

In the case mentioned above, where goods are under a transit regime, the importer of the goods (owner or legal representative) must fill in the SAD, under box number 37, with the “42” code, implying the fact that is an import procedure involving simultaneous release for free circulation, along with home use of goods that are subject to VAT-exempt supplies or transfers to another Member State.

⁶ Treaty on the Functioning of the EU (TFEU), art. 291.

⁷ Regulation No. 952/2013 of the Council and the European Parliament, for the elaboration of Customs Code, 9 October 2013.

⁸ European Court of Auditors, Special report No. 19/2017: Import procedures: shortcomings in the legal framework and an ineffective implementation impact the financial interests of the EU. https://www.eca.europa.eu/Lists/ECADocuments/SR17_19/SR_CUSTOMS_EN.pdf.

⁹ Any of the following mentioned procedures, under which goods (products/merchandise) may be placed in accordance with the Code: export, release for free circulation, special procedures.

¹⁰ The act that a person uses to indicate, under a prescribed form or certain manner, its option regarding the placement of goods/products/merchandise under a given customs procedure, also with mention, where appropriate, of any specific arrangements to be applied.

¹¹ Single Administrative Document – SAD, also known as Form No. C88 in the United Kingdom, is the main customs form that is used in international trade (acquisitions/sales), to or from the European Customs Union. All agents and traders can use the SAD standard form in cases of import, transit, export and community status declarations in situations that involve manual processing. https://en.wikipedia.org/wiki/Single_Administrative_Document.

¹² Member State of importation – the State where goods are released for free circulation after they are imported in the EU.

ABOUT VAT PROCEDURE

The import of goods into another Member State than the one in which the transport or dispatch of the goods ends, is exempt from VAT payment in the Member State where the importation took place¹³. This import VAT exemption is based on the fact that the actual import is followed by an intra-community transfer or supply of goods to another EU Member State.

Indeed, the transfer of goods that are part of his business assets, operated by a taxable person, into another EU Member State, shall be regarded and treated as a supply of goods for consideration.

The “transfer to another Member State” refers to the procedure of dispatch or transport of movable, tangible property by, or on behalf of the taxable person, for the purposes of his business, to a destination situated outside the territory of the Member State in which the property is located, but within the EU Community¹⁴.

What should be stressed out in this context is the fact that EU Member States shall lay down the conditions governing this exemption with a view to ensuring its straightforward and correct application and, also, preventing any tax evasion, avoidance or abuse¹⁵.

CONDITIONS FOR USING THE CUSTOMS PROCEDURE 42 (CP 42)¹⁶

The customs procedure 42 is the regime used by an importer for the purpose of obtaining exemption from VAT when the imported goods are to be transported to another EU Member State, in which case, VAT is due in the Member State of destination. When CP42 is used when operating an import, additional information regarding

When importing under the customs procedure 42, the customs authorities of the EU Member State of destination should request additional information, through mutual assistance, regarding the actual value of the transaction as, in these cases, the final consignee of the goods/products can make a payment (to a Chinese supplier for example) which is considerable higher than the amount shown on the invoice and presented to the customs authorities of the Member State of importation by the customs representative. This may turn, however, into a long process, or a failure may occur because the declared purchaser may differ from the final recipient of the goods, or may be a ghost company (missing trader¹⁷).

If doubts persist, samples can be taken of the imported goods and a security (warranty)¹⁸ can be required to cover any possible loss of customs duties. When implementing the priority control area for underestimation of textiles and footwear imported from Asian countries, the Commission has provided clear guidelines to EU Member States on ways to combat undeclared practices. There are still practical difficulties amongst the above mentioned customs procedures that keep popping up.

After being released for free circulation in the EU importing Member State, the goods (products/merchandise) should be either supplied to a customer, or directly transferred to the

¹³ Directive 2006/112/EG (the VAT Directive), article No. 143 (d).

¹⁴ Directive 2006/112/EG (the VAT Directive), article No. 17.1.

¹⁵ Directive 2006/112/EG (the VAT Directive), article No. 131.

¹⁶ The regime that an importer may use in order to obtain a VAT exemption in the case of importation of goods from third countries (outside the EU) followed by transportation to another Member State. Thus, the related VAT is due in the Member State of final destination.

¹⁷ A VAT purposes registered trader who, with possible fraudulent intentions, purchases, or claims to purchase goods or services without paying the VAT and further supplies these goods/services by invoicing VAT, but without paying the collected VAT to the national tax authority.

¹⁸ In accordance with Article No. 191 of the Customs Code of the European Union and Article No. 244 of the Implementing Regulation of the Customs Code of the European Union

importer in another EU Member State. This supply, or transfer of goods/products stands as an intra-Community transaction that is exempted of VAT payment¹⁹.

The obligations that should be fulfilled by the importer, or its legal tax representative, additionally to the obligations that are imposed on every taxable person, are as follows:

- to be identified, in the importing EU Member State, for VAT purposes, or to appoint a fiscal representative in this matter²⁰;
- either to be identified for VAT purposes, in the EU Member State of destination, where the case of transfers, or to supply the goods (products/merchandise) to a customer duly identified there²¹;
- to submit a recapitulative statement to the tax authorities from the importing EU Member State which should include the intra-Community transfer or supply²².

Article 20 of the Directive 2006/112/EG (the VAT Directive) stipulates the fact that VAT becomes a chargeable event in the Member State where the owner of the goods proceeds with the intra-community acquisition of the products/merchandise, after their arrival²³.

The VAT exemption pursuant to article No. 131 of Directive 2006/112/EG (the VAT Directive), shall apply only with the condition that, at the time of importation, the importer has provided, to the competent authorities of the Member State of importation at least the following information:

- a. his VAT identification number issued in the Member State of importation or the VAT identification number of his tax representative, liable for payment of the VAT, issued in the Member State of importation;
- b. the VAT identification number of the customer to whom the goods are due to be supplied, following article No. 138 1 of the VAT Directive, issued in another Member State, or his own VAT identification number, issued in the Member State in which the dispatch or transport of the goods ends when the goods are subject to a transfer, following article No. 138.2 c of the VAT Directive;
- c. the evidence that the imported goods are intended to be transported or dispatched from the Member State of importation to another Member State.

However, Member States have the possibility to provide that evidence referred to in the above mentioned point (c) may be indicated to the competent authorities, or law enforcement agencies, only upon request.

The tax authorities of the EU Member State of importation enter the data (information) from the recapitulative statement into the VIES database, thus providing access to this data to the competent authorities in the Member State of destination.

The customer, in the case of a supply, or the importer, in the case of a transfer, must declare an intra-Community acquisition to the competent authorities in the Member State of destination. This is a taxable event under which the VAT becomes chargeable in this country of final destination.

¹⁹ Directive 2006/112/EG (the VAT Directive), article No. 17, article No. 138.

²⁰ Directive 2006/112/EG (the VAT Directive), article No. 204, article No. 214.

²¹ Directive 2006/112/EG (the VAT Directive), article No. 214.

²² Directive 2006/112/EG (the VAT Directive), article No. 262.

²³ Directive 2006/112/EG (the VAT Directive), article No. 20.

HOW EVASION OF CUSTOMS DUTIES OCCURS

At the time of entry into the customs territory of the Union, the customs authorities of the importing Member State shall require the importer to pay, or to secure any customs duties applicable to the imported goods.

However, importers may deliberately reduce or evade their customs duties liability by, for example, declaring a dissimulated country of origin, undervaluing their goods, or shifting to a lower duty rate classification product.

It is estimated that customs duties represent 14% of the Union`s budget, evasion in this field increasing the customs gap and implying compensation by higher GNI (gross national income) contributions by EU Member States. Thus, the European taxpayers are the ones who ultimately borne the cost for this.

The customs duty liability can be deliberately reduced by the importer through one of the following ways:

- undervaluation (for example when the actual value of the goods is dissimulated by the importer, who declares a lower value for the imported goods; in most cases, this action also involves fake commercial documents that are being presented to the authorities);
- erroneous description of the origin of the goods, where the importer does not declare the true country of origin of the imported goods;
- incorrect tariff classification, placing imported goods in a category for which lower duty rates are applied;
- a method that combines the ones mentioned above.

In addition, importers may abuse the duty-free regime by requesting such relief for ineligible goods.

THE CUSTOMS GAP AND ITS FINANCIAL IMPACT

The obstruction of the payment (evasion) of customs duties contributes to the deficit of the actually collected customs duties, defined in a study carried out by the European Parliament²⁴ as difference between theoretical level of duties related to imports that should be collected and the actual collection level of import duties.

Possible deficits in the collection of customs duties have to be compensated by an increase in the contributions of EU Member States to the GNI (gross national income), ultimately being borne by EU taxpayers.

COMBATING AND TACKLING THE EVASION OF CUSTOMS DUTIES THROUGH INFORMATION EXCHANGE AND PROPER CUSTOMS CONTROLS

Products/goods/merchandise imported into the Community make the subject of customs controls. This controls can`t ensure a smooth functionality of the internal market nor the proper protection of European Union`s financial interests unless they are applied in a uniform and standardized manner by the EU Member States, along with being based on a common set of rules.

²⁴ According to a 2013 study conducted by the Internal Policies General Directorate, within the European Parliament – “From Shadow to Formal Economy: Levelling the Playing field in the Single Market”

Customs controls applied to the import of goods may take place:

- a. Prior to the entry of the goods into the customs territory of the EU or at the place where the unloading is operated (in this cases the checks carried out are referred to as pre-release, or pre-arrival controls);
- b. At the moment of importation of the goods („release controls”);
- c. Once the goods/products/merchandise are released for free circulation, respectively after the importation is operated. In this case, we are talking about post-clearance controls, which may be based either on audits (post-clearance audits), either on specific transactions/operations (other post-clearance controls)

Since the European Union is lacunar in means of risk management frameworks or harmonized control, the prevalence of one of the three above mentioned forms of control, or the combination of any one of them, may come in different variations, from one Member State to another. The existence of less effective controls at the pre-customs or customs clearance stage implies that the residual risks, that may affect the collection of the customs duties owed, should be mitigated at the post-clearance stage.

It is necessary for the customs authorities to exchange information on international trade with law enforcement agencies from other countries so as to ensure compliance with the applicable customs provisions and proper and complete revenue collection. This process is known as a so called „mutual administrative assistance²⁵”.

In terms of information exchanges at EU level, this can take place either between EU Member States, or between the Commission and Member States. Information exchanges also occurs at international level and it involves exchange of data with third countries (outside the EU). EU-level data/information exchanges can operate either under the Mutual Assistance Regulation or, in the case of risk-related information, in the framework of the customs risk management system.

Customs authorities cooperation is materialized in data/information/good practice exchange which takes place through joint actions, training courses, seminars, working visits, project groups, or cross-border operations, all of these being financed by the European Union’s action programs. There are two such major programs that provide funds for

Customs authorities can also cooperate with each other and exchange information and good practice in joint actions, seminars, training courses, project groups, work visits and cross-border operations, all funded through the programs action of the EU. There are two such major programs that provide funds for exchanging data/information and facilitating cooperation between law enforcement agencies (customs authorities), with the aim of protecting the EU’s financial interests. These two programs are: Customs 2013 / Customs 2020 and Hercules II / Hercules III²⁶.

CONCLUSIONS AND RECOMMENDATIONS

In a 2017 special report, the European Court of Auditors²⁷ (ECA) underlined that serious shortcomings and weaknesses were found, related to the customs legal framework, as

²⁵ Any action taken by a customs administration, in collaboration with, or on behalf of another customs administration, aiming for a proper implementation of customs legislation and for the investigation, repression and prevention of customs offenses.

²⁶ https://www.eca.europa.eu/Lists/ECADocuments/SR17_19/SR_CUSTOMS_EN.pdf.

²⁷ European Court of Auditors, Special report No. 19/2017: Import procedures: shortcomings in the legal framework and an ineffective implementation impact the financial interests of the EU.

well as inefficiency in the implementation of customs controls regarding imports, which has a negative impact on the financial interests of the EU.

In the same report it was stipulated that EU Member States do not receive sufficient financial stimulation in order to perform proper customs controls. Main reasoning for this theory revolves around the fact that those performing controls related to customs procedures, yet do not manage to recover EU's revenue, risk financial consequences, where on the other hand, no such consequences are susceptible to those which don't carry out such controls.

EU Member States registered progress towards a uniform application of the customs legislation, but they have different approaches regarding the way/means customs controls tackle undervaluation of goods, misrepresentation of origin, or incorrect tariff classification, as well as with regard to the imposition of customs penalties.

A big challenge that customs authorities have to cope with is striking an equilibrium between the need to carry out customs controls, on the one hand and the need to facilitate trading through faster and more concise import procedures, on the other hand.

The above mentioned conclusion is based on the existence of burdensome customs controls/procedures that may impact/influence the decisions of the traders when choosing an import customs office or another. Also, the ports (airports) where fewer customs controls are carried out may attract greater traffic²⁸.

²⁸ EUROPEAN COURT OF AUDITORS, Special report No 19/2017: Import procedures: shortcomings in the legal framework and an ineffective implementation impact the financial interests of the EU. https://www.eca.europa.eu/Lists/ECADocuments/SR17_19/SR_CUSTOMS_EN.pdf.

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NOVELTY ASPECTS OF NULLITY IN THE LIGHT OF THE CURRENT CIVIL CODE

Andrea-Ioana ROȘCA¹

ABSTRACT:

NULLITY IS ONE OF THE OLDEST IMPOSITION OF CIVIL PENALTIES THAT EVOLVED OVER TIME AND UNDERWENT A SERIES OF TRANSFORMATIONS. CLOSELY LINKED TO THE CIVIL LEGAL ACT, IN A FIRST STAGE NULLITY WAS REGARDED AS AN ORGANIC STATE THEREOF, AND COULD ONLY BE TOTAL AND IRREVERSIBLE. SUBSEQUENTLY, NULLITY WAS NOT DESIGNED ANYMORE AS PART OF THE LEGAL ACT, BUT/AND INSTEAD IT WAS SEEN AS A PENALTY THAT OCCURS IF THE LAW HAS BEEN VIOLATED, BY REMOVING THE CONTRARY EFFECTS. BOTH THE OLD CIVIL CODE AND THE CURRENT CIVIL CODE REFLECT THIS CONCEPT. BELOW, I SHALL PRESENT THE INNOVATIONS OF THE CURRENT CIVIL CODE WITH RESPECT TO THE OLD CIVIL CODE.

KEYWORDS: NULLITY, IMPOSITION OF CIVIL PENALTIES, LEGAL ACT, EFFECTS, CIVIL CODE

INTRODUCTION

The nullity under the old Civil Code did not have a uniform rule, but of disparate provisions throughout. This changed with the entry into force of the current Civil Code which, in Articles 1246-1260, provides the general regime in the matter of nullity and reflects the modern view with regard to it. Thus, nullity is directed against the effects of the legal act which is contrary to the purpose of the violated legal provision. Therefore, the characteristics of nullity in the view of the current Civil Code are the same as shown in the literature related to the old Civil Code. It also preserves the sanctioning and preventive functions².

NOVELTY ASPECTS

From the wording of Art. 1246 (1) of the Civil Code is apparent that "*nullity is the common law penalty for the breach/violation of the conditions required by law for its valid conclusion (condiciones iuris), except where the law provides another penalty/penalty*"³. It is noted that largely/in the broadest sense, the definition of the doctrine related to the old Civil Code has been kept to which it has been added the specification/proviso that it occurs if the law provides no another penalty.

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² See Gabriel Boroi, Liviu Stănciulescu, "Instituții de drept civil în reglementarea noului Cod civil", (București: Hamangiu, 2012), 199

³ Marian Nicolae, "Codex Iuris Civilis, Tomul 1, ediție critică", (București: Universul Juridic, 2012), 330

Regarding the acts that may be deemed null and void, the seat of the matter is represented by Art. 1244 Civil Code which specifically refers only to the nullity of the contract. However, it has been rightly noted that "*nullity is not just another penalty reserved for the contract, but is a penalty applicable to both property related unilateral legal acts and non-property acts, irrespective of their conventional or unilateral nature*"⁴. The applicability of nullity to property related legal acts results from Art. 1325 Civil Code, which establishes the rule that laws relating to contracts shall apply to such acts unless the law provides otherwise. The nullity of non-property legal acts is governed by express and special provisions, but if the latter prove insufficient, the rules for nullity of contract shall apply, provided that the latter are compatible with the specific of the property-related act. It has been also noted that the general rules concerning nullity in the Civil Code apply also to the nullity of legal acts concluded under the influence of other legal provisions adjacent to the same, unless special provisions exist⁵.

A novelty in the civil law is the introduction of agreements of finding/ascertaining or declaration of nullity. Such agreements are regulated by Art. 1246 (3) and (4), wherefrom it results that by such agreements the "*parties to a contract agree to recognize the grounds for nullity and to determine its effects without resorting to court. The terms of ascertainment and declaration are analogous to the role of courts for nullity, which is to ascertain absolute nullity and declare (rule) relative nullity*"⁶. According to Art. 1246 (4) of the Civil Code, agreements on nullity cannot establish or suppress grounds for nullity, or otherwise the provisions which establish or suppress the grounds for nullity are considered unwritten. Thus, there are only legal grounds for nullity, the conventional ones being banned. It has been also shown that these agreements must respect the rights of third parties and public order, and should not lead to the distinction between legal and judicial nullity⁷.

In the view of the current Civil Code, nullity may be classified according to the same criteria set out in the doctrine related to the old Civil Code. Thus, depending on:

- the nature of the interest protected by the violated legal provision upon the conclusion of the legal act, nullity may be absolute or relative;
- the extent of the legal effects, the distinction is made between total and partial nullity, the latter being the rule in our legal system. The express regulation of partial nullity in Art. 1255 of the Civil Code is a novelty in the Romanian legislation. According to paragraph (1) of this Article, "*the clauses contrary to law, public order or morality, and which are not considered unwritten entail the nullity of the contract as a whole only if they are, by their nature, essential or, in their absence, the contract would have not been signed/concluded*". *A contrario*, partial nullity intervene if the clauses contrary to law, public order or morality, and which are not considered unwritten are not essential or if, in their absence, the contract would have not been signed. If the nullity of certain clauses of the contract is determined, the latter are replaced by default by the applicable regulations, without prejudice to the right of the parties to insert new clauses to replace the invalid ones;
- the legislative consecration modality, nullity may be express or virtual. This distinction is apparent from the interpretation of Art. 1253 of the Civil Code, which legally establishes virtual nullity. This article provides that "*except for the cases where law provides the penalty of nullity, the contract is cancelled also when the penalty of absolute nullity or, as*

⁴ Ionel Reghini, "Câteva caractere ale nulității contractului desprinse din reglementările Codului civil", Revista Dreptul 4 (2013): 14

⁵ Ionel Reghini, "Câteva caractere ale nulității contractului desprinse din reglementările Codului civil"..., 14-15

⁶ Cristina Zamșa, in "Noul Cod civil Comentariu pe articole Ediția 2", Fl.A. Baiaș, E. Chelaru, R.Constantinovici, I. Macovei (coordonatori), (București: C.H.Beck, 2014), 1384

⁷ See Cristina Zamșa, in "Noul Cod civil Comentariu pe articole Ediția 2"..., 1384

appropriate, of relative nullity must be applied so that the purpose of the violated legal provision be achieved". It is noted that this article establishes the justification of virtual nullity which lies in the achievement of the purpose of the violated legal provision. The category of express nullities is suggested by Art. 1250 of the Civil Code which stipulates that absolute nullity of the contract intervenes in the cases specifically provided by law. Also, the same article establishes the virtual absolute nullity "when it results beyond doubt that the protected interest is a general one";

- the type of validity condition broken upon the conclusion of the legal act, is distinguished between the substantive nullity and formal nullity;

- the capitalization, the opinion accepted by the majority in the literature is that nullity may be amicable or judicial. This opinion is based on Art. 1246 (3) of the Civil Code which distinguishes between the case where the parties find or declare nullity by their own will, without recourse to the competent tribunal, and the case in which such an intervention is necessary because the parties do not agree in this regard⁸. This opinion is based on the presumption of validity of the legal act concluded disregarding the provisions of the law, until the removal of such presumption by judicial action. Thus, *"the court would not notice a pre-existent nullity, but would appreciate regarding the existence or absence of grounds for nullity, all the more since, under procedural aspect, the action for the declaration of nullity of a legal act is not a declaratory action/judgement, but an injunction, whether it is absolute or relative nullity"*⁹. In a minority opinion, it is considered that the absolute nullity operates ipso facto, the court being obliged to "hold", while relative nullity operates only on request, either by way of an action or amicably, being "declared" or "ruled" by the court which does not hold any subjective right¹⁰. This view has to the fore the legal lack of the null and void contract, *"while the contract affected by a provision of relative nullity exists as if it were fully valid, but its legal existence is not final, but only temporary"*¹¹.

With regard to the grounds for nullity, one must distinguish between those that attract absolute nullity of the legal act and those that attract relative nullity. In the literature, the following generic cases of absolute nullity have been retained: the failure to observe the legal provisions establishing a special disability/inability to use of the individual/physical person, and protecting a general interest; an intentional act expressed with no intention to produce legal effects; the existence of an undetermined or illegal object; the existence of an immoral or illegal cause; the failure to observe the form required by law *ad validitatem*; the failure to observe the right of pre-emption/first refusal in the cases expressly and exhaustively provided by law¹². Thus, some causes of absolute nullity were taken from the old Civil Code, while others are newly introduced.

Relative grounds for nullity are governed by Art. 1251 of the Civil Code, which reads as follows: *"the contract is cancellable / annulable / prone for annulment when the legal provisions on capacity to act have been disregarded, when one party consent has been vitiated, and in other cases expressly provided by law"*. Apart from non-compliance with the provisions on capacity to act, and where one party to the legal act had their consent vitiated, one may retain as causes attracting relative nullity and lack of discernment at the time of the conclusion

⁸ See Gabriel Boroi, Liviu Stănculescu, "Instituții de drept civil în reglementarea noului Cod civil"..., 203

⁹ Marilena Uliescu, Noul Cod civil Studii și comentarii Volumul III. Partea I Cartea a V-a, Despre obligații (art. 1164-1649), (București : Universul juridic, 2014), 153

¹⁰ See Marian Nicolae, "Codex Iuris Civilis, Tomul 1, ediție critică"..., 330-331

¹¹ Marian Nicolae, "Codex Iuris Civilis, Tomul 1, ediție critică"..., nota de subsol 1), 330-331

¹² See Gabriel Boroi, Liviu Stănculescu, "Instituții de drept civil în reglementarea noului Cod civil"..., 213

of the civil legal act, the lack of cause or violation of the pre-emption right in the cases expressly and exhaustively provided by law¹³.

The legal regime of nullity is different depending on the absolute or relative nature thereof, the tradition of the old Civil Code being thus preserved. Like then, also today the relative nullity is the rule, and the absolute nullity is the exception. The presumption of relative nullity is a legislative novelty in our civil law, being established by Art. 1252 of the Civil Code. It is noted that this presumption operates only in the case of virtual nullity as only then the nature of nullity is not expressly provided by law. In the literature, it has been shown that *"although from the wording of the analysed text two alternative and independent conditions of the application of this presumption would result – the non-determination of the nature of nullity or its non-resulting beyond reasonable doubt from the law/by law - in fact, the second condition entails the first and adds to it a supplementary circumstantial evidence, the existing doubt regarding the nature of nullity. The first condition strictly refers to a legal shortfall regarding the declaration of the nature of nullity, while the second suggests difficulties in identifying the general or particular interest concerned by the rule of the law infringed, the same not resulting clearly from the interpretation of the law"*¹⁴. The presumption of relative nullity is a relative legal presumption so that the person concerned should only point out that the law does not determine the nature of nullity, or that the same does not result beyond reasonable doubt from the law for the presumption to operate/function. However, if the absolute characteristic of nullity is sought, the party concerned must prove it in order to be able to rebut such presumption. Since the relative nullity is the rule, in the first part we shall deal with the legal regime thereof, emphasizing the innovations introduced by the new Civil Code, and in the second part we shall make a brief presentation of the legal regime of absolute nullity.

The legal seat of nullity regime is represented by Art. 1248 of the Civil Code in which the same is defined according to the protected interest, the persons who can invoke it are regulated, and the possibility of its confirmation. It is also important that this article be read in conjunction with Art. 1249 (2) of the Civil Code governing the limitation of relative nullity.

Thus, relative nullity occurs when the legal act is concluded in breach of a legal provisions in place to protect a particular / private / personal interest. With this in mind, annullability of the legal act may be invoked only by the person whose interest is protected by the violated legal provision. The court cannot raise it of its own motion. It has been shown that the sphere of the persons concerned includes the parties of the legal act; the legal representative of the person lacking legal capacity or the legal guardian of the person with limited legal act; the universal or universal-title successors of the party protected by the violated legal provision, except for personal actions; the unsecured creditors through the indirect claim, except in the case of rights or *intuituu persoane* shares; the prosecutor under Art. 45 and Art. Article 46 (3) of the Civil Code; third parties if by the infringed rule of law a personal interest of the third party is also protected¹⁵. A legislative novelty is brought by Art. 1258 of the Civil Code which requires the notary public to rely on relative nullity in the case they know of its existence, and to refuse the authentication of the document whether or not the law requires the *ad validitatem* authentic form, under the possibility to order the latter to repair the damage suffered, in terms of tort for their own deed.

The confirmation of the annullable legal act is part of the validation causes of the contract. Although it benefits of a uniform and wider regulation in the current Civil Code, it

¹³ See Gabriel Boroï, Liviu Stănciulescu, "Instituții de drept civil în reglementarea noului Cod civil"..., 214-215

¹⁴ Cristina Zamșa, în "Noul Cod civil Comentariu pe articole Ediția 2"..., 1390

¹⁵ See Gabriel Boroï, Liviu Stănciulescu, "Instituții de drept civil în reglementarea noului Cod civil"..., 216-217; Cristina Zamșa, în "Noul Cod civil Comentariu pe articole Ediția 2"..., 1386-1387

has retained its characteristics from the Cuza Civil Code. The confirmation remains therefore a unilateral legal act (with no need of its acceptance by the other party), accessory to the contract it comes to supplement by removing the grounds for nullity because, and an abdicative act as the party waives their right to allege nullity. The confirmation shall be certain and expressed explicitly or implied. The confirmation may be made by the person entitled to invoke the annulability of the contract, by the legal representative of the minor child for the acts concluded without the latter's consent, and by guardianship court for acts concluded without the latter's authorization. The person confirming the act must know the reason for relative nullity, and in case of violence, it must have ceased/stopped. Upon the date of confirmation, the confirmed legal act must meet all conditions for its validity. According to Art. 1264 of the Civil Code, the act of confirmation "*must contain the object, the cause, and the nature of the obligation and to mention the reason for the action for annulment, and the intention to repair the defect underpinning the action.*" Tacit confirmation occurs through voluntary execution of the obligation by the person concerned on the date on which it could be validly confirmed. A first in the legislative field is regulated in Art. 1263 (4) of the Civil Code which establishes a process through which the party concerned may put in default/give formal notice to the holder of the action for relative nullity, through a notification requiring that within 6 months confirm the act or request the cancellation thereof, subject to forfeiture of the right to demand its cancellation. This process is designed to avoid any delay on the part of the holder of the action for nullity. As in the period before the entry into force of the current Civil Code, at present as well the confirmation has retroactive effect and takes effect from the moment of conclusion of the civil legal act, and herewith, attracts waiver of the right to allege annulability by way of action or by way of exception. However, the confirmation has no effect on the rights acquired and preserved by third parties of good faith. It was shown that if the confirmatory act is favourable to third parties, the same shall be fully binding/opposable¹⁶. It is important to retain also the situation where the confirmation refers to an annulable act for fraud or or coercion or threats/violence as by confirming the act the right to invoke/allege relative nullity shall be waived, but does not in itself imply giving up the right to request damages. "*The legislative solution is explained by the legal double nature of fraud / violence, being both defect in consent, and civil offenses: or by confirmation, the defect in consent is covered, but does not solve, implicitly, the issue of damage reparation of inherent tort*"¹⁷. The current Civil Code rises to the rank of law the doctrinal assertions about the possibility of confirmation of the contract by one party, a confirmation which may not be invoked against other parties entitled to invoke relative nullity.

Limitation of the right to invoke relative nullity is governed by the current Civil Code in Art. 1249 (2). By expressly regulating the prescriptibility of the action for annulment and the imprescriptibility of the right to invoke annulability by way of exception, the doctrinal and case-law dispute under the old Civil Code was resolved in this regard.

The legal basis for the absolute nullity regime is the Art. 1247 of the Civil Code in which it is defined according to the interest protected, the persons who can invoke it are regulated, and the prohibition of confirmation thereof. It is also important to read this article in conjunction with Art. 1249 (1) of the Civil Code governing absolute nullity imprescriptibility.

Thus, absolute nullity occurs when the legal act is concluded in breach of a legal provision in place in order to protect a general or public interest. With this in mind, nullity may be invoked by any person concerned, whether by way action or by way of exception. The sphere

¹⁶ See Cristina Zamșa, in "Noul Cod civil Comentariu pe articole Ediția 2"..., 1402

¹⁷ Cristina Zamșa, in "Noul Cod civil Comentariu pe articole Ediția 2"..., 1402

of the persons proving an interest and who can claim absolute nullity coincides with the one presented in the literature of the old Civil Code. A legislative novelty brought by the new Civil Code is the obligation of the court to invoke of its own motion absolute nullity, unlike the previous legislation regulating only its right to invoke of its own motion absolute nullity. As regards the procedural aspects of this obligation, the ones laid down before the entry into force of the current Civil Code shall remain valid, that is the court cannot act *ex officio* with an action for establishing absolute nullity, and in the case of proceedings already started, *"the court, finding that the legal act which is the basis of the claim before the judge is null and void, shall reject the application for summons as unfounded (groundless), without ruling also the validity of the legal act in question (unless the defendant, by counterclaim, sought nullity)"*¹⁸.

In principle, the confirmation of the absolutely null legal act cannot work given that the violated the laws were established to protect a public interest. There are also exceptions from this rule including the possibility of confirmation of the donations and legacies made by their author, the universal successors or universal title successors, according to Art. 1010 of the Civil Code. Also Art. 303 of the Civil Code provides for two cases of tacit s confirmation for the marriages concluded in breach of the law provisions on matrimonial age.

As in the period before the entry into force of the current Civil Code, the confirmation, both of the relative nullity and of the absolute nullity when it is possible, should not be confused with the reconstruction of the null and void contract which may be done *"in whole or in part, in compliance with all provisions of the law upon the date of its re-drawing. In all cases, the redrawn contract shall take effects only for the future, and not for the past"*¹⁹.

The provisions of the current Civil Code reiterate the rule of imprescriptibility of absolute nullity, whether invoked by way of exception or by way of action.

Regarding the consequences of nullity, unlike the old Civil Code, the current Civil Code regulates them in a consistent manner in Articles 1254 to 1260. The principles governing the nullity effects were maintained, which are: retroactive effects of nullity, restoring the status quo ante /reinstatement, and annulment of the subsequent act following the cancellation of the initial act. Below, I shall briefly review each principle through the novelties brought by the current Civil Code.

The principle of retroactive effects of nullity is expressly provided for the first time in civil law in Art. 1254 (1) of the Civil Code. Among the exceptions to this principle covered by the current Civil Code, we note the following:

- the child of good faith upon the conclusion of the marriage retains their full legal capacity to act acquired as a result of the conclusion of the marriage, after its cancellation as well [Art. 39 (2) of the Civil Code];
- the declaration nullity of a legal person shall have no retroactive effect, and it ceases only for the future beginning from the date on which the judgment of ascertaining or declaring nullity becomes final [Art. 198 (1) of the Civil Code];
- the spouse in good faith upon the conclusion of a putative marriage, retains its status of spouse from a marriage valid for the period of time from concluding the marriage until the annulment of marriage judgment becomes final [Art. 304 (1) of the Civil Code];
- the children of an annulled marriage retain the status of children in the marriage for both past and future [Art. 305 (1) of the Civil Code].

It is noted that the current Civil Code did not retain the exception to maintain, until the date of cancellation, the effects of successive performance contract as Art. 1254, (3) of the

¹⁸ Gabriel Boroï, Liviu Stănculescu, "Instituții de drept civil în reglementarea noului Cod civil"..., 220

¹⁹ Art. 1259 of the Civil Code

Civil Code provides that "*the restitution of benefits shall be made even if they were not performed sequentially or have had a continuous character*".

The principle of restoring the status quo ante is provided in Art. 1254 (3) of the Civil Code. Among the exceptions to this principle covered by the current Civil Code, we note the following:

- keeping by the owner in good faith the fruit harvested within the time its good faith had lasted. The owner must have previously acquired principal real rights on a productive good by means of a translative or constitutive act of such rights, and their good faith meet the requirements of Art. 948 and Art. 1645 (1) of the Civil Code;

- reimbursement of the benefits received by the one without legal capacity to act or with limited capacity to act only within the limits of the benefit made (Art. 47 of the Civil Code). There is an exception from this rule where, intentionally or out of gross negligence, the one under the obligation to return has made it impossible, in which case they shall be ordered full refund (Art. 1647 of the Civil Code);

- invoking usucapio by the acquiring person of a legal null and void act, by means of which ownership was transmitted or constituted, or main another real right²⁰.

It is noted that the current Civil Code did not apply the exception of non-reimbursement of benefits of the parties relying on their own turpitude as Art. 1638 of the Civil Code states that "*the benefit received or made under an illegal or immoral cause shall always remain subject to refunding*".

Refund arrangements are provided for in Art.1639-1647 of the Civil Code governing their operation on several aspects: restitution in kind or compensation if it cannot take place in kind, destruction or disposal of property, accidental destruction the goods, the partial loss of goods, expenses relating to the goods, restitution of the benefits and the equivalent for the use of the goods, costs of refund and refund of benefits by the incapable persons. To be noted that restitution in kind is the rule, and that by equivalent is the exception.

The principle of annulment of the subsequent act following the cancellation of the original act provided for in Art. 1254 (2) of the Civil Code. Among the exceptions to this principle covered by the current Civil Code, we note the following:

- the lease agreement concluded by the Lessor in good faith and shall take effect also after the dissolution of the lessor's title for the period stipulated by the parties, without exceeding one year from the date of dissolution [Art. 1819 (2) of the Civil Code];

- successive performance contracts shall continue to have effect during the time stipulated by the parties, without exceeding one year from the date of dissolution, subject to compliance with the formalities prescribed by law [Art. 1819 (2) of the Civil Code];

- the marriage concluded by the spouse of a person declared dead shall remain valid after the cancellation of the declaratory judgment of death, provided that the spouse of the person declared dead had been in good faith, the first marriage being dissolved upon the conclusion of the new marriage [Art. 293 (2) of the Civil Code].

Regarding the exceptions to the principle of ineffectiveness of the annulled legal act, the new Civil Code maintained the same exceptions stated in the corresponding doctrine of the old Civil Code: legal document conversion principle, the principle of the validity appearance by law, and of tort.

The conversion receives an express regulation in the current Civil Code, unlike in the old Civil Code containing only specific provisions on documentary evidence in Art. 1172. From the Civil Code provisions, one may note that the conditions the conversion must meet in

²⁰ See Gabriel Boroi, Liviu Stănculescu, "Instituții de drept civil în reglementarea noului Cod civil"..., 227-228

order to operate were maintained. In the literature, it has been established that conversion can operate also in the case of a relative nullity act because the alternative act, deduced by interpretation of the initial void act, is the one that shall take effect²¹.

The principle of appearance validity in law (*error communis facit ius*) is legally established in Art. 17 (2) of the Civil Code. It is noted that the common and invincible error must be proved, and the application of this principle has just a judicial character. Also, its scope in real estate is limited, and in other matters where the law provides an advertising system. Its legal application to matters of civil status documents issued by a person who exercised the duties of public officer of civil status in compliance with all legal provisions, has been maintained. These documents shall remain valid, even if that person shall not have that capacity, unless the beneficiaries of these acts have known, when drawing up such act, their lack of such quality²².

The tort principle shall continue to be applied in case of a crime committed by a minor child or a person placed under judicial interdiction, upon signing of an annulable legal act. If the cancellation of the act for disability/incapacity, at the request of the minor child or the person under interdiction, would cause injury to the other party, the court may order maintenance of the act as valid, because it represents the most appropriate form of reparation of damage.

CONCLUSION

The research conducted revealed that the current Civil Code has regulated nullity in a consistent manner, assigning it an entire section in the chapter on the contract. The regulation reflects the same conception in the old Civil Code, namely straightening nullity against the effects of the legal act contrary to the completion of the violated legal provision. New legislative aspects are brought, among others, regarding the introduction of finding or declaration of nullity agreements, partial nullity express regulation, legislative establishment of relative nullity presumption, the obligation of the court to invoke absolute nullity of its own motion. It is noted that while certain aspects of legislative novelty have established the doctrinal opinions related to the old Civil Code, others are absolute novelties in the Romanian system of civil law.

²¹ A se vedea Cristina Zamșa, în "Noul Cod civil Comentariu pe articole Ediția 2"..., 1398

²² A se vedea art. 102 din Codul civil

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AERODYNAMIC ANALYSIS OF ICE ACCRETION

Angelo PAPA¹

ABSTRACT:

THE PRESENT PAPER HAS THE PURPOSE OF ANALYZING THE CONDITIONS IN WHICH ICE ACCRETION IS POSSIBLE AND THE FORMATION OF ICE IN RELATION WITH THE AERODYNAMIC EFFECTS ON AIRFOILS. THE STANDARD AIRFOIL NACA0012, INSIDE AND OUTSIDE THE ICING CONDITIONS WAS USED FOR THE SIMULATION. TWO POLAR GRAPHS WERE DESIGNED AND ANALYZED LATER ON WITH THE HELP OF THE FREEWARE SOFTWARE QBLADE. THE 3D PROFILE OF THE AIRFOILS WAS MADE USING SOLIDWORKS SOFTWARE IN WHICH THE DYNAMIC PRESSURE DISTRIBUTION CAN BE SEEN AND THE WAY IN WHICH IT INFLUENCES THE FLOW DISTRIBUTION ALONG THE SURFACE OF THE AIRFOILS.

KEYWORDS: SUPERCOOLED WATER DROPLETS, AIRFOIL, LIFT AND DRAG COEFFICIENTS, QBLADE, SOLIDWORKS.

Cu	Cumulus	LWC	Liquid Water Content	FZDZ	Freezing Drizzle
Cb	Cumulonimbus	FARA	Freezing Rain	Ns	Nimbostratus
As	Altostratus	Sc	Stratocumulus	A	Reference area
Ac	Alto cumulus	St	Stratus	C_l	Lift coefficient
α	Angle of attack	F_D	Drag force	v	Flow velocity
ρ	Mass density	F_L	Lift force	C_d	Drag coefficient

INTRODUCTION

Weather was taken into account from the very beginning of aviation. It can be said that the atmosphere can be identified as a friend or a foe for all pilots depending on its characteristics. I would like to present the hazardous part of the physical processes that occur in the atmosphere, especially ice accretion. Icing is possible at ambient and airframe temperature below 0°C and if water is present in liquid state (supercooled water droplets)². Supercooled water droplets imply a temperature of the droplets below 0°C but still in liquid state. If droplets strike the aircraft, they start to freeze³.

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² A.A. Peterson, L.U. Dadone, Helicopter icing review, September 1980, available at <https://apps.dtic.mil/dtic/tr/fulltext/u2/a094175.pdf>;

³ Meteorology, chapter 14, second edition revised 2014, ISBN 978-0-906202-46-0, CAR Oxford, Aviation Academy;

The general types of aircraft structural icing can be defined as⁴: clear ice. For this type of icing, there needs to be large supercooled water droplets striking the aircraft which will release latent heat. The freezing process is delayed and thus the droplet will flow back over the airfoil. The airfoil shape is destroyed and so control problems and vibrations can occur at any time. This is the most hazardous structural icing not only because it is hard to be noticed but because it alters the shape of the airfoil and it is very hard to be removed. Clear ice forms in Cu, Cb and Ns clouds in temperatures between 0° and -20°C (see figure 1).

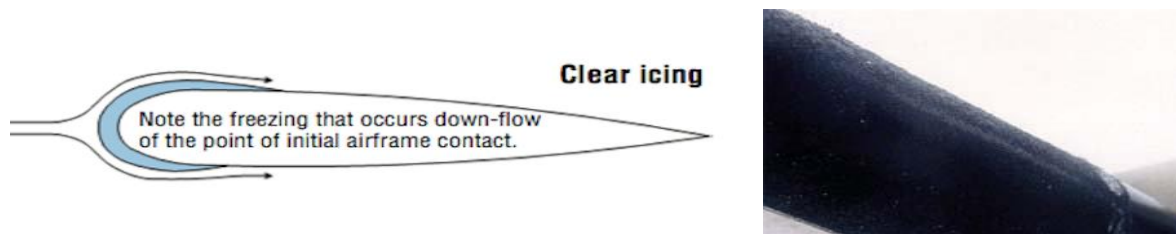


Fig.1 Clear ice

Rime ice - compared to clear ice, for the rime ice formation small supercooled water droplets need to be present. When the droplet strike the surface it freezes almost at once. Because air is trapped between each frozen droplet, the aspect of ice is opaque with a light texture. Rime ice can be present in any cloud with small supercooled water droplets like Ns, As, Ac, Sc and St and it usually forms below -15°C (see figure 2).

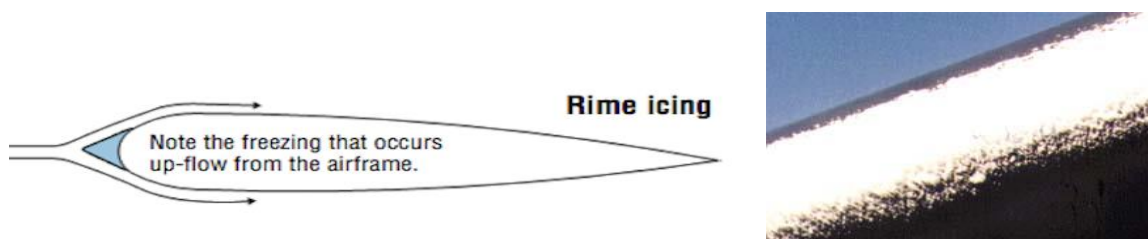


Fig.2 Rime ice

Mixed Ice - It forms between 0° and -20°C temperature range where a mixture of both small and large supercooled water droplets is found. This type of icing gives a combination of the worst effects caused by the build up on the leading edge of small droplets and the flowback of large water droplets(see figure 3).

⁴ Meteorology, 14-4, Aviation Training Systems Nordin, EASA Edition, ISBN: 978-82-8107-145-2; Aviation Weather, 3rd edition, chapter 13, Jeppesen 2013, ISBN 9780884875949; Meteorology, chapter 14, second edition revised 2014, ISBN 978-0-906202-46-0, CAR Oxford, Aviation Academy;

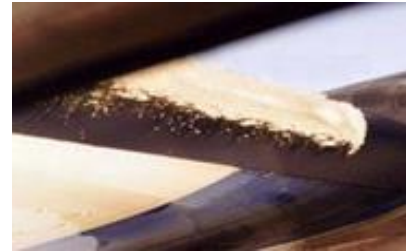
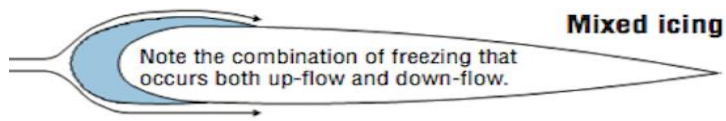


Fig.3 Mixed ice

1. THEORETICAL STUDY OF ICE

Icing is directly connected with atmospheric conditions and flying parameters. It should be reported to the immediate unit with whom the pilot is in contact and when he encounters such conditions while flying from point A to point B⁵. The microscale processes that influence formation of icing the most and the severity of ice accretion are described in the next paragraphs.

1.1. The Physics of Icing

Three of the most important parameters that influence icing are: temperature, moisture and droplet size⁶.

a) Temperature

The temperature in the cloud can influence the number and size of the droplets dramatically. Also, clouds that form in cold air masses will have a lower liquid content than clouds formed in warm air masses. With experience and time it was observed that serious icing is most possible to appear at temperatures just below 0°C and with colder temperatures the problems consisting of blade icing become less damaging⁷. Between the range of -4°C and -10°C water does not remain on the leading edge, spreading back on the airfoil, causing ridges and horns. This accumulation of ice degrades the aerodynamic performance and disrupts the normal airflow. Large supercooled water droplets start to freeze almost instantaneously at -10°C with the rate of freezing process increasing rapidly with temperatures below -15°C. At -40°C only small supercooled water droplets are found and icing can be considered negligible⁸.

b) Moisture

The liquid water content (LWC) is a condition that has to be met for structural icing to form. The quantity of water is measured in mass per volume of air (g/m³). The higher the LWC, the higher the rate of ice accretion will be. Lifting of a mass with moist characteristics into an environment of subfreezing temperatures is mostly enough to form supercooled water droplets in a cloud. If the lifting is slow and the air is stable than stratiform clouds with low liquid water content will form. For cumuliform clouds to form lifting must be rapid and the air unstable. Serious icing may be encountered in cumuliform clouds with high moisture content while cirriform clouds do not usually represent ice hazards⁹.

⁵ Meteorology, 14-4, Aviation Training Systems Nordian, EASA Edition, ISBN: 978-82-8107-145-2;

⁶ Meteorology, 14-4, Aviation Training Systems Nordian, EASA Edition, ISBN: 978-82-8107-145-2;

⁷ Flight safety foundation, Helicopter safety, Inflight icing and the Helicopter, December 1990, available at https://flightsafety.org/hs/hs_nov-dec90.pdf ;

⁸ Meteorology, 14-4, Aviation Training Systems Nordian, EASA Edition, ISBN: 978-82-8107-145-2;

⁹ Meteorology, 14-4, Aviation Training Systems Nordian, EASA Edition, ISBN: 978-82-8107-145-2;

c) Droplet size

Supercooled water droplets may be considered large if their diameter is more than 0.04 mm. Maximum size for a water droplet may achieve 5 mm in diameter. There are two processes for the formation of large supercooled water droplets¹⁰.

The first is collision/coalescence process in which droplets are already supercooled. If there is sufficient time and moisture in the atmosphere with temperatures above -15°C, the number of supercooled water droplets can grow at a significant rate. The second way is when snow falls into a relatively warm layer (temperature bigger than 0°C) where ice crystals start to melt and then reach a cold layer. Here the water droplets become supercooled and reach the ground as FZRA (freezing rain, see figure 4) or FZDZ (freezing drizzle)¹¹.

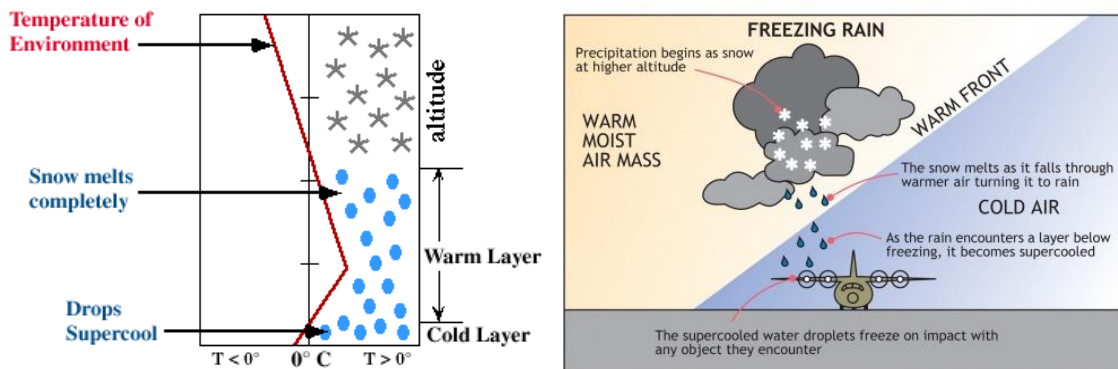


Fig.4 Freezing rain,¹²

1.2. Reporting Icing

When encountering icing conditions pilots are requested to report: time, location, intensity, flight level, aircraft type, icing type. Aeronautical Information Manual define three types of icing intensities known worldwide to be reported¹³:

Light icing: conditions less than moderate icing. There may be problems if the flight continues in icing conditions more than 1 hour. The proper use of ice protection equipment prevents or removes accumulation and ice should not become dangerous. If there is no ice protection equipment or a proper flight plan, a 180° turn should be taken into account.

Moderate icing: change of altitude and/or heading may be considered desirable.

The use of equipment for ice protection is necessary and even short periods in moderate icing cause the performance to decrease and might be potentially hazardous.

Severe icing: immediate change of altitude and/or heading is required. De-icing/anti-icing equipment fails to control or reduce the hazard.

¹⁰ Aviation Weather, 3rd edition, chapter 13, Jeppesen 2013, ISBN 9780884875949

¹¹ Aviation Weather, 3rd edition, chapter 13, Jeppesen 2013, ISBN 9780884875949

¹² Aviation Weather, 3rd edition, chapter 13, Jeppesen 2013, ISBN 9780884875949

¹³ Aeronautical Information Manual, 7-1-21, PIREPs Relating to Airframe Icing, available at <https://airresearch.com/Pilots/AIM-08/Chap7/aim0701.html>;

2. AERODYNAMIC ANALYSIS OF ICE ACCRETION

2.1. Icing conditions under analysis (geometry, instrument used, flight conditions)

The aerodynamic analysis shows the difference of the symmetrical airfoil NACA 0012 in standard conditions and icing conditions, see figure 5. As known in specialized literature¹⁴, the thickness of the ice layer and the distribution of it on the blade might affect the aerodynamic performance of the helicopter until one point where it becomes unsafe to fly. The study implies an ice accretion of the leading edge of the airfoil no more than 4% of the chordline.

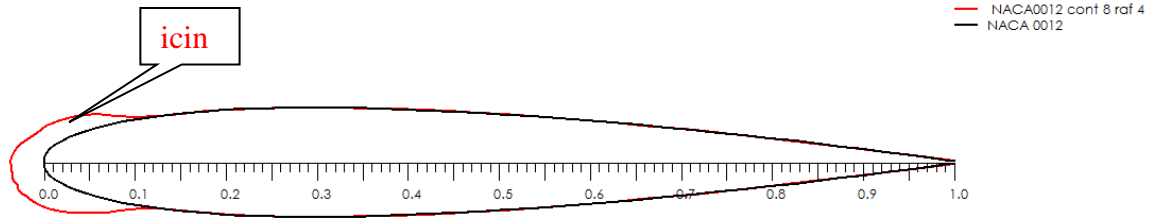


Fig.5 Qblade coordinates

Aerodynamic performance was realised with the freeware instruments Qblade, XFLR5 and SolidWorks¹⁵. The airfoils were realised in Qblade and imported later in SolidWorks to make a 3D view of the blades in both conditions¹⁶, see figure 6 and 7.

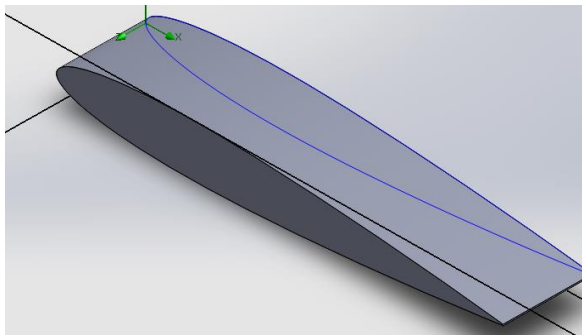


Fig.6 NACA0012 Standard

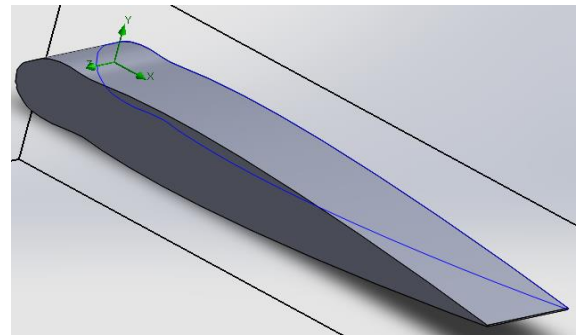


Fig.7 NACA0012 ice accretion

¹⁴ A.A. Peterson, L.U. Dadone, Helicopter icing review, September 1980, available at <https://apps.dtic.mil/dtic/tr/fulltext/u2/a094175.pdf>

¹⁵ David Marten, Qblade Short Manual, available at https://www.researchgate.net/publication/281279669_QBlade_Short_Manual_v08; Prisacariu V., The aerodynamic analysis of the profiles for flying wings, JOURNAL OF DEFENSE RESOURCES MANAGEMENT, vol.4 issue 1(6)/2013, ISSN:2068-9403, eISSN:2247-6466, ISSN-L: 2247-6466, p211-218; Prisacariu V., Boşcoianu C., Luchian A., Considerations of the bird strike on aircraft wing, RECENT Journal, Vol. 18, no. 2(52), July, 2017, Transilvania University of Brasov, Romania, ISSN 1582-0246, p 109-115; *** Guidelines for XFLR5 v6.03, 2011, 71.

¹⁶ Dassalt Systems, SolidWorks, available at <https://www.solidworks.com/>; Prisacariu V., CFD Analysis of UAV Flying Wing, INCAS Bulletin, vol. 8, 3/2016, ISSN 2066 – 8201, DOI: 10.13111/2066-8201.2016.8.3.6, p 65-72.

Flight conditions of the analysis, see table 1:

Table 1. Analysis conditions

Parameter	Value	Parameter	Value
Velocity in X direction	66 m/s	Roughness[μm]	10 μm
Reynolds	500000	Temperature[K]	293.2
Gas	Air	Angle of attack [α]	-2° to 13°

2.2. Results of the analysis

Graphs from figure 9 were realised using Xfoil Direct Analysis with regard to Qblade software¹⁷. It is clear how drag coefficient and glide ratio to alpha are affected by the ice accretion of the airfoil. From the drag formula¹⁸,

$$F_D = \frac{\rho v^2}{2} C_d A \quad (1)$$

We can see that the drag force is greater for the iced airfoil compared to the normal one, where ρ is the mass density of the fluid, v is the flow velocity relative to the airfoil, C_d coefficient of drag and A is the reference area.

Figure 9a shows an increase of drag (C_d) by incidence and figure 9b shows reduces gliding ratio (C_l/C_d) by incidence.

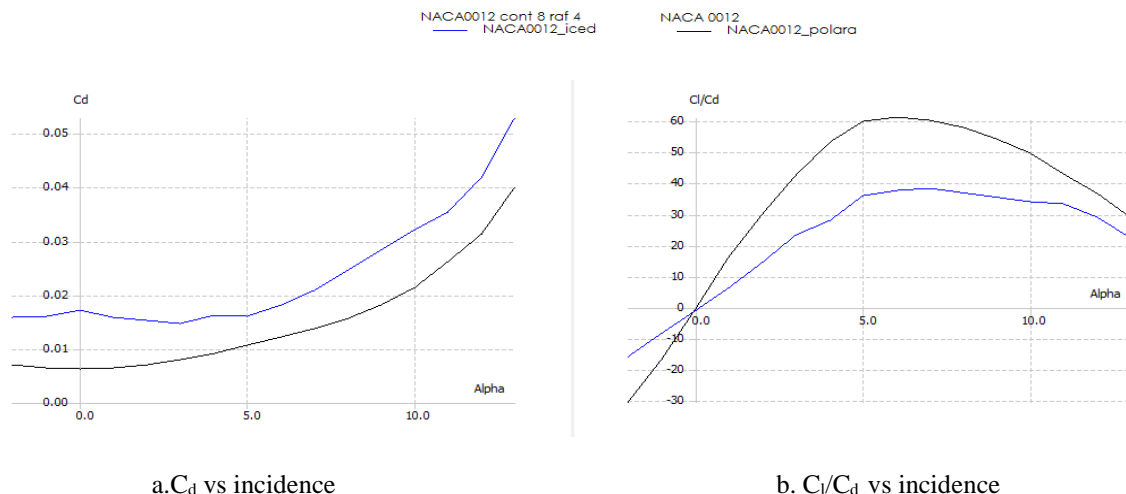


Fig.9 Polar comparison

¹⁷ David Marten, Juliane Wendler, Qblade Guidelines, 2013, 76, available at http://q-blade.org/project_images/files/guidelines_v06.pdf

¹⁸ Principles of Flight, 2-18 and 3-1, Nordian Aviation Training Systems, 2017, ISBN 8281071486, 9788281071483,

Figures 10 and 11 display the dynamic pressure distribution along the airfoil for the same air velocity of 66 m/s. Because of the asymmetric shape of the iced profile the dynamic pressure is reduced along the surface, thus decreasing the lift force¹⁹,

$$F_L = \frac{\rho v^2}{2} C_L A \quad (2)$$

where $\frac{\rho v^2}{2}$ represents the dynamic pressure.

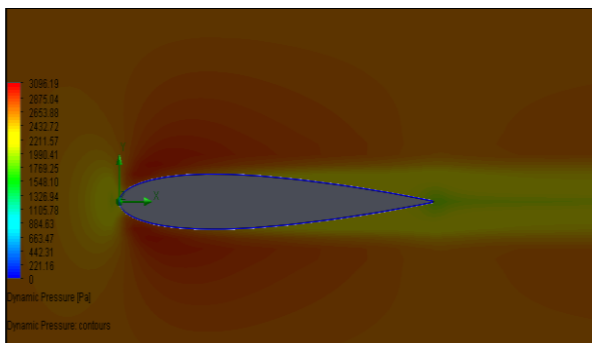


Fig.10 Dynamic pressure NACA0012

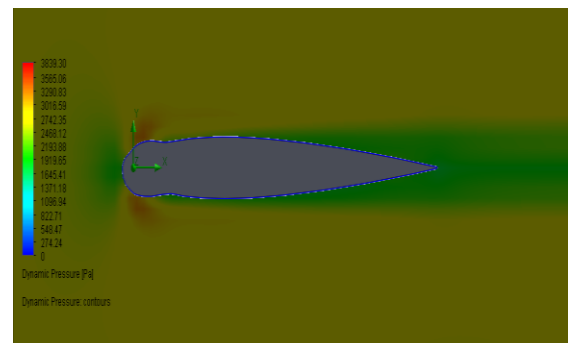


Fig.11 Dynamic pressure NACA0012 with ice accretion

CONCLUSIONS

As we all saw, maneuverability and overall aspects in icing conditions are deteriorated depending on type and severity of the ice on the airfoil. This implies a disrupted flow distribution, power required increased and performance reduced²⁰. Two of the most dangerous effects of icing are determined by the magnitude of the vibrations caused by asymmetrical ice shedding as well as a degraded autorotational capability²¹. With regard to the ice shape and the severity of it, pilots should be aware of the hazardous effects of the ice accretion.

Numerical simulations highlighted the quantitative and qualitative negative influence of ice deposition on bearing surfaces. To increase the reliability of the results, accurate geometry and analytical conditions are recommended with the use of commercial CFD tools.

¹⁹ Principles of Flight, 2-18 and 3-1, Nordian Aviation Training Systems, 2017, ISBN 8281071486, 9788281071483,

²⁰ LAKP-Yukon, NWT, Nunavut, Aviation weather hazards, chapter 2, Icing; available at <https://drive.google.com/file/d/1bYwOPLZR6QP1j4YFZpJtLhmuJmYFI584/view?ts=5bc84adb>; A.A. Peterson, L.U. Dadone, Helicopter icing review, September 1980, available at <https://apps.dtic.mil/dtic/tr/fulltext/u2/a094175.pdf>;

²¹ Flight safety foundation, Helicopter safety, Inflight icing and the Helicopter, December 1990, available at https://flightsafety.org/hs/hs_nov-dec90.pdf;

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ASPECTS OF THE ANTI-SEMITIC VIEWS OF NICHIFOR CRAINIC REFLECTED IN “GÂNDIREA” JOURNAL

Iuliu-Marius MORARIU¹

ABSTRACT:

USING INFORMATION FOUND IN GÂNDIREA JOURNAL, AN IMPORTANT ROMANIAN PUBLICATION FROM THE INTERWAR PERIOD, THAT NICHIFOR CRAINIC DIRECTED FOR ALMOST TWO DECADES, THE AUTHOR EMPHASIZES IN THIS ARTICLE THE MOST IMPORTANT ASPECTS OF ANTI-SEMITIC VIEWS OF HIM. IMPORTANT ROMANIAN PERSONALITY FROM THE AFOREMENTIONED PERIOD, PERSECUTED AND IMPRISONED LATTER BY THE COMMUNISTS FOR HIS PREVIOUS ATTITUDE, HE LEFT IMPORTANT WORKS ON SPIRITUALITY, MYSTIQUE AND PHILOSOPHY. BESIDES THESE THEMES, HE ALSO DEVELOPED IDEAS RELATED WITH POLITICAL AREA, THAT WE WILL INVESTIGATE THERE. THE APPROACH WHICH WILL BE A KIND OF REVIEW OF LITERATURE, WILL TAKE INTO ACCOUNT THE NUMBER OF ARTICLES PUBLISHED BY HIM THERE, THEIR THEMATIC REPARTITION (BECAUSE HE PUBLISHED THERE TEXTS OF THEOLOGY, PHILOSOPHY, LITERATURE, POLITICAL ARTICLES, CHRONICLES OR BOOK REVIEWS), BUT ALSO THE ASPECTS OF ANTI-SEMITISM AND THE WAY HOW AUTHOR MOTIVATES HIS ATTITUDE. WE WILL ALSO USE THE PREVIOUS RESEARCHES DEDICATED TO HIM OR HIS WORK, SHOWING HOW THEY CONTRIBUTE TO THE RECEPTION OF CRAINIC FOR NOWADAYS RESEARCH.

KEY WORDS: GÂNDIREA JOURNAL, LEGIONARY MOVEMENT, INTERWAR PERIOD, MYSTIQUE, NATIONALISM.

INTRODUCTION

Important personality of Romanian political, religious and cultural space from the interwar period, Nichifor Crainic is still debated and quoted today. Both historians, theologians or scholars from the space of political investigation are trying to bring into attention interesting aspects of his life and work.

Unfortunately, in many situations, the approaches dedicated to his life and work are unilateral and not totally objective. Therefore, sometimes, theologians try to present only his contributions as the first holder of an Orthodox Mystique chair,² neglecting his far-right

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² Ioan Ică jr., "Nichifor Crainic și redescoperirea misticiei în Ortodoxie în prima jumătate a secolului XX (Nichifor Crainic and the rediscovering of mystique in Orthodoxy in the first half of 20th century)," in *Nichifor Crainic, Cursurile de mistică (Nichifor Crainic, classes of mystique)*, ed. Ioan Ică jr., (Sibiu: Deisis, 2010), 3-77; Ioan Ică

deviations or his political activity, while the historians or other scholars see in him only the legionary and the Ministry of Propaganda from the Second World War, neglecting his qualities or contributions to Romanian culture.³ Therefore, as a theologian, we will not try there to avoid his "dark side", presenting it in an objective way. As historians, we will also bring into attention the positive aspects of his life and work.

This approach will be related with one important aspect of his cultural and publicist activity, namely *Gândirea* journal. Important periodical of interwar period, it was directed by him between 1926 and 1944.⁴ It was, for sure, the best period of existence of this journal. Young voices together with consecrated writers will publish then there. Therefore, authors like Lucian Blaga, Dumitru Stăniloae, Bartolomeu Anania,⁵ Ion Barbu, Alexandru Busuioceanu, Radu Gyr, Victor Papilian, Ion Pillat, Tudor Vianu, Vasile Voiculescu and many others, will sign there texts, chronicles, book reviews or interviews. It is true that some of them were legionary sympathisers, but not all. Moreover, it was not their political orientation that contributed to appointment into the editorial committee or to the publication of their texts, but the quality of their approaches. A good analysis of the journal will also show that, the majority of their articles will be rather connected with cultural nationalism and re-discovering of autochthon tradition, history and culture (in a form that can call this current as a kind of outcome of *semănătorism*), than with other aspects of legionary doctrine, as anti-Semitism.

In this new posture of director of a publication, Crainic was not only a man who lead it, read some texts and, from time to time, signed an article, but a writer who, using the experience of writing, manifested in articles published in journals like *Ramuri*⁶. Noticing his important contribution to this journal, but without neglecting his political and ideological orientation, we will try there to speak about the way how his anti-Semite views can be seen in this journal.

Jr., "Nichifor Crainic," *Revista Teologică*, 111, no. 2 (May-June 2018): 7-22. Cf. Iuliu-Marius Morariu, "Theological Ideas of Nichifor Crainic and their Relevance for His Political Activity," in *Postmodern Openings*, 9 (October-December 2018), no. 4: 54. Emanuel Cășvean, Iuliu-Marius Morariu, "Conceptia euharistică a lui Nichifor Crainic reflectată în opera sa poetică și filosofică", in Mihai Himcinschi, Jean Nicolae (ed.), *Eucharist and Martyrdom from th ancience catacombs to the communist prisons, Proceedings of 13 th International Symposium on Science, Theology and Arts, Alba-Iulia, Faculty of Orthoox Theology, 6-8 May 2014 (ISSA 2014)*, 2nd volume, (Alba-Iulia: Renașterea Press, 2014): 281-189; Iuliu-Marius Morariu, Emanuel Cășvean, "Tinerețea sufletească și importanța ei în gândirea lui Nichifor Crainic," in *Altarul Reîntregirii*, 31, no. 3 (September 2016): 281-289.

³ Cf. Keith Hitchins, *Romania 1866-1947*, (Oxford, New York: Oxford University Press, Clarendon Press, Oxford, New York, 1994), 303-305.

⁴ Ion Hangiu, *Dicționarul presei literare românești (1790-1990) (Dictionary of Romanian Literary Press (1690-1990))*, (Bucharest: Press of Romanian Cultural, Foundation 1996), 76.

⁵ Valeriu Anania, *Memorii (Memories)*, (Iassy: Polirom, 2008).

⁶ Cf. Nichifor Crainic, "Berze (Storks)", in *Ramuri*, 96, no. 12 (December 1912): 598; Nichifor Crainic "La răscruce (At the crossroads)," *Ramuri*, 224, no. 1 (January 1920): 3; Nichifor Crainic, "Aproape (Close)," *Ramuri*, 230, no. 6 (June 1921): 188. But he also published in many other important journals of the time. Cf. I. Petrovici, "Nichifor Crainic," *Gândirea*, 221, no. 11 (December 1940): 193-195.

THE ANTI-SEMITIC VIEWS OF NICHIFOR CRAINIC AS REFLECTED IN THE “GÂNDIREA” JOURNAL

As we have already mentioned, the contribution of the Romanian philosopher and journalist to *Gândirea* was not a neglecting one. In the years when he directed the publication (it must be mentioned that, after 1945, therefore, shortly after his departure, the journal will be suspended by communists), he published there 96 article signed with his name⁷. If we take into consideration that it was a period when many notes of redaction, chronicles and even articles were signed with pseudonym or presented as editorial note, we may consider that the number of articles signed by him was even bigger. Still, because of methodological reasons, we will work there only with the ones that we are sure that belong to him. Also, it must be mentioned the fact that, there is a great diversity of genres and texts between them. Therefore, reading *Gândirea* in the aforementioned period, the reader will find book reviews, poetries, political articles, theological approaches and s. o. All of them, signed by Nichifor Crainic. From the point of view of their content, they can be classified as it follows: medalions,⁸ attitudes towards

⁷ Iuliu-Marius Morariu, "Nichifor Crainic și *Gândirea* (Nichifor Crainic and *Gândirea*)," *Tabor*, 99, no. 3 (March 2015): 29.

⁸ See: Nichifor Crainic, "Nicolae Bălcescu", *Gândirea*, 84, no. 12 (December 1927): 340-347; Nichifor Crainic, "Ioan Mincu premergătorul (Ioan Mincu the predecessor)," *Gândirea*, 90, no. 1-2 (January-February 1929): 57; Nichifor Crainic, "Oscar Walter Cisec," *Gândirea*, 112, no. 1-2 (January-February 1930): 51-53; Nichifor Crainic, "Tudor Vianu, interpret al lui Eminescu (Tudor Vianu – Eminescu's interpreter)," *Gândirea*, 114, no. 6-7 (June-July 1930): 244-246; Nichifor Crainic, "Sf. O. Iosif," *Gândirea*, 114, no. 6-7 (June-July 1930): 257-258; Nichifor Crainic, "Jacques Maritain," *Gândirea*, 115, no. 8-9 (August-September 1930): 314; Nichifor Crainic, "Cupo Sancto," *Gândirea*, 115, no. 11 (November 1930): 390-396; Nichifor Crainic, "Dostoiewski," *Gândirea*, 119, no. 2 (February 1931): 49-53; Nichifor Crainic, "Cincinat Pavelescu," *Gândirea*, 126, no. 9 (September 1931): 372; Nichifor Crainic, "Dan Botta," *Gândirea*, 128, no. 11 (November 1931): 468; Nichifor Crainic, "Un gânditor: Lucian Blaga – rânduri întârziate (A thinker: Lucian Blaga – delayed rows)," *Gândirea*, 132, no. 7-9 (July-September 1932): 322-323; Nichifor Crainic, "George Coșbuc, poetul rasei noastre (The poet of our race)," *Gândirea*, 142, no. 5 (May 1935): 258-267; Nichifor Crainic, "Gib I. Mihăilescu," *Gândirea*, 143, no. 10, (December 1935): 489-493; Nichifor Crainic, "Vasile Goldiș," *Gândirea*, 148, no. 3 (March 1936): 159-160; Nichifor Crainic, "Rainer Maria Rilke", *Gândirea*, 164, no. 1 (January 1939): 1-12; Nichifor Crainic, "N. M. Condiescu," *Gândirea*, 170, no. 7 (September 1939): 388-395; Nichifor Crainic, "Elogiul lui Octavian Goga (Tribute to Octavian Goga)," *Gândirea*, 183, no. 6 (June 1941): 269-277; Nichifor Crainic, "Avram Iancu," *Gândirea*, 261, no. 3 (March 1943): Nichifor Crainic, "Vasile Voiculescu, poet al spiritului (Vasile Voiculescu, poet of the spirit)," *Gândirea*, 267, no. 7 (August-September 1943): 361-370.

political, cultural or religious aspects,⁹ theological studies,¹⁰ philosophical or political approach¹¹.

In the beginning of the Second World War he will bring together in a book entitled *Germany and Italy in my writing since 1931*¹², some of this articles from *Gândirea*, but not only from there. Published with a propagandistic purpose, this book's aim is to demonstrate philosopher's orientation towards the two important allies and to highlight the way how he used the influences from there inside his work. He will do the same inside some of the articles published into the publication that we are investigating. But, it must be said that only some of his articles are dedicated to this topic, because, in most of them he focuses on aspects of theology, culture, religious life and religious behaviour or morals.

Therefore, while nationalism is a topic often found both in the poetries signed by Crainic, in theological articles, meditations, reviews or chronicles aspects like anti-Semitism

⁹Cf. Nichifor Crainic, "Filarmonica (The filarmonic)," *Gândirea*, 38, no. 1, (November 1924): 51; Nichifor Crainic, "La un concert al S. C. R. (To a S. C. R. concert)," *Gândirea*, 41, no. 5 (December 1924): 149; Nichifor Crainic, "Cronica mărunță (Small Chronicles)," *Gândirea*, 70, no. 10 (October 1927): 272-273; Nichifor Crainic, "Pen-clubul românesc (Romanian pen-club)," 69, no. 9 (September 1927): 85-87; Nichifor Crainic, "Tradiție și internaționalism (Tradition and internationalism)," *Gândirea*, 86, no. 2, (February 1928): 76-77; Nichifor Crainic, "Sensul tradiției (The sense of tradition)," *Gândirea*, 97, no. 1-2 (February 1929): 1-11; Nichifor Crainic, "Pacifism," *Gândirea*, 107, no. 4, (April 1930): 101-105; Nichifor Crainic, "O carte de teologie estetică (A book of esthetical theology)," *Gândirea*, 111, no. 8-9 (August-September 1930): 300-302; Nichifor Crainic "Romancier de mâna stângă (Left-hand novelist)," *Gândirea*, 117, no. 4 (April 1931): 180-182; Nichifor Crainic, "Condamnarea lui Andre Gide (The condemnation of Andre Gide)," *Gândirea*, 116, no. 3 (March 1931): 131-132; Nichifor Crainic, "Despre demofilie (About demophily)," *Gândirea*, 231, no. 1 (January 1941): 1-8; Nichifor Crainic, "România în Europa nouă" (Romania in New Europe)," *Gândirea*, 251, no. 3 (March 1944): 121-130.

¹⁰ Cf. Nichifor Crainic, "Politică și ortodoxie (Politics and orthodoxy)," *Gândirea*, 29, no. 5 (November 1923): 77-83; Nichifor Crainic, "Între Apollo și Iisus (Between Apollo and Jesus)," *Gândirea*, 73, no. 1 (January 1927): 1-4; Nichifor Crainic, "Între Apollo și Iisus (Between Apollo and Jesus)," *Gândirea*, 80, no. 2 (February 1927): 61-64; Nichifor Crainic, "Spiritualitate (Spirituality)," *Gândirea*, 91, no. 8-9 (August-September 1928): 307-310; Nichifor Crainic, "Tineretul și creștinismul (Youth and Christianity)," *Gândirea*, 135, no. 3 (March 1934): 65-73; Nichifor Crainic, "Ortodoxie (Orthodoxy)," *Gândirea*, 179, no. 1 (January 1939): 1-9; Nichifor Crainic, "Rugăciunea lui Iisus (Jesus prayer)," *Gândirea*, 181, no. 5 (May 1934): 217-224; Nichifor Crainic, "Filocalia (The Philocaly)," *Gândirea*, 181, no. 5 (May 1934): 280. Cf. Doina Curticăpeanu, "Nostalgia Paradisului (Paradise nostalgia)," *Tabor*, 34, no. 10 (January 2010): 58; Nichifor Crainic, "Regele și Biserica (The king and the Church)," *Gândirea*, 224, no. 10 (December 1939): 529-537; Nichifor Crainic, "Modul teandric (Theandric way)," *Gândirea*, 227, no. 1 (January 1940): 1-7; Nichifor Crainic, "Viața spirituală în România de azi (Spiritual life in today's Romania)," *Gândirea*, 237, no. 10 (December 1940): 623-640; Nichifor Crainic, "Poesia noastră religioasă (Our religious poetry)," *Gândirea*, 269, no. 8 (October 1943): 425-432; Nichifor Crainic, "Ortodoxia română ca funcțiune europeană (Romanian Orthodoxy as European function)," *Gândirea*, 258, no. 1 (January 1944): 1-8; Nichifor Crainic, "Dionisie Areopagitul (Dyonisius the Areopagite)," *Gândirea*, 261, no. 4-5 (April-May 1944): 185-196.

¹¹Cf. Crainic, "Politică și ortodoxie (Politics and orthodoxy)": 77-83; Crainic, "Între Apollo și Iisus (Between Apollo and Jesus)": 1-4; Crainic, "Între Apollo și Iisus (Between Apollo and Jesus)": 61-64; Crainic, "Spiritualitate (Spirituality)": 307-310; Crainic, "Tineretul și creștinismul (Youth and Christianity)": 65-73; Crainic, "Ortodoxie (Orthodoxy)": 1-9; Crainic, "Rugăciunea lui Iisus (Jesus prayer)": 217-224; Crainic, "Filocalia (The Philocaly)": 280; Nichifor Crainic, "Teologie și estetică (Theology and aesthetics)," *Gândirea*, 204, no. 4 (April 1939): 204-210; Nichifor Crainic, "Modul teandric (Theandric way)": 1-7; Crainic, "Viața spirituală în România de azi (Spiritual life in today's Romania)": 623-640; Crainic, "Poesia noastră religioasă (Our religious poetry)": 425-432; Crainic, "Ortodoxia română ca funcțiune europeană (Romanian Orthodoxy as European function)": 1-8; Crainic, "Dionisie Areopagitul (Dyonisius the Areopagite)": 185-196. Cf. Morariu, "Nichifor Crainic și *Gândirea* (Nichifor Crainic and *Gândirea*)," : 29-32.

¹² Nichifor Crainic, *Germania și Italia în scrisul meu dela 1931 încoace (Germany and Italy in my writings since 1931)*, (Bucharest: Cugetarea Press, 1941).

are poor highlighted there. Still, like other intellectuals of the time,¹³ he will use religious, historical or economic reasons to justify his conception about them and to be part of a conception that has been then embraced by many people and based on aspects like the results of some of their commercial activities, like selling alcohol.¹⁴

Coming back to Crainic, we must say that, while in articles like *"The allies of Adolf Hitler,"*¹⁵ a text that certifies his filo-Nazi orientation at that moment, being a kind of testimony, the one dedicated to the providence and its role in history,¹⁶ *Voices from Balkans,*¹⁷ where he evaluates the diplomatic, social and cultural situation of the space where we live, or even in *Contemporary German spirit,*¹⁸ which is another text that will contribute for sure to his later self-censorship of his memorial writings, there can be found aspects related with Jews and small accents of anti-Semitism (for example in the phrases where he praise the attitude of the Fuhrer), to see his real opinion about this topic, a researcher must dig deeply inside his works, read his entire publications from the aforementioned journal and identify small parts that are relevant for this topic.

Therefore, the most vehement attitude of the writer about Jews and the only that we found there, is part of an article written by him in 1941. It may look strange, but his approach starts as a chronicle and goes rather to the theological essay than to the political one. Entitled *Our ecumenical land*¹⁹, the text starts from the description of a conference where an important Russian theologian from exile was invited to speak about the ecumenical dimension of "patria". He underlines the necessity of Orthodoxy to discover this important aspect and to step over the artificial borders created by the national understanding of religion and of the Church. The thinker criticises there aspects like *philetism* that must have been present in his days in some of the attitudes of Constantinople Patriarchate and some of Orthodox faithful, but also in Slavic space and other Orthodox areas. Still, in the beginning of his article, he makes a big digression, not to develop an argument based on Scripture's text, but to refer at Jews and criticise them. He says there:

"If we would be Jews, we would not stay to choose (the two lands, our note), because the two lands would be reduced to one alone. Without having roots in no one country in the world, but only tentacles, they unwind from there to wind in other spaces. Their nation is only namely the dogma of racial egoism, with the aspect of a vividly ambiguous where you do not know if Talmud is more Saint than their bank registry. The dogma of racial egoism excludes the idea of ecumenism. And also, where we say "Judaic international," we do not understand through that, an ecumenical notion, but only a verbal artifice under which is hidden the exclusivism of some people who do not participate to the spiritual community of any stranger nation. It is not true that the Jew is a man with

¹³ Cf. Emil Boşca-Mălin, *Evreii în Țara Năsăudului (Jews in Năsăud country)*, (Braşov: Press of Writers from Năsăud Area 1943).

¹⁴ See for example: A. C. Cuza, *Lupta contra alcoolismului în România (The fight against alcoholism in Romania)*, (Iassy: National Press 1897); Nicodem Munteanu, Ludovic Cosma, Anghel Constantinescu, *Jos Beţia! (Down with the drunk!)*, (Bucharest, Press of Socec&Co, Bucureşti, 1908) for more information about this topic, for Romanian attitude and the way how this activity representative for Jews in Romanian space contributed to the formation of a certain mental representation of them.

¹⁵ Nichifor Crainic, "Aliaţii lui Adolf Hittler (The allies of Adolf Hitler)," *Gândirea*, 234, no. 7 (September 1941): 337-340.

¹⁶ Nichifor Crainic, "Providenţa în istorie (Providency in history)," *Gândirea*, 251, no. 1 (January 1942): 1-8.

¹⁷ Nichifor Crainic, "Glasuri din Balcani (Voices from Balkans)," *Gândirea*, 255, no. 6 (June-July 1942): 281-283.

¹⁸ Nichifor Crainic, "Spiritul german contimporan (German contemporary spirit)," *Gândirea*, 263, no. 2 (February 1943): 57-64.

¹⁹ Nichifor Crainic, "Patria noastră ecumenică (Our ecumenical land)," *Gândirea*, 236, no. 5 (May 1941): 209-216.

many national lands, as it is often believed. On the contrary, he is the representant of a people from Christian Europe who has only one national land, which looks neither with our national land, nor with our ecumenical one. From this situation sui generis is born the incapacity of Jews to be integrated between other peoples. Judaic tragedy comes from the identity between religion and race, between Talmud and Israelite collective. This tragedy shows, especially to us, to the Orthodox Christians, where leads the confusion or identity between race and religion."²⁰

Without having a direct relationship with the subject of his approach, the digression dedicated to the Jews that shows his attitude towards them is interesting and useful. It highlights the fact that the attitude of Crainic is motivated, at least at this level, by their understanding of Talmud, their economic policy and the way how they understand the others, refusing to integrate themselves among the others. What generated his attitude towards them in an article where he speaks about the relevance of love principle in relationship with others²¹ is difficult to say. The fact that it is the only text where the author has this vehemence against Jews may also rise some question marks and let us think why, ashamed about what he wrote here and about some other allusions from other articles, he decided to self-censorship some parts of his autobiographical writings.

CONCLUSION

Anti-Semite attitude of Nichifor Crainic from *Gândirea* journal is, as we could see an appearance with a fairly low recurrence. Some allusions to the Jews in the articles dedicated to Hitler, Nazi doctrine or fascism are accompanied with a digression coming from an article with theological content that summarizes his approach to Jews and their way of being. The philosopher seems to be rather interested about aspects like keeping national identity, relating spirituality with history or political life than about Jews and their role in Romanian history, at least in the articles published in the investigated journal. Still, when he speaks about them, his anti-Semite attitude is a fact that can be proved and is related with an interesting perception about their way of acting, some behaviours of Jews that he encountered, but also with a conception often shared by far-right oriented intellectuals. Together with other aspects of his work from the aforementioned journal, it shows the complexity of his works and emphasizes some arguments of his thinking. Therefore, together with other aspects of his activity, Nichifor Crainic must be rediscovered, investigated and discussed, for having a complete landscape of his life and activity from this controversial period of his life.

²⁰ Crainic, "Patria noastră ecumenică (Our ecumenical land)": 209-210.

²¹ Crainic, "Patria noastră ecumenică (Our ecumenical land)": 211.

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44. **Crainic, Nichifor;** "Ortodoxia română ca funcțiune europeană (Romanian Orthodoxy as European function)," *Gândirea*, 258, no. 1 (January 1944): 1-8;
45. **Crainic, Nichifor;** "Ortodoxie (Orthodoxy)," *Gândirea*, 179, no. 1 (January 1939): 1-9;
46. **Crainic, Nichifor;** "Oscar Walter Cisec," *Gândirea*, 112, no. 1-2 (January-February 1930): 51-53;
47. **Crainic, Nichifor;** "Pacifism", *Gândirea*, 107, no. 4, (April 1930): 101-105;
48. **Crainic, Nichifor;** "Patria noastră ecumenică (Our ecumenical land)," *Gândirea*, 236, no. 5 (May 1941): 209-216;
49. **Crainic, Nichifor;** "Pen-clubul românesc (Romanian pen-club)", 69, no. 9 (September 1927): 85-87;
50. **Crainic, Nichifor;** "Poesia noastră religioasă (Our religious poetry)," *Gândirea*, 269, no. 8 (October 1943): 425-432;
51. **Crainic, Nichifor;** "Politică și ortodoxie (Politics and orthodoxy)," *Gândirea*, 29, no. 5 (November 1923): 77-83;
52. **Crainic, Nichifor;** "Providența în istorie (Providency in history)," *Gândirea*, 251, no. 1 (January 1942): 1-8;
53. **Crainic, Nichifor;** "Rainer Maria Rilke", *Gândirea*, 164, no. 1 (January 1939): 1-12;
54. **Crainic, Nichifor;** "Regele și Biserica (The king and the Church)," *Gândirea*, 224, no. 10 (December 1939): 529-537;
55. **Crainic, Nichifor;** "Romancier de mâna stângă (Left-hand novelist)," *Gândirea*, 117, no. 4 (April 1931): 180-182;
56. **Crainic, Nichifor;** "România în Europa nouă" (Romania in New Europe)," *Gândirea*, 251, no. 3 (March 1944): 121-130;
57. **Crainic, Nichifor;** "Rugăciunea lui Iisus (Jesus prayer)," *Gândirea*, 181, no. 5 (May 1934): 217-224;
58. **Crainic, Nichifor;** "Tradiție și internaționalism (Tradition and internationalism)," *Gândirea*, 86, no. 2, (February 1928): 76-77;
59. **Crainic, Nichifor;** "Tudor Vianu, interpret al lui Eminescu (Tudor Vianu – Eminescu's interpreter)," *Gândirea*, 114, no. 6-7 (June-July 1930): 244-246;
60. **Crainic, Nichifor;** "Sensul tradiției (The sense of tradition)," *Gândirea*, 97, no. 1-2 (February 1929): 1-11;
61. **Crainic, Nichifor;** "Spiritualitate (Spirituality)," *Gândirea*, 91, no. 8-9 (August-September 1928): 307-310;
62. **Crainic, Nichifor;** "Spiritul german contemporan (German contemporary spirit)," *Gândirea*, 263, no. 2 (February 1943): 57-64;
63. **Crainic, Nichifor;** "Sf. O. Iosif," *Gândirea*, 114, no. 6-7 (June-July 1930): 257-258;
64. **Crainic, Nichifor;** "Tineretul și creștinismul (Youth and Christianity)," *Gândirea*, 135, no. 3 (March 1934): 65-73;
65. **Crainic, Nichifor;** "Un gânditor: Lucian Blaga – rânduri întârziate (A thinker: Lucian Blaga – delayed rows)," *Gândirea*, 132, no. 7-9 (July-September 1932): 322-323;
66. **Crainic, Nichifor;** "Vasile Goldiș," *Gândirea*, 148, no. 3 (March 1936): 159-160;
67. **Crainic, Nichifor;** "Vasile Voiculescu, poet al spiritului (Vasile Voiculescu, poet of the spirit)," *Gândirea*, 267, no. 7 (August-September 1943): 361-370;

68. **Crainic, Nichifor;** "Viața spirituală în România de azi (Spiritual life in today's Romania)," *Gândirea*, 237, no. 10 (December 1940): 623-640;

TEACHING QUALITY ENHANCEMENT FROM FEEDBACK AND IMPORTANCE - PERFORMANCE ANALYSIS, A CASE OF PUBLIC SPEAKING MODULE IN VIETNAM UNIVERSITIES

LE THI NGOC DIEP¹

ABSTRACT:

ENHANCEMENT OF THE TEACHING QUALITY IS ALWAYS AN ESSENTIAL ISSUE IN THE HIGHER EDUCATION, AND THE SIGNIFICANCE OF THE FEEDBACK FROM THE SOCIETY AND STUDENTS HAS BEEN INCREASINGLY EMPHASIZED BY HIGHER EDUCATION AUTHORITIES AND INSTITUTIONS BECAUSE IT IS A CONSIDERABLE SOURCE OF INFORMATION TO ENHANCE THE EDUCATION QUALITY. THIS PAPER AIMS TO EXPLORE THE FEEDBACK AND GAP BETWEEN EXPECTATIONS, PERCEPTIONS OF STUDENTS AND EXPERTS ON THE COURSE OF PUBLIC SPEAKING (PS) IN THE VIETNAM UNIVERSITIES. THE STUDY HAS EMPLOYED 2 METHODS OF THE QUALITATIVE AND THE QUANTITATIVE. THE QUALITATIVE RESULT IS FROM THE INTERVIEWS WITH STUDENTS AND CONSULTATIONS FROM EXPERTS WHO ARE AS SOCIETAL FACTORS OF THE EDUCATIONAL QUALITY SYSTEM, AND THE QUANTITATIVE OUTCOMES ARE FROM THE QUESTIONNAIRE WITH 267 UNDERGRADUATES AND GRADUATES. ADDITIONALLY, IMPORTANCE-PERFORMANCE ANALYSIS (IPA) HAS BEEN DONE WITH 11 ATTRIBUTES. THE RESULTS WILL BE USED AS A FOUNDATION TO REVIEW AND DEVELOP THE SYLLABUS TOWARDS THE SOCIETY-CONCENTRATED PURPOSE.

KEYWORDS: FEEDBACK, IMPORTANCE-PERFORMANCE ANALYSIS (IPA), PUBLIC SPEAKING, QUALITY, UNIVERSITY, VIETNAM.

INTRODUCTION

Higher education is known as a crucial institution for educating and training a skilled human workforce for a country development². In Vietnam, higher education faces great challenges and the human resource quality does not meet the needs of society because of many different reasons, in which the key comes from the university quality³. Therefore, most

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² Ghonji, M. et al. "Analysis of the some effective teaching quality factors within faculty members of agricultural and natural resources colleges in Tehran University." *Journal of the Saudi society of agricultural sciences* 14, iss. 4 (2013): 109–115.

³ Xuan, Manh. "Solutions to enhance the higher education quality" 2017.

<http://www.nhandan.com.vn/giaoduc/item/32001702-giai-phap-nang-cao-chat-luong-giao-duc-dai-hoc.html>;

Dung, Le K. "Human resource quality in the context of integration." 2018. <http://enternews.vn/chat-luong-nguon-nhan-luc-trong-boi-can-hoi-nhap-127468.html>

universities and higher education institutions in Vietnam find continuously innovative ways such as the improvement of the teaching and learning methods, research investment not only to enhance the quality but also to remain globally competitive in educational provision. On the other hand, the effectiveness and success of any educational system depend on a great extent on the lecturers' quality in terms of academic training and incentive administration and the curriculum implementation at any level⁴. In addition, the significance of the feedback from society and students has been increasingly defined by higher education authorities and institutions by its role as a very good and considerable source of information to enhance the education quality⁵. The aims of this study are (1) to explore feedback, expectations, and satisfaction of students, (2) to seek the experts' reviews and comments in PS course, (3) to discover teaching and learning gaps in PS course. As a result, the recommendations will be formulated to improve teaching quality.

LITERATURE REVIEW

- **Quality enhancement in education**

The United Nations Educational, Scientific and Cultural Organization - UNESCO⁶ defines the four specific functions of higher education as students' preparation for research and teaching. Those are the provision of highly specialized training courses, the adaption of the needs of economic and social life/service wide-openness to the many aspects of lifelong education in the widest sense, and the promotion of international cooperation through internationalization of research, technology, networking, and the free movement of persons and scientific ideas. To reach those objectives, currently, most of the universities and institutions are gradually enhancing their quality. In terms of the concept "quality", Parasuraman et al.⁷ define quality as meeting the expectations of the customer. In education, quality and quality management are seen as "a cooperative system in which both customers (students) and suppliers (university/institution/faculty) mutually agree to and meet the needs, requirements, and expectations of customers on a continuous basis"⁸. In addition, Bazagan⁹ points out that the quality in higher education cannot be generalized or organized with the predetermined model because the teaching quality is highly dependent on the capabilities of faculty members.

In terms of customers in education, Brewer et al.¹⁰ consider employers and the community to be "customers" of an educational program, on contrast, others consider students

⁴ Emmanuel, Olusola Adu et al. "School Input Factors and Teacher Effectiveness in Some Local Government Areas of Lagos State, Nigeria." *International Journal of Educational Sciences* 8 (2015): 461-472, doi: 10.1080/09751122.2015.11890268

⁵ Loc, Doan. "Is feedback a waste of time? The students' perspective." *Journal of perspectives in applied academic practice* 1 (2013): 3-10.

⁶ The United Nations Educational, Scientific and Cultural Organization - UNESCO. *Learning: the treasure within - Report of the International Commission on education to UNESCO for the twenty-first century*. Paris: UNESCO, 1996.

⁷ Parasuraman, Parsu A. et al. "A Conceptual model of service quality and its implications for future research." *Journal of Marketing* 49 (1985): 41-50.

⁸ Barbara, Lewis R. "Service quality: definitions, determinants and measurement." *Training for quality 1*, (1993): 16-19.

⁹ Abbas, Bazargan. "Introduction to assessing quality in higher Medical education in Iran: challenge & perspectives." *Quality in higher education* 5 (1999): 61-67

¹⁰ Brewer, Peggy D. et al. "Strategic planning for continuous improvement in a college of business." *The Mid - Atlantic Journal of Business; South orange* 36(2/3) (Jun/Sep 2000): 123-132.

as the true “customer” of the educational process. Nonetheless, Pereira and Da Silva¹¹ state that upon the process of teaching, learning or researching, there are some kinds of customers as faculty, students (as internal customers), employers, and society/government.

Besides, Aithal et al.¹² confirm higher education as a process in which the students are seen as “products”, therefore, it becomes input to the growth and development of business and industry. Jackson¹³ points out students are central to the higher education system due to their contribution of time, finance, energy and intellect, and they are critical to the advancement of knowledge. Agreed by Bloxham and Boyd¹⁴, students are considered as active role-players in the “judgment process” and knowledge creation. Furthermore, the student experiences through curriculum and teaching are viewed as central to the educational quality¹⁵.

In the Analytic Quality Glossary, quality enhancement is a process of augmentation or improvement which can be explained into two strands. The words ‘enhancement’ and ‘improvement’ are often used interchangeably. Likewise, several definitions of quality enhancement focus on students’ learning such as the Quality Assurance Agency for Higher Education (QAA)¹⁶ of the United Kingdom and the Scotland definitions¹⁷. With the acknowledgement as a service industry, the higher education sector, especially for the universities is currently with the aim of meeting students’ needs, desires and expectations¹⁸.

More of that, effective teaching in educational development and student learning are important considerations for evaluations of quality¹⁹ because they show not only the opinions on the quality of social services and university resource provision but also the judgment on the content of the curriculum, length of studies as well as teaching and learning methods²⁰. Students are kept motivated to participate and contribute to activities that enhance the quality of their education which leads to the improvement of their learning environment²¹. There are

¹¹ Pereira, Marco A. C. and Da Silva, Márcia T. “A Key Question for Higher Education: Who are the customers?” Paper presented the 31st Annual Conference of the Production and Operations Management Society, April 4-7, 2003, Atlanta, GE, 2003.

¹² Sreeramana, Aithal et al. (2015). “Quality enhancement in higher education institutions: A case study of SIMS.” *International journal of multidisciplinary research and development* 2 (2015): 18-31.

¹³ Jackson, Norman. “Creativity in Higher Education. Creating tipping points for cultural change.” *SCEPTRE Scholarly Paper* 3 (2006): 1-25.

¹⁴ Bloxham, Sue and Boyd, Pete. *Developing effective assessment in Higher Education: A practical guide*. Maidenhead: Open University Press, 2007.

¹⁵ Trowler, Paul. “A Sociology of teaching, learning, and enhancement: improving practices in higher education.” *Revista de Sociologie* 76 (2005): 13-32.

¹⁶ Quality Assurance Agency for Higher Education (QAA). *Outcomes from institutional audit. Institutions’ support for e-learning* (2nd series), 2006.

<http://www.qaa.ac.uk/reviews/institutionalAudit/outcomes/eLearning.asp>; Charles, Bardes L. et al. “Measuring Teaching: A Relative Value Scale in Teaching.” *Teaching and Learning in Medicine* 10 (1998): 40-43.

¹⁷ Quality Assurance Agency for Higher Education (QAA). *Handbook for enhancement-led institutional review* (Scotland), 2003. http://www.qaa.ac.uk/reviews/elir/handbook/scottish_hbook_preface.asp

¹⁸ Kevin, Elliott M. and Dooyoung, Shin. “Student satisfaction: An alternative approach to assessing this important concept.” *Journal of higher education policy and management*, 24 (2002): 197-209.

¹⁹ Alfred, Artiles J. et al. “Assessing the link – between teacher cognition, teacher’s behaviors and pupil response lessons.” *Teaching & teacher education* 10 (1994): 405–481.; Charles, Bardes L. et al. “Measuring Teaching: A Relative Value Scale in Teaching.” *Teaching and Learning in Medicine* 10 (1998): 40-43.

²⁰ Floud, Roderick. “Government and higher education: the approach to regulation.” in L. Weber and S. Bergan (eds.) *The public responsibility for higher education and research*, (pp. Strasbourg: Council of Europe Publishing, 2005.

²¹ Ken, Reid Obe. “An evaluation of an internal audit on student feedback within a British university: A quality enhancement process.” *Quality assurance in education* 18 (2010): 47-63.; Quality Assurance Agency for Higher Education (QAA). *Enterprise and entrepreneurship education: Guidance for UK higher education providers*, 2012. <http://www.qaa.ac.uk/en/Publications/Documents/enterprise-entrepreneurship-guidance.pdf>

differences in the terms of teaching effectiveness, teaching competence and teaching performance²². According to those scholars, teaching effectiveness is the degree of a lecturer achievement of desired effects on students. Teaching performance is the lecturer behavior in the teaching process while teaching competence is the level of lecturer knowledge and skills required as the necessary or desirable qualification to teach.

In the study of Williams²³, a large gap exists between the customer perception on performance and satisfaction levels. As like as other businesses, universities/ institutions must confront this issue. In quality management, identifying and assessing gaps is a popular methodological tool, especially with the customer service. It is also noted that quality of education can be assessed equally through the quality of its inputs - lecturer quality, instruction quality, and evaluation quality among others²⁴.

The concept of feedback in the higher education context.

In the literature, various definitions of “feedback”²⁵ are available. One of the most considerable definitions is from Hattie and Timperley²⁶. That is the information provided by an agent (e.g. tutor, parent, or friend) regarding aspects of one’s performance or understanding. Significantly, in the educational context, feedback is widely recognized as a tool to enhance performance and practice²⁷ or to close the gap between the actual level and reference performance level²⁸. From those concepts, feedback is as a result of previous performance and practice²⁹. This is highly agreed by Nasser and Fresko³⁰, Berk et al³¹, Berk³², and Moore & Kuol³³.

²² Adenrele, Oladosu. T. “Teacher classroom teaching and management competencies as determinants of student reactions in public secondary schools in Oyo and Osun States, Nigeria.” Ph.D. diss. University of Ibadan, Nigeria, 2014.

²³ Williams, Peter. “Total quality management: some thoughts.” *Higher education* 25 (1993): 373-375.

²⁴ Gbadegehin, Akinloye M. “Teacher demographic and behavioral indicators as correlates of student learning outcomes in secondary schools in southwest, Nigeria.” Ph.D. diss., University of Ibadan, Nigeria, 2013.

²⁵ Black, Paul and Wiliam, Dylan. “Assessment and classroom learning.” *Assessment in education: Principles, Policy & Practice* 5 (1998): 7-74.

²⁶ Hattie, John, and Helen Timperley. “The Power of Feedback.” *Review of Educational Research* 77, no. 1 (March 2007): 81–112. doi:10.3102/003465430298487.

²⁷ Jon, Veloski et al. “Systematic review of the literature on assessment, feedback and physicians’ clinical performance: BEME Guide No. 7.” *Medical Teacher*, 28 (2006): 117-128.; Hattie, John, and Helen Timperley. “The Power of Feedback.” *Review of Educational Research* 77, no. 1 (March 2007): 81–112. doi:10.3102/003465430298487; Julian, Archer C. “State of the science in health professional education: effective feedback.” *Medical education* 44 (2010): 101-108.

²⁸ Arkalgud, Ramaprasad. “On the definition of feedback.” *Behavioral Science* 28 (1983): 4-13; Ellery, Karen. “Assessment for learning: a case study using feedback effectively in an essay-style test. *Assessment & evaluation in higher education* 33 (2008), 421-429.

²⁹ Hattie, John, and Helen Timperley. “The Power of Feedback.” *Review of Educational Research* 77, no. 1 (March 2007): 81–112. doi:10.3102/003465430298487.

³⁰ Nasser, Fadia and Fresko, Barbara. “Faculty views of student evaluation of college teaching.” *Assessment & Evaluation in Higher Education* 27 (2002): 187-198;.

³¹ Ronald, Berk A. et al. “Beyond student ratings: Peer observation of classroom and clinical teaching.” *International journal of nursing education scholarship* 1 (2004): 1-26.

³² Ronald, Berk A. “Survey of 12 strategies to measure teaching effectiveness.” *International journal of teaching and learning in higher education* 17 (2005): 48-62

³³ Sarah, Moore and Nyiel, Kuol. “Students evaluating teachers: exploring the importance of faculty reaction to feedback on teaching.” *Teaching in higher education* 10 (2005): 57-73.

In terms of teaching performance, Berk³⁴ and Berk et al.³⁵ show many available ways as student and administration evaluations, peer review, self-evaluation, or student outcomes to provide feedback to teachers because feedback provides the clarification of lecturers on goals and increases the commitment or effort. In practice, as a part of teaching, feedback will be conducted after the learning process. In higher education, feedback should be applied and found by both students and lecturers. Students get lecturers' feedback to make their learning better, and lecturers seek students' feedback to boost their teaching. As analyzed, feedback plays a vital role in intensifying the quality of both learning and teaching. As a result, the learning and teaching environment will be surpassed from the understanding of the concept of feedback. In conclusion, using and applying feedback effectively are to ensure worthwhile learning and teaching experience³⁶.

Regarding both professional development and curriculum monitoring and assurance, to enhance and assure the quality of the wide array of educational approaches, student/graduate feedback is an essential aspect which must be established into any program from the outset. This is shown in the studies of Dent & Harden³⁷, Dornan et al.,³⁸ and Chen & Chu³⁹. As also agreed by Nair & Mertova⁴⁰, feedback is the cornerstone of an effective quality assurance system in higher education and a formative process to help students and/or lecturers or even the whole curriculum be improved. In the conclusion, feedback is aimed to confirm achievement of desired learning outcomes, satisfaction with the content and teaching approach, or to seek advice on new teaching initiatives.

On the other hand, finding or selecting the effective feedback is difficult. According to Hattie & Timperley⁴¹, effective feedback must answer three major questions in terms of goal definition, methods and strategies to goal achievement because all methods of feedback have strengths and weaknesses. To achieve a wiser approach, multiple evaluation methods should be used⁴². As its nature, feedback can be either active or passive⁴³; nonetheless, its power is mentioned frequently in learning and teaching articles and has been systematically investigated

³⁴ Ronald, Berk A. "Survey of 12 strategies to measure teaching effectiveness." *International journal of teaching and learning in higher education* 17 (2005): 48-62

³⁵ Ronald, Berk A. et al. "Beyond student ratings: Peer observation of classroom and clinical teaching." *International journal of nursing education scholarship* 1 (2004): 1-26.

³⁶ Muhamad, Yusoff S. B. *Using feedback to enhance learning and teaching*. Centre for academic excellence & student advisory and development (CDAE). Malaysia, 2013.

³⁷ John, Dent and Ronald, Harden M. *A practical guide for medical teachers* (3rd ed.). Edinburgh: Churchill Livingstone Elsevier, 2009.

³⁸ Tim Dornan et al. *Medical education theory and practice*. Edinburgh: Churchill Livingstone Elsevier, 2011.

³⁹ Chenicheri, Sid Nair and Patricie, Mertova. *Student feedback: The cornerstone to an effective quality assurance system in higher education*. Chandos Learning and Teaching Series, Chandos Publishing, 2011..

⁴⁰ Chenicheri, Sid Nair and Patricie, Mertova. *Student feedback: The cornerstone to an effective quality assurance system in higher education*. Chandos Learning and Teaching Series, Chandos Publishing, 2011.

⁴¹ Hattie, John, and Helen Timperley. "The Power of Feedback." *Review of Educational Research* 77, no. 1 (March 2007): 81–112. doi:10.3102/003465430298487

⁴² Ronald, Epstein M. "Assessment in medical education." *New England journal of medicine* 356 (2007), 387-396.

⁴³ Muhamad, Yusoff S. B. *Using feedback to enhance learning and teaching*. Centre for academic excellence & student advisory and development (CDAE). Malaysia, 2013.

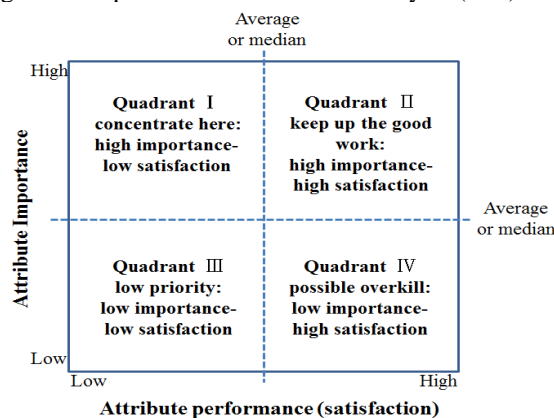
its meaning⁴⁴, that is, both positive and negative feedback can gain beneficial effects on learning and teaching as noted by Kluger & DeNisi⁴⁵.

Importance-Performance Analysis and teaching effectiveness attributes in the higher education context.

As stated, quality has become a crucial issue in higher education institutions/ universities, and one of the main ways is to retain the balance between their satisfaction and the institution/university performance. As a part of marketing research techniques, Importance-Performance Analysis (IPA) is used to analyze customer attitudes toward main product or service. IPA has also been proved as a useful tool in examining customer satisfaction and management strategies in many settings as automotive, food, housing, education, healthcare, hospitality industry, tourism, etc.⁴⁶.

The IPA consists of a pair of the coordinate axis where the “importance” (y-axis) and the “performance/satisfaction” (x-axis) of the different attributes are compared and is classified into four categories as stated below and presented in figure 1

Figure of Importance-Performance Analysis (IPA) matrix



Source: Matzler et al.⁴⁷

⁴⁴ Hattie, John, and Helen Timperley. “The Power of Feedback.” *Review of Educational Research* 77, no. 1 (March 2007): 81–112. doi:10.3102/003465430298487

⁴⁵ Kluger, Avraham and DeNisi, Angelo. “The Effects of Feedback Interventions on Performance: A Historical Review, a Meta-Analysis, and a Preliminary Feedback Intervention Theory.” *Psychological Bulletin* 119 (1996). 254-284.

⁴⁶ *Krisana Kitcharoen*. “The Importance-Performance Analysis of Service Quality in Administrative Departments of Private Universities in Thailand.” *ABAC journal* 24 (2004), 20-46.; Matzler, Kurt et al. “The asymmetric relationship between attribute-level performance and overall customer satisfaction: A reconsideration of the importance-performance analysis.” *Industrial Marketing Management* 33 (2004): 271-277; Abalo, Javier et al. “Importance values for Importance-Performance Analysis: A formula for spreading out values derived from preference rankings.” *Journal of Business Research* 60 (2007): 115-121.; Go, Frank, and Wei Zhang. “Applying Importance-Performance Analysis to Beijing as an International Meeting Destination.” *Journal of Travel Research* 35, no. 4 (April 1997): 42–49. doi:10.1177/004728759703500407.; Fátima, Silva and Paula, Fernandes. “Using importance-performance analysis in evaluating of higher education: A case study.” Paper presented at ICEMT 2010 International Conference on Education and Management Technology. IEEE. (Pp. 121-123). Cairo, Egypt, 2010.; Sever, Ivan. “Importance-performance analysis: A valid management tool?.” *Tourism Management* 48 (2015): 43-53.

⁴⁷ Matzler, Kurt et al. “The asymmetric relationship between attribute-level performance and overall customer satisfaction: A reconsideration of the importance-performance analysis.” *Industrial Marketing Management* 33 (2004): 271-277.

- Quadrant 1: Concentrate here - high importance, low performance. This quadrant requires immediate attention for improvement and shows major weaknesses;
- Quadrant 2: Keep up with the good work - high importance, high performance. This part indicates opportunities for achieving or maintaining competitive advantage and shows major strengths;
- Quadrant 3: Low priority - low importance, low performance. This part displays minor weaknesses and does not require additional effort;
- Quadrant 4: Possible overkill - low importance, high performance. The business resources committed to these attributes would be overkill and should be deployed elsewhere.

In terms of the attributes of performance and satisfaction in the education programs in the higher education institutions/ universities, there are many concepts on this issue. In the contribution of Gurney⁴⁸ compiled from a ten point model of Alton-Lee⁴⁹, five key attributes for the effective teaching practice has been presented as lecturers' knowledge, enthusiasm and responsibility for learning; classroom activities, assessment activities, effective feedback, and effective interaction between the teacher and the students. However, in the study of Phillips (2014), an evaluation framework has been established with 6 attributes as planning and preparation, classroom environment, instruction, professional responsibilities, and collaboration and partnership. More of that, in the study result of Ghonji et al.⁵⁰, 5 attributes of effective teaching quality are shown as a lesson plan, teaching skill, communication skills, expertise related to the lesson and individual capabilities of members. Therefore, in this study, adapted with the previous studies and the consultation of experts, 11 attributes have been developed to be analyzed in IPA as follow-up the syllabus, good demonstrations of knowledge to the students, enthusiasm and positive attitude toward the students, teaching methods of the lecturers, introduction of syllabus books, references, etc. to the students to aid the current learning and deeper comprehension, encouragement of students to participate in class activities, creating equal learning environment and opportunities for students, acceptance of criticism or feedback from students, friendly behavior (in teaching), clarification of the lesson's (syllabus's) primary aim, and transferring the learning contents.

METHODOLOGY

To obtain the objectives, this study employs 2 methods: the qualitative and the quantitative.

- In relation of the qualitative method, the interviews and consultations with 4 experts have been done to define and consult on the attributes, and the questionnaire has been performed to get their comments on the current syllabus and reach their comments on the survey result and syllabus development. In addition, four 30-minutes interviews with 13 students, 6 graduates and 7 undergraduates with the random sampling, have also been conducted to explore the hidden issues which are not stated in the questionnaire and to explore more relevant problems.
- In terms of the quantitative method, the five Likert-scale questionnaires are used as the main tool. The purpose of the survey is to understand the students' perception &

⁴⁸ Philip, Gurney. "Five factors for effective teaching." *New Zealand journal of teachers' work* 4 (2007), 89-98.

⁴⁹ Adrienne Alton-Lee. *Quality teaching for diverse students in schooling: best evidence synthesis*. Wellington, New Zealand, 2013.

⁵⁰ Ghonji, M. et al. "Analysis of the some effective teaching quality factors within faculty members of agricultural and natural resources colleges in Tehran University." *Journal of the Saudi society of agricultural sciences* 14, iss. 4 (2013): 109-115.

awareness, study behavior, expectations and satisfaction on the course delivery and quality. The questionnaire with 20 questions has been sent via Google docs to the undergraduates and graduates in 6 universities in Vietnam. Random sampling technique is chosen due to its convenience and 267 responses have been collected and represented as the sample population for the study. Also, before launching to broad collection scale and increasing reliability and credibility, the questionnaire pilot test has been done with 12 students and 4 experts to ensure its good wording, appearance, and understanding.

RESULTS & DISCUSSIONS

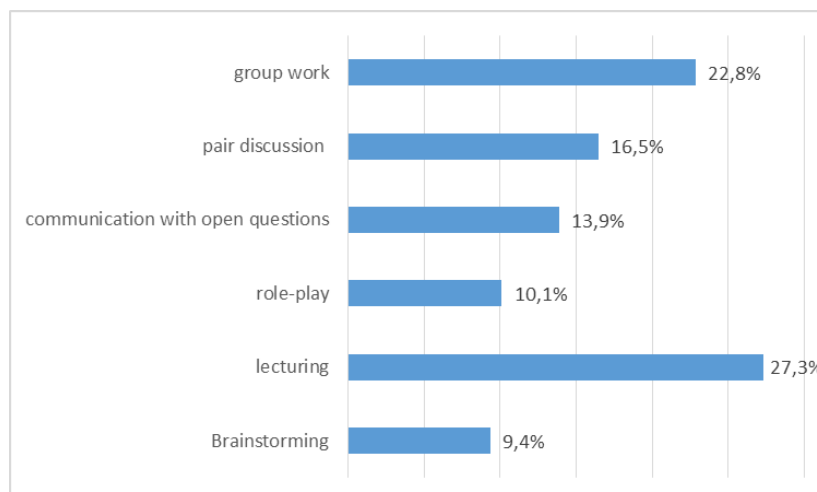
Findings from the students' feedback

As stated, there are 267 students' responses of which 79% of them are undergraduates and 21% are graduates. This is a very good source of information because their feedback represents this current setting of what happens. Also, the result shows 17.97% students have never done the public speaking. The result reveals 2 issues (1) lecturers are not covering fully to all the students in the classrooms, or do not produce chances for students to practice, or (2) the students show wrong knowledge/understanding in PS concepts. To reconfirm the students' feedback on the chance to PS practice, the question for students' practice frequency has done as well and the result is consistent, meaning that, 19.47% of them confirmed they have never done PS before.

Regarding the perceptions of the material study, 69.66% are agreed with the material study and 33.7% are at the low agreement. As a result, this is also worth thinking. This means the study material is not really matching with the students' needs.

As for the question on the student's perception, if the lecturers' teaching methods are diversified, 60.29% of respondents show their agreement with the diversified teaching methods of lecturers. In contrast, 39.71% show "disagreed". Furthermore, with the interview results and responses, the lecturing, problem-based and pair-work methods are mainly used in the course delivery. Moreover, that result confirms the lecture is consistent with the syllabus. Nonetheless, with the comments of the experts, this is not a good mode of teaching. This is as in the following figure.

Figure of detailed teaching methods of lecturers



Source: Own (2018)

In terms of the students' behaviors, the question "are you active in the classrooms", 41.2% are from the "completely inactive" to "neutral" scale, the remainder is 58.8%. This ratio takes into account the learning attitude of the students and lecturer's class management. Hence, it can be stated that the problems are from the lecturer and/or from students' attitude and/or from boring study topics as stipulated in the syllabus. Also, relating to the students' confidence, 31.83% students own confidence in their PS practice. This is a question which needs finding the answer because 82.39% of them have been practiced during the course and in the real world.

On the other hand, as stated in the objectives, the main issues are to understand the students' expectation and satisfaction to the course. As for the result of the students' expectation, 67.41% state, the course is under their expectations. As the consequence, with their total satisfaction of the course, the result shows that the course does not match with the satisfaction of respondents by 67.41% from the scales of neutral to completely disagreed.

Findings from the experts' feedback

In the published course outline of the universities, the teaching contents are rather theoretical, not smooth and not consistent with the real practice. It does not match the fact that the course of PS is mentioned as the primary design to provide both theory and the opportunity for understanding and improving communication skills in public and professional speaking situations. Also, the teaching method is a crucial problem because the lecturing and pair-group methods are mainly used with some minor students' activities and homework. Therefore, various teaching methods should be done such as video-criticism, visiting experts as outsiders, etc. As a result, students can have chances to increase practical views and knowledge from experts, and they can practice as much as possible. Moreover, changing in teaching method makes the students more active and interested. Furthermore, the time allocation for one topic during a 3-period session is completely unsuitable. More topics and activities should be delivered because this will help students present plenty of social issues.

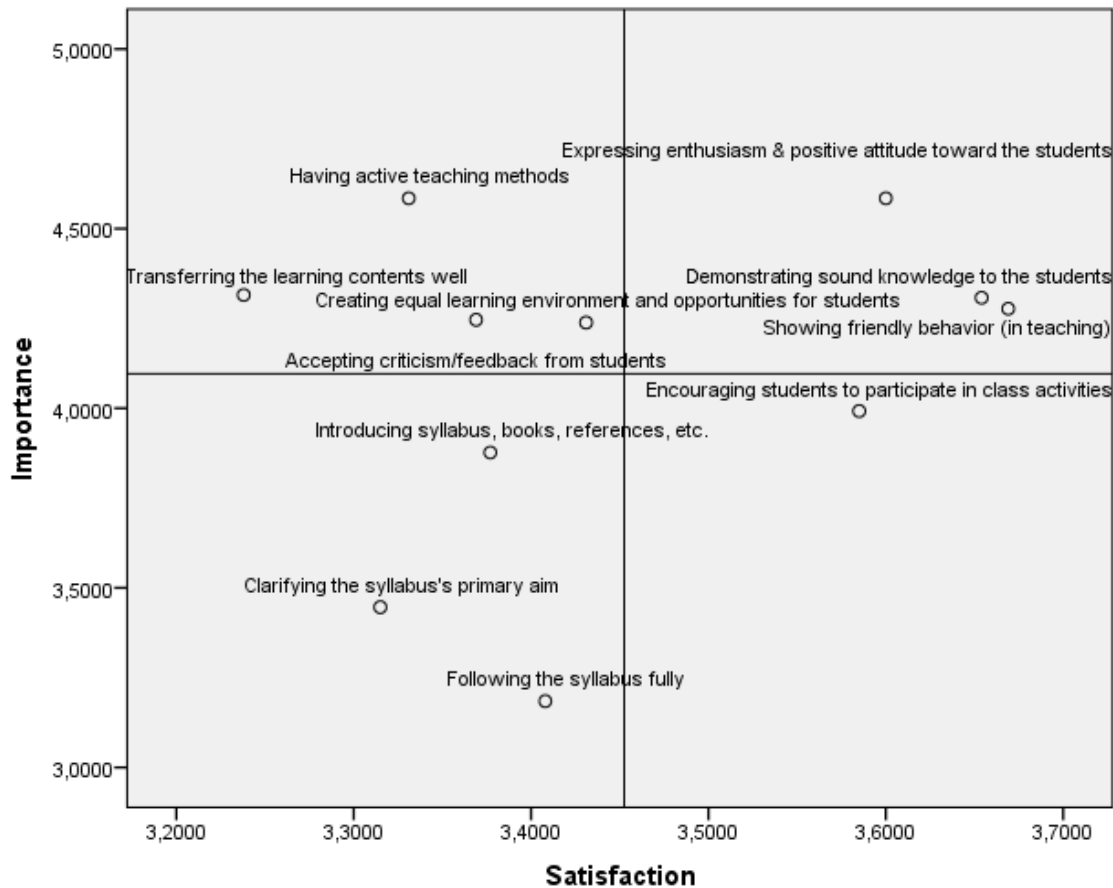
Relating to the current course outcome standard, it is not only inconsistent (with the real practice) but also ambiguous and un-quantitative as well. Also, the indicators are not applied to evaluate the criteria of a speech in the final exam. In addition, the course objectives and program are not mentioned because it only focuses on language accuracy and fluency, which leads to the big drawbacks.

The result of the Performance – Importance Analysis

ATTRIBUTES	IMPORTANCE (MEAN)	SATISFACTION (MEAN)
Following the syllabus fully	3,1846	3,408
Demonstrating sound knowledge to the students	4,3077	3,654
Expressing enthusiasm & positive attitude toward the students	4,5846	3,600
Having active teaching methods	4,5846	3,331
Introducing syllabus, books, references, etc.	3,8769	3,377
Encouraging students to participate in class activities	3,9923	3,585
Creating equal learning environment and opportunities for students	4,2385	3,431
Accepting criticism/feedback from students	4,2462	3,369
Showing friendly behavior (in teaching)	4,2769	3,669
Clarifying the syllabus's primary aim	3,4462	3,315
Transferring the learning contents well	4,3154	3,238

Source: Own (2018)

Figure of the result of IPA matrix



Source: Own (2018)

With this IPA Matrix, the figure depicts that

- Quadrant 1: Attributes as “having active teaching methods; creating equal learning environment and opportunities for students; accepting criticism/ feedback from students; and transferring the learning contents well” require immediate attention for improvement and are major weaknesses.
- Quadrant 2: Attributes as “demonstrating sound knowledge to the students; expressing enthusiasm & positive attitude toward the students and showing friendly behavior (in teaching)” should be remained and promoted;
- Quadrant 3: The “following the syllabus fully, introducing syllabus books, references, etc.; and clarifying the syllabus's primary aim” are minor weaknesses and do not require additional effort;
- Quadrant 4: “Encouraging students to participate in class activities” indicates that resources committed to these attributes would be overkill and should be deployed elsewhere”.

RECOMMENDATIONS

Teaching quality and enhancement in the higher education institutions/universities are in need. From the above analysis, some of recommendations are formulated as follow:

As known, each teaching method has each own strengths and weaknesses, and method application is up to the case. With the PS course, it is suggested that other active teaching

methods as video-criticism, visiting experts from the outside, case study, etc. should be applied. The "student-centered" teaching approach should be focused because this approach helps lecturers to have a friendly relationship with students as they are seen as central to the educational process. They are respected and are free to express their opinions. As a result, the student-lecturer relationships will be closer and more comfortable. Lecturers need to learn, to listen to their ideas and to accept "the opposites" and also to improve their knowledge through discussion with students. That is to meet the expectation of their requirements having the creating equal learning environment and opportunities for students and accepting criticism/feedback from students. Besides, this is the technique to create the positive learning behavior of the students.

In addition, a well-constructed syllabus will help students understand clearly the course as well as their roles and lecturers'. To have a student-centered syllabus, it is required to have a co-operation and comments of the key stakeholders such as faculty administrators, experts, businesses, etc. for an overview of the subject. Moreover, the syllabus must be changed, updated and controlled from time to time. According to Boye (n.d), learning outcomes should conclude 3 major characteristics: observability, measurability, and conductibility. Last but not least, the learning outcome statements in the syllabus should be written more specifically, assessably and in a student-centered manner.

CONCLUSION

Teaching quality and enhancement at the universities are necessary, especially in the time of adaption and integration to the education system in the region and the world. This issue becomes more and more crucial. This paper is to discover the feedback from the students and experts to formulate recommendations and to bring benefits to the teaching quality enhancement in the PS module at the universities in Vietnam. However, this study limits in the scope because the survey is implemented only in six universities and the sample collection in the conventional method. Further research can be done to cover the limitations.

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ROMANIAN SPORT INTEGRITY PROBLEMS AND WHISTLEBLOWING IN 2017-2018¹

Pompiliu-Nicolae CONSTANTIN²

ABSTRACT:

ROMANIAN SPORT RECORDED MANY CASES OF WHISTLEBLOWING IN 2017 AND 2018, WHICH HAVE TRANSPIRED ESPECIALLY IN THE MEDIA. SOCIETY HAS OFTEN RECEIVED TESTIMONIES ABOUT ABUSES, DOPING OR FIXED MATCHES AND THIS ASPECT SHOWED THE PROBLEMS OF THE SPORT SYSTEM. THE IMPACT OF WHISTLEBLOWING THAT WAS VISIBLE DURING THESE TWO YEARS DISPLAYS THE IMPORTANCE OF THE PROCESS OF REPORTING IRREGULARITIES AND THE PROSOCIAL BEHAVIOUR OF THE PEOPLE FROM SPORT. THE ETHICAL ISSUES ARE DEBATED THROUGH THE REPORTING OF ILLEGAL WRONGDOINGS. WHISTLEBLOWING BECAME MORE ACCEPTED IN THE ROMANIAN SOCIETY BECAUSE LEGAL STATUTES ARE STIPULATED. THE CASES OF WHISTLEBLOWING ARE A GOOD INDICATOR FOR THE LEVEL OF INTEGRITY IN ROMANIAN SPORT AND IT HELPS TO UNDERSTAND THE CHALLENGES OF THE PHENOMENON. THIS STUDY GATHERS THE MOST IMPORTANT CASES OF WHISTLEBLOWING FROM THE PERIOD 2017-2018 AND EXPAINS THEIR CONTEXT, THEIR RELEVANCE AND CONSEQUENCES.

KEY WORDS: SPORT INTEGRITY, WHISTLEBLOWING, ROMANIAN SPORT, CORRUPTION IN SPORT.

Sport integrity has a positive connotation and it is related with the concept of fair-play. In the last two decades specialists in social sciences focused on the subject and have analysed the ethics³, the mechanisms of corruption⁴ and integrity. The mutations of the sport phenomenon were more frequent. If we consider the integrity as a value of the sport, it is possible to assert that the alteration of the game ethics questions the process of valorisation. However, this process that seems to be irreversible and which alters the competition has an instrument that could reverse the process. It is the whistleblowing, a prosocial and altruistic

¹ This research work was conducted as part of the project „Development of a Course to Teach Coaches Sport Integrity /CSI” (Erasmus Plus Sport, 590595-EPP-1-2017-1-EL-SPO-SCP).

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³ Randolph Feezel, *Sport, Play and Ethical Reflection* (Chicago: University of Illinois Press, 2004).

⁴ Adam Masters, Adam, “Corruption in sport: From the playing field to the field of policy”, *Policy and Society*, 34 (2015): 111-123.

aspect of the society, theorized by Dozier, Miceli⁵ and Hersh⁶. For the integrity process, whistleblowing is essential, because it encourages athletes, coaching staff and other officials from sport to come forward and provide information about irregularities. Dozier, Miceli and Hersh think that whistleblowing should increase if it is observable that it generates a real help for the society or organization. The whistleblowing process could be analysed as a whole or examining the effectiveness of the phenomenon, the financial dimension, the ethical challenges, the organizational misconduct, the retaliation and the loyalty aspect.

Near and Miceli⁷ are identifying three social actors in the whistleblowing mechanism: 1. The whistleblower; 2. The wrongdoer; 3. The recipient of the report. Every aspect is connected with the idea of personal integrity. The whistleblower observes the wrongdoing and takes action, noticing the ethical challenges which he then reports. It is difficult to generalize the whistleblowing process because of the unicity of the phenomenon. Even though sport organizations are trying to prevent, tackle the irregularities and to minimize the damages of wrongdoing, it is nearly impossible to assure a perfect clean environment⁸.

But in such a context, the credibility of the whistleblower is extremely important, the power to convince and the characteristics of the complaint will gain significance. The first action of the whistleblower is to assess and decide whether the gesture is immoral and illegal. After the whistleblower filed the report, the organization has to make a decision on how to manage the situation. The next step should be to start an investigation to determine the level of seriousness of the case. In this situation, the organization that could take a decision has the possibility to make right the wrongdoing or to ignore the claim.

Whistleblowers are considered moral actors in the process of revealing the wrongdoing. But their appearance in the Romanian sport media is often received with reserves. More than that, their testimonies are considered to be exaggerated. Also, some of them are published many years after the events happened. It is the case for fixed matches or physical abuses. However, this aspect shows that years 2017-2018 are favourable for whistleblowing in Romanian sport.

ROMANIAN CASES

Sport problems reflect the society challenges. Integrity differs across different sport practices, it has distinct levels of complexity, as well as it depends on age groups. Sport integrity contrasts between amateur and elite or professional sport. This study uses information leaked in the media. Romanian sport was the centre of many whistleblowing reports, in various sports, such as football, handball, volleyball, judo, or athletics. This variety shows that the system is under a strict pressure and the irregularities are touching these areas. Also, not only the diversity of sports is relevant, but also the problems revealed. They were mentioned cases of illegal betting, fixed matches, physical abuses, corruption, etc. This study will mention the most important cases and will follow their impact. The most popular sports in Romania are football, tennis and handball.

⁵ Janelle Brinker Dozier and Marcia P. Miceli, "Potential predictors of whistle-blowing: A prosocial behavior perspective", *The Academy of Management Review*, 10 (1985): 823-836.

⁶ Marion Hersh, "Whistleblowers – heroes or traitors: Individual and collective responsibility for ethical behavior", *Annual Reviews in Control*, 26 (2002): 243-262.

⁷ Janet P. Near and Marcia P. Miceli, "Whistle-blowing: Myth and reality", *Journal of Management*, 22 (1996): 507-526.

⁸ Muel Kaptein, "From inaction to external whistleblowing: The influence of the ethical culture of organizations on employee responses to observed wrongdoing", *Journal of Business Ethics*, 98 (2011): 513-530.

Football

In 2017 and 2018, the media mentioned many irregularities from the Romanian football, considering abuses, fixed matches and illegal involvement in betting industry. The most important case at the beginning of 2017 was that of a network of referees, which operated in friendly games in Turkey and Cyprus. They were Romanians and they worked for betting mafia. *Gazeta Sporturilor* investigated the case and found out that 13 Romanian referees from lower leagues were part of this network. They were presented as referees from Bulgaria or Turkey and few of them changed their look in order to not be recognized. Their actions were associated with another illegal betting network from Singapore. The journalists identified these referees and have produced many articles about the subject. They discovered that the network was bigger and this practice was frequent in friendly tournaments. The Romanian Football Federation used this whistleblowing case to punish the referees.

Also, in 2017, Alin Pânzaru, the coach of *Dacia Unirea Brăila*, a club from the second league, revealed that players of his team have fixed matches to obtain financial gains from betting. He made public the names of the footballers and described their immoral activities⁹. Footballers proceeded this way because the club did not pay the players in time. After the whistleblowing gesture of the coach, the club reacted promptly and has dismissed the footballers mentioned in this case. The president of the club confirmed the story of the coach after he made an investigation.

These cases questions the concept of fair-play, so usual met in football. Butcher and Schneider¹⁰ are considering that the intrinsic essence of fair-play is respect for the game and are putting in discussion the role of education when the fair play is missing. The cases mentioned above outline the failure of moral reasoning and the absence of impartiality and reflective judgment in sport.

The majority of whistleblowing cases from football were testimonies about fixed matches which happened many years ago. Former footballers confessed to the media that they have participated in fixed matches not only during the communism period, but also after 1989. It was a confirmation of some facts described in that period by the media, but without specific evidence. It is the case of Daniel Chiriță, a former player of *Petrolul Ploiești*, who blew the whistle in 2018 about facts from the 90s. He described the phenomenon of fixed matches from that time, explaining that the teams *Petrolul*, *Ceahlăul*, *Gloria Bistrița* and *U Cluj* had they own reciprocities¹¹. In the same manner, the former striker Ionel Danciulescu explained that when he played for *Steaua* and *Dinamo*, he participated at fixed matches in the last rounds of the championship¹². These types of testimonies regarding the 90s were numerous in 2017 and 2018. Nicolae Stanciu, who was also a footballer in that period, admitted that he played in fixed matches.

Contractual infringement is another kind of immoral behaviour that came to light via whistleblowing. Romanian football has many cases in this category, however they are already considered a normal practice. For example, in January 2018, media exposed the case of

⁹ Digi Sport, 7 December 2017, <https://www.digisport.ro/fotbal/cutremur-in-fotbalul-romanesc-declaratii-incendiare-au-fost-niste-blatisti-ordinari-niste-nenorociti-354826>, accessed January 12, 2019.

¹⁰ Robert Butcher and Angela Schneider, "Fair Play as Respect for the Game", Jan Boxill (ed.), *Sports Ethics: An Anthology* (Oxford: Blackwell, 2003): 153-173.

¹¹ Pro Sport, 11 December 2018, <https://www.prosport.ro/video/prosport-live/video-exclusiv-un-fost-fotbalist-in-liga-1-recunoaste-am-jucat-in-meciuri-aranjate-cum-se-facea-sedinta-tactica-in-vestiar-la-comun-azi-castigam-noi-la-doua-goluri-diferenta-17781616>, accessed January 10, 2019.

¹² Costin Stucan, *Gazeta Sporturilor*, 15 October 2018, <https://www.gsp.ro/fotbal/liga-1/gsp-live-video-danciulescu-marturisiri-incendiare-am-jucat-in-blaturi-in-spania-la-steaua-si-dinamo-va-zic-si-un-meci-550671.html>, accessed January 10, 2019.

Alexandru Ioniță, from Astra Giurgiu, a club in the first league, who was cast out of the team and sent to train alone because he refused to extend his contract¹³. In this manner, the club wanted to put pressure on the footballer, but he reacted back and made the case public. Eventually, the player decided to enter in a contract for a period of 6 months, during which period he had the right to sign with any club, however Astra Giurgiu management decided to punish him because he refused any offer of contract extension.

In this context, the sport integrity is altered by the lack of honesty and fairness. The respect for the dignity of each other is missing in such cases of contractual infringement and the footballers are put in difficult situations that could determine them to sign a new contract or, if a club wants to fire a player, to terminate the agreement. The integrity obligations of clubs are often a problem in the Romanian sport and this aspect has a cause in the lack of management knowledge and in the sport mentality.

Handball

The Romanian handball exposes a similar case, but with different significance. For example, player Laurentiu Dinescu complained to the Romanian Handball Federation because the club AHC Dunărea Călărași tried to force him to terminate the contract. The handballer was obliged to overtrain and, on top of that, he was not paid his regular salary¹⁴. Because the officials of the Romanian handball did not take any measure, the player told his story in the press. As a consequence, media became a vital space for whistleblowing. The investigation journalists contribute to revealed the irregularities. The gesture of the athlete shows that the reporting process could often be ignored by the institutions responsible to resolve such cases. In this context, the press justifies its surname, “the sixth power in state”. Journalists are making known the case and often are putting pressure on clubs or federations.

Another case from handball was made public by the sport television Digi Sport. It has discovered that a referee from the first league has broken an important rule. His age was over the limit but he continued to officiate¹⁵. The whistleblowing action of the journalists obliged the Romanian Handball Federation to stop the activity of the referee. This case puts in discussion the implementation of a mechanism to identify such situations. This example represents a lack of controls and governance in the handball sport system, which allows people from the handball scene to abuse the lack of controls and have a behaviour which lack integrity. Even though this case is not perceived as something serious, the way how media exploited it has damaged the image of the handball competition.

Volleyball

Volleyball is a poorly mediatized sport in Romania, however in 2017 and 2018, the press focused more the attention on it because of a betting scandal. Two volleyball players and one of their friends, also volleyball player, bet against their own team, Arcada Galati, in a tournament at the beginning of 2017. The International Volleyball Federation identified them with the help of a software and suspended them. After this episode the Romanian Volleyball Federation stayed in silence and did not take any reprimanding measures, until the club ACS Zalau found out and contested the right of a volleyball player to be on the pitch. After the

¹³ Libertatea, 10 January 2018, <https://www.libertatea.ro/sport/alex-ionita-ii-se-antreneaza-prin-parcuri-2102445>, accessed January 9, 2019.

¹⁴ Jurnalul de Călărași, 25 September 2018, <https://www.soridapress.ro/scandal-la-echipa-de-handbal-din-calarasi/>, accessed January 12, 2019.

¹⁵ Digi Sport, 30 May 2018, <https://www.digisport.ro/handbal/scandal-fara-precedent-se-fluiera-pe-fals-in-handbalul-romanesc-452327>, accessed January 11, 2019.

media investigation, one of the players admitted his immoral gesture and explained all the events that determined him to bet. He assumed the role of a whistleblower and described his feelings, trying to give himself as an example for other players that could have the same temptation. Nevertheless, in this case, the lack of reaction from the Romanian Volleyball Federations seems to be problematic, because it covered the case until an exterior factor came to point out this case.

Another case from the Romanian volleyball revealed in 2017 physical abuses at the CSS 2 Baia Mare. The coach of the team was accused by five junior players of abuses, physical and verbal, during a period of four years. The journal *Gazeta Sporturilor* developed this case and launched an important debate about the training methods in volleyball and the responsibility of the coach. The case became so well-known and forced the Ministry of education to analyze it¹⁶. This situation also revealed other misconduct of the coach, i.e. an attack over a referee. “Negative coaching behaviors and practices have been identified as having a significant impact on sports”, observes Ibrahim Lawal Yazid¹⁷.

In this context, the journal *Gazeta Sporturilor* launched a platform of reporting, called *nuabuz.gsp.ro*, an important instrument which helps against the abuses in sport. Especially its purpose is to identify abuses against children who begin their sports careers. The investigation journalists try to encourage children, parents or coaches to report these irregularities. They are promising the confidentiality of the source and they are verifying the information. This project is an example of good governance in sport, despite the fact that was initiated by a private entity and not by the Ministry of Sport or by the Romanian Volleyball Federation. The online platform is not limited to only one sport and it is an important instrument to report the negative experiences. The sporting environment exposes sometimes the minors from Romanian sport to various forms of violence, like those revealed above, and “can lead to lifelong consequences on their emotional, physical and psychological health, personal development, social and family life, and subsequently impact their participation in sport and life”, as European Commission experts observed¹⁸.

Judo

Another sport with low visibility in the media is judo. Despite of that, in 2018, girls who competed in judo games and were sport athletes in the Olympic centre from Cluj-Napoca, accused coaches Florin Bercean, Gianina Andreica and Ana Maria Mititelu of physical and verbal abuses¹⁹. Florin Bercean is a national well-known coach with important results through his athletes, including Olympic gold. But judo athletes accused him of violent behavior during training. There were five girls who revealed that they were beaten, humiliated, threatened and bullied. These testimonies were published in the journal *Gazeta Sporturilor*, however the

¹⁶ Costin Stucan, *Gazeta Sporturilor*, 9 January 2018, <https://www.gsp.ro/gsp-special/investigatie/plangere-penaliza-impotriva-antrenorului-acuzat-de-abuz-contraminorilor-marturie-pro-rau-e-un-om-foarte-bun-chiar-daca-mai-are-scapari-ce-se-intampla-in-vestiar-trebuie-sa-ramana-acolo-529925.html> , accessed January 11, 2019.

¹⁷ Ibrahim Lawal Yazid, “Integrity Issues in Competitive Sports”, *IOSR Journal of Sports and Physical Education*, 3 (2016): 69.

¹⁸ Expert Group on Good Governance (European Commission), *Recommendations on the protection of young athletes and safeguarding children's rights in sport*, July 2016: 3, available online <http://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupDetailDoc&id=25000&no=1> , accessed January 6, 2019.

¹⁹ Justin Gafiuc, *Gazeta Sporturilor*, 24 November 2018, <https://www.gsp.ro/gsp-special/investigatie/foto-video-noi-dezvaluiri-tulburatoare-despre-agresiunile-de-la-lotul-olimpic-de-judo-m-a-batut-cu-sete-pe-spate-cu-o-coarda-de-cauciuc-aratam-ca-o-zebra-553762.html> , accessed January 10, 2019.

Romanian Judo Federation refused to take into consideration their complaint. The mentioned coaches denied the accusations, while other athletes who obtained important medals in international competitions came to their defence and support.

Sport officials showed little interest in vulnerable athletes and their whistleblowing actions were left out. Safeguarding judoka's rights has been given insufficient attention by the Romanian federation and this aspect is an indicator for lack of integrity. By nature, judo is considered a violent sport, however this does not mean that abuse should be acceptable during training and preparation for competition. The nature of judo hide easier different misconducts of the coaches or other officials. Judo athletes may be harmed by an adult or another athlete, but any abuse is hard to demonstrate because the nature of sporting activity. The scientific literature on child or youngster protection in sport is concerned about the safeguarding from violence in sport²⁰, but the connection with the idea of integrity is neglected. Often, child athletes are the victims of organisational threats. To diminish the danger of irregularities, the coach should inspire the morality principles, as Sandra Pelaez has demonstrated²¹.

Boxing

The journal *Gazeta Sporturilor* obtained in 2017 the testimony of few coaches about a bribery and fraud case at the Romanian Boxing Federation. The International Boxing Association (AIBA) has organized in Bucharest a course to license coaches in May 2016²². An international trainer came to Romania, taught the course and tested the Romanian coaches. Few of them reported that general secretary of the Romanian Boxing Federation, Viorel Sima, demanded to the coaches to raise money for the instructor, to obtain the questions of the exam and corresponding answers. They did this and Viorel Sima offered them the answers or the questions a day before the exam. However, only 6 out of the 19 coaches passed the exam. The other coaches felt cheated and reported the case to the president of the Romanian Boxing Federation, who did not take any action in this respect. Few months after their report, the coaches blew the whistle in the media. The subject became national. The lack of reaction from the officials has obliged the coaches to search justice in the public space. But the opacity of the Romanian Boxing Federation continued. This episode was one of the reasons to maintain the funding block of the federation by the Ministry of Sport.

The immoral and unethical activity is realised for the personal material gain, but the case mentioned above is more severe because it has an international dimension, because it involves an AIBA official. Boxing is not immune from traditional types of corruption, which in this case is bribery and the fraud in an international exam. Corruption is used to attain a certain *status* in the boxing activity. The problematic behaviour of the general secretary of the Romanian Boxing Federation was doubled by the favourable response of the coaches that were willing to accept this unethical bargain. This attitude highlights a systemic problem with the corruption.

Athletics

Another sport practice which has recorded whistleblowing cases was the athletics domain. Frequently is called into question the gender difference in this sport, not only when

²⁰ Margo Mountjoy et al., "Safeguarding the child athlete in sport: a review, a framework and recommendations for the IOC youth athlete development model", *British Journal of Sports Medicine*, 49 (2015):883-886.

²¹ Sandra Pelaez, *The Coach as a Moral Influence*. Thesis (PhD), Montreal: Concordia University, 2010.

²² Marian Ursescu, Mirela Neag, *Gazeta Sporturilor*, 16 October 2017, <https://www.gsp.ro/sporturi/box/audio-incredibil-marturii-pe-banda-oferite-gazetei-sporturilor-despre-un-curs-organizat-de-federatia-romana-de-box-cum-se-cumpara-licenta-de-antrenor-in-romania-523284.html>, accessed January 8, 2019.

are analysed the performances, but also the abuses. Female athletes seem to experience more harassment than men, as a Norwegian study suggests²³. Underreporting is a general problem, especially in the juvenile and youth athletics.

Abuses against juniors in sport are hard to be whistle-blown because of the statute of the victim. Usually the coach is the source of aggression. Such a case was revealed by the journal *CanCan*, which published the testimony of a junior girl abused by her coach from the athletics club in Suceava²⁴. The girl gave up to her athletic career, but she assumed the whistleblower role and explained that she was not the only one in that situation.

Romanian athletics also offered a case of whistleblowing from the administrative level. German coach Siegfried Becker revealed in the media the way how he was approached by the club CSM Bucharest to train a Romanian athlete. Becker wanted to show the unprofessional behaviour of the people with who he negotiated and the fact that the club has not respected the promises made at the beginning of the discussions²⁵. Becker case could be useful for the athletes and the coaches who want to understand the integrity challenges in the contract negotiation process. They could learn from this experience and they could take safety measures to prevent this kind of irregularities.

Tennis

Individual sports such as tennis often have their own abuse cases, but many of them remain unknown, because the athlete is discouraged to blow the whistle and he or she had low chances to demonstrate its case. However, in rare occasions, athletes have the courage to make a step forward and point out the immoral and illegal situations. It is the case of a junior tennis player, who was the victim of a sexual abuse from her coach. The 11 years old girl made a complaint against the coach to the federation and actioned him in justice. The case became nationally known when the media found out the details and reveals the abuses²⁶.

Previous studies that focused on coach-athlete relationships revealed that the harassment experience has a huge emotional impact. The ratio of male harassment could be identified in the patriarchal power culture of the Romanian society. Dropping out of sport performance is often the main consequence of sexual harassment, but there is also a secondary consequence – destruction of the relationship with the coach and creation of a more negative view of men in general. The lack of a safe environment in tennis could be seen as a problem of integrity and in this case the whistleblowing has a positive role.

CONCLUSION

In a perfect world, there would be no need for whistle-blowers, nevertheless Romanian sport is far from being perfect. Whistleblowing is a key action to fight against abuses and corruption and which could stimulate the fairness of the sport phenomenon. With the risk of suffering severe repercussions, sport athletes or coaches are take ownership for their actions

²³ Kari Fasting, Celia Brackenridge and Jorunn Sundgot-Borgen, "Prevalence of sexual harassment among Norwegian female elite athletes in relation to sport type", *International Review for the Sociology of Sport*, 39 (2004):373–86.

²⁴ CanCan, 28 January 2018, <https://www.cancan.ro/mega-scandal-sexual-club-sportiv-suceava-antrenorul-e-acuzat-hartuit-santajat-atletele-minore-puisor-scump-trimite-mi-poze-tine-mi-e-dor-p-mea-faci-sustine-profesorul-apararea-17702568>, accessed January 11, 2019.

²⁵ Sport Total FM, 29 December 2018, <https://sptfm.ro/2018/12/29/audio-exclusiv-antrenorul-siegfried-becker-acuza-csm-bucuresti-ca-l-a-umilit-in-cazul-sulitasului-alexandru-novac-au-batut-cu-pumnul-in-rulota-mea-ca-sa-nu-vorbesc-urat-de-csm/>, accessed January 10, 2019.

²⁶ Ebihoreanul, 21 January 2018, <https://www.ebihoreanul.ro/stiri/ultima-or-31-35/revolttor-antrenor-de-tenis-din-cugir-trimis-n-judecata-pentru-c-ar-fi-violat-o-feti-de-11-ani-139262.html>, accessed January 12, 2019.

and became whistleblowers. The cases presented above show that the Romanian sport is confronted with a substantial increase of reporting irregularities, aspect that could help organizations and athletes' vigilance. The information reported by whistleblowers is critically important not only for sport institutions, but also for the athletes and for the public.

With the exception of legal obligations, whistleblowers are confronted with a significant cultural opposition in the Romanian society. They are seen as „informers”, „dobbers” or „snitches”. This aspect makes difficult the action of reporting the irregularities. In the same direction, the culture inside sport organizations doubles the difficulty of whistleblowing process. For this reason, many whistle-blowers chose to make public in the media their case. This is the first source for the report and it shows that 2017 and 2018 were prolific years for the whistleblowing process in Romanian sport.

The level of undiscovered cases prevalent in Romanian sport are greater than reported. This assumption would seem reasonable particularly because our research was limited to some sports and has collected just the cases that have been published in the media. To increase the whistleblowing process and to reduce the integrity problems it is necessary to formulate clear guidelines, establish educational workshops and put into action intervention programs.

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A COMPARISON OF MODERN SCIENCE WITH VEDIC SCIENCE

Subhendu DAS¹

ABSTRACT:

THIS IS A REVIEW OF MULTI-DISCIPLINARY RESEARCH ARTICLES ON THE TITLE SUBJECT, PUBLISHED IN VARIOUS PEER REVIEWED JOURNALS, PROFESSIONAL CONFERENCES, AND SCIENTIFIC BOOKS, INCLUDING THE BOOKS OF RELIGIONS.

(A) THERE WAS A TIME WHEN VEDAS WERE KNOWN ALL OVER THE WORLD. YOU CAN SEE THE INFLUENCES OF VEDAS IN THE BOOKS OF ALL MODERN RELIGIONS. FOR EXAMPLE, YOGA AND YOGIC POWERS ARE DESCRIBED IN BIBLE AND ALSO IN THE BOOKS OF JUDAISM. THERE ARE MANY HIGH LEVEL MODERN YOGIS ALL OVER THE WORLD WITH MAGICAL POWERS. SAINT JOSEPH OF CUPERTINO HAS DEMONSTRATED LEVITATION, DEFYING GRAVITY, AND HIS CASE IS MOST WELL DOCUMENTED IN THE WESTERN WORLD. YOGIC POWERS SHOW US THAT YOU CAN DISCOVER THE TRUTH, ONLY BY OBSERVING THE NATURE, JUST LIKE GALILEO DID. (B) UNFORTUNATELY, MODERN SCIENCE HAS ABANDONED THE APPROACH OF OBSERVING THE NATURE, AND HAS GONE ON A TRACK DEFINED BY HYPOTHESIS, ASSUMPTIONS, EXPERIMENTATIONS ETC., TO DISCOVER THE TRUTH. AS A RESULT WE CAN SHOW THAT THE MODERN SCIENCE LACKS THE TRUTH. WE DO NOT KNOW EVEN GRAVITY CORRECTLY. WE DO NOT KNOW WHY PLACEBO MEDICINE WORKS. (C) WE SEE THAT VEDIC SCIENCE GIVES US A VERY MEANINGFUL AND UNIVERSAL DEFINITION OF TRUTH. WHEREAS THE MODERN SCIENCE LACKS ANY SUCH DEFINITION, CAUSING A MAJOR CONFUSION IN RESEARCH ACTIVITIES. (D) THE VEDIC SCIENCE ALSO HAS ANOTHER VERY CRUCIAL DIFFERENCE – IT HAS OBSERVED TWO TYPES OF CAUSES: (I) EFFICIENT CAUSE AND (II) MATERIAL CAUSE, BEHIND EVERY PHENOMENON. ON THE OTHER HAND MODERN SCIENCE CONSIDERS ONLY THE MATERIAL CAUSE. THIS IS WHY VEDIC SCIENCE IS VALID FOR THE ENTIRE UNIVERSE AND FOR ALL TIME, PAST, PRESENT, AND FUTURE. WE WILL ILLUSTRATE ALL RESULTS OF VEDIC SCIENCE WITH OBSERVATIONS IN NATURE. SUCH EXAMPLES WILL BE BEYOND COMPREHENSION OF MODERN SCIENCE. (E) THIS RESEARCH WILL SHOW THAT THERE IS A HEAVEN AND HELL DIFFERENCE BETWEEN MODERN SCIENCE AND MODERN ENGINEERING. MODERN SCIENCE THEREFORE IS NOT AND CANNOT BE THE FOUNDATION OF MODERN ENGINEERING.

KEYWORDS: NEWTON'S LAWS, ASSUMPTIONS, ROOT CAUSES, DESTINY, YOGIC POWERS, TRUTHS

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INTRODUCTION

There is a fundamental difference between modern science and Vedic science. Generally speaking, the modern science can be represented by a diagram like in Figure-1. In this figure a force F_1 is acting on an object and producing another force F_2 . This diagram may represent the action reaction law of Newton or the cause and effect law. The Vedic science represents the same phenomenon by Figure-2, where the F_1 is replaced by another object, maybe a human being. Physics or modern science does not consider any active, conscious, and intelligent object behind any event, although modern engineering always does. Figure-2 is taken from the website².

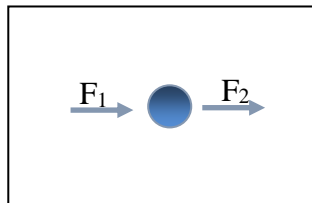


Figure-1 Modern science-



Figure-2 Vedic Science-Universal

In one sense, it is true that the nature has only physical objects, which we sense using our sense organs, like eyes, ears, nose, etc. Such physical objects occupy space, they are continuously moving in space, and changing in characteristics with time. They take birth, grow to a maturity, then decay to its death, and vanish. However, every physical object has some characteristics, which distinguish them from one another.

There are two key words in the English language: noun and adjective. A noun is a physical object, it occupies space, and we can see them. An adjective is a property, a quality, or a characteristic of a physical object. Adjectives therefore cannot exist on its own, it must require a noun. Thus the force F_1 in Figure-1 cannot exist without an object behind it, like in Figure-2. This fundamental difference between the two figures creates a vast separation between the two sciences.

The rest of this article has the following contents. It has two major sections – Modern science and Vedic science. Modern science has several sub-topics – physics, mathematics, economics, and medicine. And the Vedic science section mainly deals with destiny, cause and effect, and yogic powers. We begin with the definition of truth as can be found in Vedas and therefore also in books of all religions.

DEFINITION OF TRUTH

Modern society does not have a definition of truth. Merriam-Webster defines “a judgment, proposition, or idea that is true or accepted as true”. The most common or popular understanding of the above is that – you have your own truth and I have my own truth. Under that definition Galileo would still be wrong today. We give the following definition of truth (T1):

- (T1):** (1) The laws of nature are the only truths,
 (2) These laws are created by the objects of nature and their characteristics, and
 (3) Nature always demonstrates all its laws.

Such truths are unique, universal, and eternal. Unique means one law will not contradict another law, they are independent, and there will be no redundancy. It also means everybody

² Blogspot, “Billiards and Pool”

will understand them in the same way. Universal means if a law is valid in USA, it must be valid in China also. Similarly, if a law is valid on earth it will be valid in any other planet in any galaxy of the universe. And finally, eternal means, if a law was valid million years back, it will be valid now, and will remain valid million years from now. We will soon learn that this truth is neither objective nor subjective. Thus the truth is the only unifying force at all levels of the universe.

Objects of nature are humans, animals, plants, sun, moon, earth, galaxies, etc. Objects of nature are also TVs, air planes, missiles, electronics, computers, roads, bridges, houses, etc., because they are made from the objects of nature. Objects of nature can be sensed by our five sensors, like eyes, ears, etc. There are two very important things in our society which are all pervading and yet not objects of nature: money and real numbers. Of course, money is a real number too.

Characteristics are attached with objects of nature, they cannot exist independently, they are adjectives. Energy, for example, cannot exist without the sun. Thus the energy is an adjective and the sun is the corresponding noun. Similarly, vibrations cannot exist, it requires an object, like a string. The forces of nature cannot exist either, there must be a noun, and which is any physical object. Therefore, if you try to define nature using only such characteristics, like in Figure-1, then that description will not represent the truth.

The nature is always demonstrating its laws, but we fail to recognize them, because we are living within these laws from our birth and we are part of the nature. The fact that the earth is moving, for example, we do not even realize that. Only when Galileo told us then we learnt that the earth is going round the sun. Even then his discovery did not change anything in our average life. Therefore, we will realize a law only when some extra ordinary events are demonstrated by nature or observed by any person. However, modern science did not create any “paradigm changes”³, because they are all based on invalid assumptions as we will discuss here.

We will see that the laws of physics are not the laws of nature, but many fundamental laws of nature are described in Vedas. As an example gravity as described in physics is not a law of nature. There are many examples which show that a high level human yogi can levitate, float, and even walk or fly in air, above the ground⁴. Birth-maturity-death of every object is an universal truth. We will find that reincarnation, destiny, etc. are also universal truths. And nature always demonstrates them. If you read carefully then you will find the above definition of truth (T1) is embedded in Vedas, Bible, and many books of all religions.

DESTINY LAW

The most powerful law of nature is described in the Vedic science and it is known as the destiny law. We can find that the destiny law is also mentioned in the Bible and in the books of other religions. It is the highest level law of nature. Everything in the entire universe is controlled by this law⁵. All other events that happen, are all derived or influenced by this destiny law. In simple terms this law can be described as:

(1) All events in the universe, and in our life in particular, are predetermined, and planned already.

³ Kuhn, *Structure of Scientific Revolutions*

⁴ Grosso, *The man who could fly*

⁵ Das, “Scientific theory of destiny”

(2) All events that will happen, moment by moment, short terms, and long terms, can be precisely predicted with all details, and before the events happen, by any high level yogi with the power of third eye.

No Freewill An immediate consequence of the destiny law is the absence of freewill. It is very easy to understand that we do not have freewill. All our actions have reasons, without any reasons we never do anything. But since reasons come before we act, it means that our present action is controlled by our past reasons. Thus no one can have any freewill at the present moment. Therefore we are guided, moment by moment, by the destiny law.

No Choices We also do not have any choices or options. This is so because we analyze every option one by one, since our mind works only sequentially. When we take any one of the options and analyze it, our freewill does not work for that option and for that time slice, as explained before. Our things happen in the same way for next time slice and for the next option. Thus in every moment we have only one choice with no freewill.

The above explanation is based on the action-reaction law of Newton, we only injected the principle that there is always a time gap between the two events: action and reaction. This law is same as sow-reap statement of Bible and the cause and effect statement of Vedas. However, destiny law and its mechanism is lot more complex than the simple action-reaction law, as can be demonstrated by the following example.

Observation-1 A yogi from India came to visit a research institute in USA during the early seventies. Pat Norris came to his office to see him. As she entered his office, the yogi told her to ask some questions. One by one she asked seven questions. Then the yogi picked up a paper from his desk, turned it upside down, and gave that to her. In that paper all her seven questions were already written by the yogi, along with their answers. Pat said - one was wrong, and another one was partially correct, rest were all correct⁶. Thus even for moment by moment, life can be precisely predictable, before the events happen.

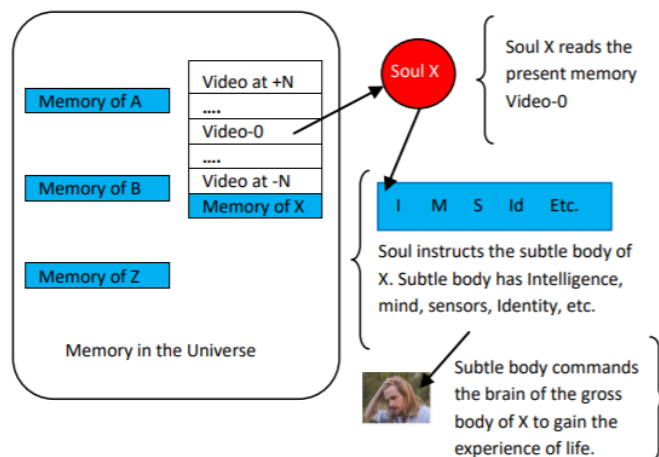


Figure-3 Memory and Destiny

There is no probability or randomness at any level. Everything is controlled by the global destiny. The above casual demonstration was not performed under video camera, so it will be difficult to find why the results were not 100% correct, which usually is the case for high level

⁶ Green and Green, *Beyond Biofeedback*

yogis. There are many such precise demonstrations in the literature and can be found free on the internet.

The above Observation-1 says that (1) we are robots, we do not have any freewill. (2) Everything that we do is already written in the memory of the universe. Some call this memory as Akashic record. (3) Any high level yogi will be able to read this memory and predict our actions exactly. (4) Our soul also reads that same memory and performs the actions. This destiny mechanism can be described by the diagram in Figure-3. The photo of the thinking man in Figure-3 is taken from⁷.

In Figure-3, the memory of Mr. X is given as a sequence of entries. This sequence is finite, since every object lives only for a finite length of time. Similarly, memory of other humans like A, B, ..., and Z are also stored in the universe. All such memories can be read by any advanced yogi at any time. This memory is permanently written in the universe, and is protected by the law of conservation. The soul of Mr. X reads the memory and performs its action accordingly. This data is used by the soul to control the brain, which in turn controls our action organs for performing physical actions. This Figure-3 shows: (1) How destiny works (2) Why it is predictable and (3) Why everything in the universe is like a robot. In the diagram there is a concept of subtle body, which contains Intelligence, Mind, Sense organs, Identity, etc.

Mathematical Model Destiny law can be comprehensibly described using a simple mathematical model. The model will only illustrate the existence of an unique global destiny, and why the destiny of every individual is also unique and linked to this global destiny. This model cannot be used to solve for destiny of any event at any space time point. However, it shows the existence and uniqueness of the destiny law for every object.

All objects in the universe are continuously and simultaneously interacting with each other and for eternity. This law is quite obvious and is known as simultaneity law. We can describe this phenomenon by the law of conservation or the sigma law⁸ :

$$a_1x_1 + a_2x_2 + a_3x_3 + \dots + a_Nx_N = 0 \quad (1.1)$$

In the above expression all x variables are actions of all objects in the universe. They can be trillions in number but is finite, since universe is finite. The coefficients of each variable are used as scale factors or parameters that magically transform every action into a real number. The addition is zero, because law of conservation says nothing can be created or destroyed, they can only be transformed in shape or size and can be transferred from one point to another point by motion. Since everything is continuously changing we can rewrite the equation (1.1) and then redefine the coefficients using the same name:

$$\dot{x}_1 = a_1x_1 + a_2x_2 + a_3x_3 + \dots + a_Nx_N \quad (1.2)$$

Clearly the above expression will be valid for all variables, then we can repeat the equation (1.2) for each variable in the left hand side giving us a set of simultaneous differential equations. This equation then can be written in the matrix form as:

$$\dot{x} = Ax, \quad x(t_0) = x_0 \quad (1.3)$$

⁷ Photos, "Thinking Man"

⁸ Das, "Conservation laws of nature"

It is well known that the above differential equation has an unique solution for any given initial condition. This shows that the global destiny is unique and exists for all time. Thus no one has any freewill to change anything in the universe. If anything changes then everything changes. In the above equation (1.3) there is no control force, because we have considered the entire universe, and there is no outside from which a control force can come. Everything is included in the original sigma law (1.1).

Corporate model The concept of global destiny is clearly visible in the corporate model of our modern world. Before we start a project, we all come together in a meeting, define the tasks that need to be performed, we assign tasks to proper individuals, we then define our schedule and interfaces with each other, etc. This project plan is nothing but the global destiny of our corporation. Every day when we come to work we know exactly what we have to do. We cannot change our mind, and if we do then the entire project destiny for everybody will be disturbed. And why would you change your mind, when you jointly created the plan? We can then see how simultaneity law is working inside a corporation to produce an unique destiny for every individual.

When I am alone in the universe, I can have freewill. As soon as I get a life partner, my freedom reduces, we now have to accommodate each other to live together. When we get kids our freedom decreases again, when we start working for a corporation, our freedom again decreases. You can then imagine when all the souls of the entire universe are together and simultaneously interacting, every action becomes completely restricted and precisely defined. Destiny then essentially means that every activity has thousands of reasons as shown by the model (1.3). No single person is responsible for any single event. All events are created by all persons. Every event is a result of continuous action reaction for all past present and future times. Nothing can happen without taking care of all future events. Thus model (1.3) justifies the description of Figure-3.

The activities of UFO-ETs with humans on earth is truly a representation of simultaneous interactions at the global stage of the universe. This interaction is not just physical it is also technological. Do not think that UFO-ETs are false. There are thousands of videos and documents on the internet on this subject. If you do your own research carefully you will not only find that they are real, but they have been interacting with humans on earth for millions of years. We provide some examples in this article later.

MODERN SCIENCE

Since everything is controlled by the destiny law, the state of the art of the modern science and therefore our present society is also controlled by the destiny law. Thus we cannot blame anybody about the status, that is, we are all equally responsible for such conditions. This was all planned long before the modern society was even conceived. We will examine the characteristics of the modern science in the following areas (1) Physics, (2) Mathematics, (3) Economics, and (4) Biology.

We will find that there is an unified theory behind all activities of the modern science and they are completely controlled by money and money power. This money, of course, is also a product of the destiny law, and has naturally evolved over thousands of years. We will also find out that the Vedic science is not created by any individual and therefore money could not control it. It was entirely based on observation of nature.

MODERN SCIENCE - PHYSICS

Sending Galileo to jail, in 1633, was the turning point in the evolution of our modern society. Scientific community realized the consequences of going against money, money power, and discovering the truth. Carroll Quigley (1910-1977), a professor at Georgetown university and a mentor of the US President Bill Clinton (1993-2001), mentioned in his book, *Tragedy & Hope*⁹, that there are three negatives in our education system, and one of them is – “never to teach the truth”. After Galileo, therefore, the scientific community stopped observing the nature and decided to start with assumptions instead, to create the false theories. This way people can be kept busy and yet in ignorance. Satyajit Ray (1921-1992), an Oscar winning film director, in one of his films, *In the land of diamond king*¹⁰ said – “shutdown the schools, burn all the books, jail all the teachers. More you teach them, more they learn, and more they disobey”.

To illustrate the point, and be more specific, let us select Newton’s First Law, which we have studied in our high school science classes. Newton (1643-1727) said¹¹ – “(1) In the absence of any unbalanced force (2) an object will continue in motion (3) in a straight line (4) with a constant velocity.”

Have you ever observed any such object on earth or in space? No, of course you have never seen such an object. Item (1) in the law, is the assumption of isolated environment, which is impossible, because gravitational forces are always there. In the deep space and also on earth, the sum total of all gravitational forces from all objects of the universe, at every point in space, is non-zero, and is continuously changing in both magnitude and direction, because all objects in the universe are continuously moving. Since all objects are continuously moving, the item (3) is also not feasible, there is no straight line in the universe. Thus Newton’s first law is completely wrong, false, meaningless, and cannot work in nature.

This has happened because Newton did not observe the nature, like Galileo did, and instead started with two assumptions (1) and (3). The following statements can be found in a physics textbook¹² about Newton’s first law:

“We could hardly sustain that this principle (First law) is a strict experimental result. On the one hand it is not evident how to recognize whether a body is free of forces or not. Even if a unique body in the universe were thought, it is undoubted that its movement could not be rectilinear and uniform in every reference system.”

If you read carefully you will find that all theories of mathematics and physics start with assumptions, and therefore none of them can be correct. All results are thus nothing but manipulations of these assumptions, therefore all results are also assumptions. Assumptions can never become true no matter what you do with it.

Interestingly, Einstein assumed existence of inertial reference frame, which is a frame that moves with a constant velocity in a straight line. That is, Einstein assumed Newton was correct. Einstein also made another major assumption - that the light speed is constant, which has not been proven correct yet¹³. Heisenberg’s uncertainty principle similarly assumes that the position and the momentum of a particle are related by Fourier Transform (FT), a completely

⁹ Quigley, *Tragedy and Hope*

¹⁰ Ray, "Land of the Diamond King"

¹¹ Serway and Jewett, *Modern Physics*

¹² Ferraro, *Space-Time*

¹³ Das, "Light speed is not constant"

unrealistic assumption, and he also ignored the fact that the FT uses infinity, which is not there in nature¹⁴. A physics textbook confirms the above assumed relation:

“Further, since the wave function $\Psi(x, t)$ is a probability amplitude for position, its Fourier transform $\tilde{\Psi}(p, t)$ is the probability amplitude for momentum”¹⁵.

Assumptions vs. Approximations There is a difference between assumptions and approximations. If you have ten forces acting on an object, and if you consider only one of them, then it is an approximation. But if you neglect all of them, that is, consider an isolated environment, then that will be an assumption. Besides there are other kinds of assumptions too. For example using infinity is an assumption. A large number is never an approximation for infinity. Replacing infinity by any finite number, will change the mathematical theory completely¹⁶. Taking light speed as constant is also an assumption. Existence of a straight line in nature is another similar kind of assumption. God, as the creator of the entire universe is an assumption also. An important thing to remember is that nature, and engineering which is a part of nature, cannot accept assumptions and will remove them automatically from all engineering experiments, making the theories to fail. Thus no experiment can verify any theory. We must observe the nature, and that is the only way to find the truths.

Since all assumptions are invalid for nature, then they are all false. Something that is false can never become true, no matter what you do with it. Thus all theories will remain false, because they are nothing but only manipulations of the initial assumptions. Thus entire modern science must be wrong or false for nature. Then why are we doing it - because we are not free, and are guided by the destiny. Destiny basically means trillions of reasons, spanned over billions of years, past, present, and future.

It must be understood clearly that there is a heaven and hell difference between science and engineering. Engineering is correct, because engineering uses objects of nature. However, since engineering also uses false theories and false money, engineering is full of patches and kludges, therefore very unreliable, and pollutes environment. We give an example to illustrate the difference between the science and the engineering.

GPS Design We are all very familiar with the GPS technology, because most of our cell phones use GPS receivers, which receive data from the satellites rotating around the earth. In physics there is law called Kepler’s law, which says that a satellite will rotate around earth in an elliptical path, and then the law gives a mathematical formula to find the position of the satellite at any point in time. This formula did not work for GPS satellites. So, engineers, physicists, and mathematicians modified the law significantly but still could not make the Kepler’s law work. Eventually the GPS ground system was used to directly measure and find the positions of the satellites, upload that data to GPS transmitters, which then broadcasted that data to our hand held receivers to provide the desired accuracy. Even this did not work properly, so the ground station repeats the process every two hours or so, to maintain the accuracy requirements.

Why did Kepler’s law fail to work? The assumption ellipse is defined only on a plane of paper and around a stationary center point. But earth is moving around sun, and takes the satellite with it. Thus the path of the satellite can never be an ellipse. There are other objects,

¹⁴ Das, “Assumptions in Quantum Mechanics”

¹⁵ Phillips, *Quantum Mechanics*

¹⁶ Das, “Finite Time Engineering”

like moon, and planets of the solar system, which also influence the position of the satellite. The sun is not stationary either, it is travelling along one of the spirals of our galaxy, that spiral is also rotating around the central core of the galaxy. Thus the path of the GPS satellite is immensely complex and beyond our imagination, and therefore cannot be translated using a simple symbolic language like mathematics. This example shows why our engineering is so full of patches and kludges. Consequently, our engineering cannot be reliable at all.

The above GPS example shows that mathematics is not good for nature and engineering. In reality mathematics is not necessary at all for designing engineering systems. All we need is good measurement systems involving good sensors just like human body has. Using measurements, just like GPS ground system, we can design any engineering system in much more reliable way¹⁷.

MODERN SCIENCE - MATHEMATICS

Real numbers are false. If you write (M1): $1+2=3$, most people will understand its meaning. One orange plus two apples make three fruits. But to a mathematician (M1) is a completely wrong application of mathematics. One, two, and three are real numbers, they are not for apples, oranges, etc. One, two, and three are points on a real line, which is a straight line. And the numbers are equal distance apart starting from the point zero. Thus addition is defined only for real numbers, and not for anything else. Here only distances are added, two apples cannot be added. There are many such properties for real numbers. Any textbook on real analysis will describe them¹⁸. Thus real numbers are not objects of nature and therefore must be false, according to our definition of truth (T1), and cannot be applied for the description of nature.

No straight line. There is no straight line in nature. Since all objects in the universe are moving continuously, no three points on a straight line can remain on that straight line for more than a moment. Thus the foundation of mathematics, a straight line, is not meaningful for nature. Since engineering uses objects of nature, and also interacts with nature, mathematics cannot be applied to describe both engineering and nature.

No Infinity. Infinity is a very important concept in mathematics, however, infinity is not there in both engineering and in nature. The characteristics of any mathematical theory that uses infinity will magically change completely if you replace infinity by any finite number, however small or large. We can illustrate it¹⁹ using the Laplace Transform (LT), a very commonly used tool in engineering and physics. Similar effects can be shown²⁰ for the Fourier Transform (FT) also.

Infinite Laplace Transform (ILT) Laplace Transform (LT) is defined using an integral as shown in (2.1):

$$F(s) = \int_0^{\infty} e^{-st} f(t) dt \quad (2.1)$$

In expression (2.1) the variable t is usually considered as time. The integral limits show that the time must be valid from zero to infinity. Thus the function $F(s)$ on the left hand side, called infinite Laplace transform (ILT), will be valid only for infinite time systems. Consider the step function defined over infinite time:

$$f(t) = 1 \text{ for all } t \geq 0 \quad (2.2)$$

¹⁷ Das, "Embedded system design"

¹⁸ Trench, *Real Analysis*

¹⁹ Das, "Finite Time Engineering"

²⁰ Das, "Assumptions in Quantum Mechanics"

Using the definition (2.1) we get the expression for the infinite Laplace transform (ILT):

$$\begin{aligned} \mathcal{L}(1) &= \int_0^{\infty} e^{-st} \cdot 1 \cdot dt \\ &= \frac{1}{s} - \frac{1}{s} e^{-sT} \end{aligned} \quad (2.3)$$

$$= \frac{1}{s} \quad (2.4)$$

The last step is obtained by using infinity for T in the previous step. We can see from (2.4) that the ILT has a pole at $s = 0$. This creates singularity in the engineering systems. Employees in corporations use such techniques, without knowing that they are using infinite time theory in finite time engineering, leading to complex patches and kludges. This is obvious because we are using wrong theories.

Finite Laplace Transform (FLT) Let us now consider an example with finite time T to bring out the fact that the Laplace transform is based on infinite time assumptions, that is, it cannot be used for finite duration signals. The finite duration step function $f(t)$ is defined by

$$f(t) = \begin{cases} 1 & 0 \leq t \leq T \\ 0 & \text{otherwise} \end{cases} \quad (2.5)$$

Using the definition (2.1) we get the expression for the finite Laplace transform (FLT):

$$\begin{aligned} \mathcal{L}_T(1) &= \int_0^T e^{-st} \cdot 1 \cdot dt \\ &= \frac{1}{s} - \frac{1}{s} e^{-sT} \end{aligned} \quad (2.6)$$

$$= \frac{1 - e^{-sT}}{s} \quad (2.7)$$

Observe from expression (2.7) that the FLT does not have any poles, that is, a value of infinity for $F(s)$ at the origin. At $s=0$ the expression (2.7) takes 0/0 form. The FLT completely changes the nature of LT. In this case the FLT is an analytic function with no singularity. The situation will be true for all kinds of functions, and not just for step function. Thus real engineering, which is a finite time system, does not have any poles.

This example shows that just because something is used in engineering and engineering works, it does not mean that this something is correct.

An entire theory of control systems, signal processing, and communication engineering has been developed using this pole-zero concepts of Laplace Transform. Transfer functions, Bode plot, root locus, are taught extensively in undergraduate classes. You can now see that they are all wrong. Finite time engineering cannot have poles.

The Laplace Transform theory must be revised and rewritten for applications in finite time engineering²¹. For embedded engineering applications, ILT is not a correct tool and its use will make the embedded engineering software unreliable. But in practice that is what happens, engineers will have to add patches and kludges to make engineering work. Thus engineering has become complex because we are using wrong or false theories.

²¹Das, "Finite Time Engineering"

In reality all theories are wrong, and none of them works or can work for any engineering applications. In fact engineering can be designed completely without any theory. Human body is the best example of nature's engineering product. We do not use any theory when we walk, or when we do our daily activities. This happens because we have the best sensor technology inside our body. The same can be done for engineering also²². It should be mentioned that, since mathematics is wrong, and physics uses mathematics then physics must be wrong too. By wrong or false, we mean that the subject is not applicable for engineering or nature.

Modeling an Apple Can you describe an apple using mathematics? Did you ever realize that different parts of the same apple has different tastes? How did that happen? This means every molecule of the same apple has different tastes. This in turn means every atom, and therefore every electron has different tastes. But physics do not recognize such properties of electrons. There are billions of electrons in an apple, and we cannot model them using any mathematical algorithms. This complexity or "taste" is there in every object of nature and therefore mathematics cannot be used to describe any object of nature. If you cannot describe one apple, then you cannot compare two apples. Thus it is wrong to say that this apple costs \$10 and that apple costs \$15.

You cannot even compare the shapes, colors, etc., of any two apples. It is impossible to identify the position of a point on the surface of an apple, using any algorithm. Where would you place the origin of your coordinate system on one apple? Can you locate the same point in another apple? No, you cannot, two apples are completely different. If you think this way you will realize the immense complexity of nature, which is beyond the capabilities of our mathematics. Thus mathematics is false or wrong for both engineering and nature.

MODERN SCIENCE - ECONOMICS

False money. Money is a real number, therefore money must be false, since real numbers are false, as explained before. Economy must be false then, since money is false. We can verify from the graphs of the economic performances that the wealth gap is increasing and poverty is also increasing in USA. We can also see from the graphs that our economy is never stable, it goes through recessions every now and then; and these are planned events too²³. In the figures 4 and 5, the horizontal x-axis represents years from 1967 to 2009. The vertical bars represent the economic recessions, their widths represent the duration of the recessions. The vertical y-axis has been normalized to unity value of income.

Thus the economy that creates poverty, repeated recessions, wars, discriminations, etc., cannot be good for the society, and therefore must be false. It should be obvious that it is the false money that caused such a state of the art. Something false can never create anything true. You do not need to understand economics, if you observe a homeless man lying on a sidewalk in the USA, you will immediately know that there must be something wrong in the economy.

Profiting is stealing Profiting is the core activity of our economic system, and can be considered as the foundation of our present Central Bank Economy (CBE). Let us illustrate how profiting creates poverty. A CEO manufactures a product at \$5 per unit. He then sells it at \$15 per unit, thus making a profit of \$10 per item. Thus the cost of the product is \$5 for the CEO, and it is \$15 for all of us. Thus every time we buy an item from this CEO we lose extra \$10. And the CEO becomes richer by the same amount.

²² Das, "Embedded system design"

²³ Das, "Federal Reserve"

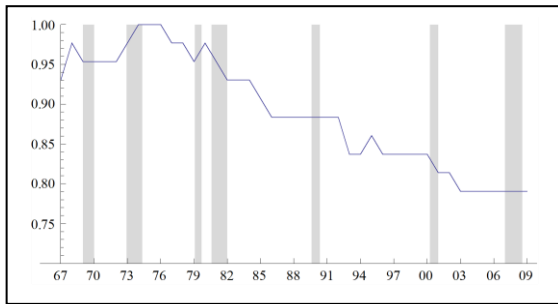


Figure-4 Income of bottom fifth and Recessions

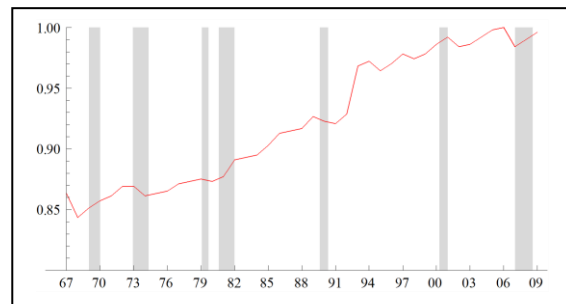


Figure-5 Income of top fifth and Recessions

This way every business is stealing wealth from people, and this stolen wealth gets accumulated to a small number of people making them richer and the poor is getting poorer. There is no win-win under the CBE, it is always win-lose. Win-lose is a law of nature, in physics it is called the law of conservation. In every apparent win-win case, if you look carefully, you will always find a third party who will be loser. Giving higher salary, interest charging, creating unemployment, creating recessions, etc., are all methods of creating poverty by transferring wealth from the poor to the rich. This is happening because money is a real number, and therefore false, and can be easily manipulated to violate all the laws of nature. This shows that the CBE is not a natural economy, it is artificial, yet it is controlling the entire humanity and our destiny.

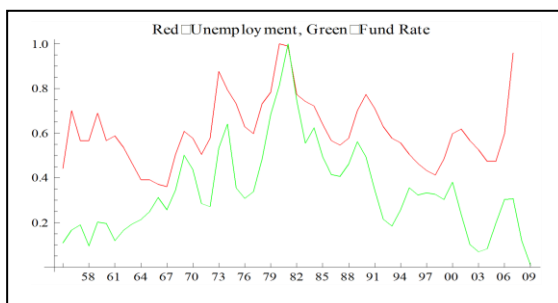


Figure-6 Funds rate and Unemployment

The two graphs in figures 4 and 5 show how top fifth of the population are becoming richer over the years and it will always continue to do so as long as money is there. In the same way you can see how the bottom fifth of the population is going downhill and becoming poorer. Thus the real definition of poverty is the wealth gap between the rich and the poor, because that wealth gap is the true measure of how much is stolen from the people. For details about the data sources and the processing of data, take a look at²⁴.

Every object, including all humans, of this earth has been assigned a price tag. Therefore you cannot eat if you do not have money. You cannot also sleep on the sidewalk, because someone else owns that sidewalk. Thus by manipulating false money the CBE has taken the democracy away from the people. Since the money is false, all such assignments of money value to objects of nature, must be false also. Thus there is no reason to justify that apples is \$10. Similarly, you cannot rationalize that, Mr. X will get \$10/hr and Mr. Y will get \$1000/hr as their salaries. Thus false money is forcing us to accept anything or do anything that CBE wants us to do. Anybody can be paid to kill anybody, and that person must perform that action, otherwise he or his loved ones will be killed. For the same reason, physics also can be wrong, because that is what CBE wants. The entire education system must be wrong, because it is controlled by money power originating from the central bank (CB).

²⁴ Das, "Federal Reserve"

The graphs in Figure-6 show how the core interest rate, which is also known as Federal Funds Rate (FFR), can be manipulated to create unemployment. FFR is controlled by the central bank (CB), independent of anything, and the government does not have any control over CB. On the other hand the CB can completely control the government by controlling its supply of money, and its lobbyists by using the well known carrot and stick policy. The two curves in Figure-6 show almost complete match in shape. Again, for the exact details, of how the data was obtained, and how graphs were transformed, see the original source²⁵. It was Ben Bernanke, a professor at Princeton, and later the chairman of the Fed, who first pointed out such feature of FFR²⁶.

Moneyless economy (MLE) It may appear that there is no way to run an economy without money, but that is not correct. Since money is false, money cannot be necessary to run any real economy. Let us look at money in a different way: Why do we need money? You give me money so that I can work for you. Similarly, I need your money to buy my food and shelter. That is the only purpose of money. Why not then I work free for you and the governments give us free shelter and food. That is, we work free and get everything free. This system is called moneyless economy (MLE).

Under MLE there will be no poverty, no unemployment, and all of us will have full democracy. MLE will automatically eliminate wars, pollutions, migration, racism, gun violence, religious violence, etc. MLE can bring heaven on earth. MLE will also create One World Order, a dream objective for the CB. For more details on MLE take a look at²⁷.

MODERN SCIENCE - BIOLOGY

Placebo Medicine Any time a new medicine is tested, the medical industry tests the drug to a selected group of humans. Then they divide that group in two sub-groups. One group is given a placebo medicine and the other group is given the real drug under test. Placebo medicine is a false or fake medicine, like plain water, or sugar pill, etc. The drug industry has the data²⁸ to show that all diseases have been cured by placebo medicine. This then raises the question – is the drug effective or meaningful? Or in other words is the medicine effect nothing but the placebo effect? Although all medical doctors know about the placebo effect, but modern medicine does not have any answer to such questions.

Similar results have been observed in the case of placebo surgery also. People have been healed by fake surgery, where in reality nothing was done to the patient, but the patient was made to believe that a real surgery was performed on him. This again shows that modern health care system does not know how things work in practice or what actually is the real cause behind such placebo or medicinal treatment.

There is a video that demonstrates, in real time under ultra sound, that a yogi cures cancerous tumor within three minutes²⁹. UFO-ETs have used the similar methods on human abductees to activate their yogic powers. There are hundreds of videos on human abductees, describing their experiences and their body implants. One UFO-ET and human hybrid woman has given eye-sight to a blind woman, and the case is documented in a book, Raechel's Eyes, written by the mother of the blind woman. There are many such examples of miraculous cure, performed by high level yogis, and written in many books on yogis. Again, about UFO-ETs

²⁵ Das, "Federal Reserve"

²⁶ Bernanke and Blinder, "The federal funds rate"

²⁷ Das, "Moneyless economy"

²⁸ Rankin, "Scientific proof of healing"

²⁹ YouTube, "Powers of the mind"

you should not rely on governments, but rely on your own research on the internet documents. UFO-ET cases show that Veda is truly valid for the entire universe.

Evolution Theory This theory says that objects evolved from one form to another form. There are many different types of fossils that show such evolution. But these are only effects of evolution. Thus evolutionists did not provide any explanations about the causes of such effects. If the causes are not known then the effects are not understood also. They say that natural selection causes evolution³⁰. But what is natural selection? Again it says environment selects the traits. But environment is same as nature. Thus the causes or the root cause has not been explained, justified, or observed in nature by the evolutionists.

Some articles say that the DNA changes, genetic code changes DNA, viruses change the genetic code, etc. But the same question remains – what causes a virus to change things. If a virus can change something, then it means that the virus has freewill. But that is not possible, we have shown here that nothing, no living or nonliving object, has any freewill. It is the modern science that says there is no freewill, and that is correct.

As mentioned, if you ask question after question, then you will find that the last question has never been answered correctly. If the last answer is not known, then the first answer is also not meaningful. And contradictions for such answers can always be observed in nature, because nature always demonstrates the truth. We have to learn to observe the nature carefully, just like Galileo did. We need to change our scientific process to search for truth. However, yogic power with divine vision (third eye) will always reveal the truth.

THE TWO SCIENCES

We can thus see that there are some fundamental differences between modern science and Vedic science. Most significant one is that the modern science is based on assumptions; and the Vedic science is based on observations of nature. Another difference is that in modern science there is no concept of root causes, as a result it often does not know which one is the cause and which one is the effect. The scientific process is also very wrong; it tries to do engineering experiments, but does not know that assumptions cannot be verified, because engineering or nature will automatically reject all assumptions. Thus if you cannot verify the assumptions then no theory can be verified also, because all theories of modern science are only manipulations of assumptions. It must be recognized though, that all engineering experiments are correct, and they do demonstrate some laws of nature, but they do not verify any theory of modern science.

CAUSE AND EFFECT

We never do anything without any reasons. Our reason is the cause, and our action is the corresponding effect. Without a cause nothing can happen, not even evolution or creation. Modern engineering recognizes two types of causes³¹ – (a) *material cause* and (b) *efficient cause*.

Observation-2 You make a pot out of clay. The pot is the effect and clay is the *material cause*. Without this clay that pot cannot be made. We must also have a specific kind of clay to make a specific kind of pot. Not any pot can be made from any kind of clay. In addition, you

³⁰ Ayala, *Evolution and Creationism*.

³¹ Virupakashnanda, *Samkhya Karika*.

must require an expert human being, that is, a conscious, intelligent, and efficient person, who can correctly rotate the pottery wheel, and also simultaneously use his hands properly, to transform the clay into a pot. Not anybody can create such a pot, he must be efficient for that specific task. Without such a person the pot cannot be created. This human being provides that *efficient cause*.

All engineering corporations look for experts who can provide such efficient causes for their projects. Unfortunately no science theories, including evolutionism, talk about such efficient causes. The following law is very fundamental and may be quite obvious, once you know it and understand it:

Law1 Effect is ever existent³² (SK.9).

In observation-2 we find that the pot was already there inside the clay. The potter only extracted it out from the clay. All that happened is only a transformation of the clay to a different shape. Thus the effect was hidden in the material cause. This also shows that the cause and effect are similar in essence. Things that are nonexistent can never become existent. Thus the effect is eternally existent inside the material cause.

This is the law of conservation that we know from physics. Bible also has a similar statement – “There is nothing new under the sun”. To create a specific product you not only need specific material, you also must find a specific person trained, skilled, and efficient in that technology. Not anybody and any material can make the product happen. All efficient causes must have these properties – skilled, conscious, intelligent, etc.

ROOT CAUSES

We have two types of causes, material and efficient. We trace each one to find the corresponding root causes. Since these causes are two distinct types, we will find two distinct types of root causes also.

Matter Take any object in nature and ask the question what this material is composed of. You will find a few new materials. You can then repeat the same question again for all of these new component materials and this way you will find many more new materials. But after a finite number of iterations you will come to a same root material for all new materials. The iterations will be finite because the universe has only a finite number of objects. This final root material must be invisible, otherwise you will have to ask the same question again. This root material must be causeless or unmanifested. This invisible particle must have caused all the materials, because all effects must remain hidden in the material causes, by law1. This invisible root material must be the tiniest particle, because it produced the tiniest visible object.

You will not be able to see the root material using your ordinary eyes. You must acquire highly sensitive vision, called the third eye, as we have demonstrated in the yogic power section, to see such normally invisible objects and their characteristics. This root material is called the primordial nature, nature, matter, or prakriti in Sanskrit. Bible calls it dust. This dust is not the dust on our earth, but it is the cosmic dust, that spans the entire universe. All objects of the universe are created from this root material. Thus in a very rational way, by repeated questions, we can find the invisible, eternally existent, and unmanifested root material.

³² Virupakashnanda, *Samkhya Karika*.

Soul Along the same line, if you ask repeatedly – what causes this efficient cause – you will ultimately arrive at the root efficient cause, after a finite number of repetitions. This root efficient cause is called the atman, soul, or spirit. It has the consciousness property, because it is efficient. This root efficient cause must also be a tiniest, invisible, and eternally existent, uncaused or unmanifested, particle for the same reasons we have used for the root material cause. Thus we have demonstrated the existence of soul in a very rational way, by asking a simple question repeatedly. Since everything is originated by this soul, every object in the universe has a soul, and that soul has created that object using the root material. Bible says – “God is spirit”, and spirit is same as soul. Thus the idea of root efficient cause, which is the individual god, or individual creator, is deeply embedded in the Bible also. We will later give three other independent proofs for the existence of soul.

ETERNALLY EXISTENT

Law2 The unmanifested cause exists³³ (SK.15-16)

This law explains why both root material cause and root efficient cause exist for eternity. One of the major reasons we could come to the root cause is because our questioning had stopped due to the finite nature of the universe. As a result the root causes had to be invisible, causeless or unmanifested, i.e. objects without any further cause behind them. If there were no unmanifested causes then we would have found infinite number of objects in the universe, which is not meaningful. Just like oxygen and nitrogen molecules span the entire atmosphere of the earth, and they are finite in numbers, similarly the root material and the root efficient cause particles also cover the entire universe and are finite.

These two types of particles, matter and soul, must be eternally existent – because nonexistent cannot become existent. This also means all effects must be eternally existent inside the root material cause by Law1. Thus the universe must have emerged from this cosmic dust as Bible has mentioned. When the universe dies, it will definitely die because all manifested objects die, then it will merge into this root material. These ever existent root causes will be visible to any high level yogi at any time, including the modern times.

We see that all objects are homogeneous in nature, that is, they all have the property of knowledge, ignorance, and energy. All objects go through a birth maturity and death process. We see in yogic power section that all objects have consciousness, intelligence, mind etc. In reality every object has a subtle body, which contains mind, intelligence, and the identity, and few other things, as shown in Figure-3. This homogeneity or unified design means the existence of same unmanifested root causes, having these properties.

Similarly, all objects have different characteristics which must come from the efficiency of the root efficient cause and characteristics of root material cause. All objects are made from root material which has three properties Sattya (truth, light, knowledge), Tamas which is the opposite of sattya or ignorance, and Rajas which means mobility, energy, controller, etc. These properties combine at different proportions and continuously vary according to the desire of the soul. Thus object characteristics are not finite, not discrete, and can vary continuously, which creates distinct destiny for every individual in every incarnation.

It is this combination of the three properties of the unmanifested root material cause that changes the human body and gives the capability of flotation, transparency from camera, ability to pass through walls, protection from diseases, healing powers, etc. These are the combinations that tune our body to remain better connected to our soul. These three properties

³³ Virupakashnanda, *Samkhya Karika*.

are like Red, Green, Blue (RGB) colors of our television screens, which can give the infinite variety of colors by controlling their proportionality. Such abilities can be acquired by birth also, as we see in the yogic power section, and will explain many observations in evolutionism.

THEORY OF CREATION

Law3: Nature exhibits to the soul, and the soul wants to enjoy, learn, and emancipate. Therefore the matter and the soul join together like a union between the lame and the blind. From this conjunction proceeds the creation³⁴ (SK.21).

Thus, I got excited seeing the beauty of nature, and my soul created my physical body to enjoy the nature. But because of the three properties I got delusional and experienced suffering. Nobel Laureate Poet Rabindranath³⁵ said – “I am a lost traveler visiting your world”. Then over many life times, through the yogic meditation we learn to control the three properties to acquire a physical body that can help us to emancipate. But we cannot escape reincarnation³⁶ (Gita 2:27), because we are guided by the destiny³⁷. We can compare and say according to the Bible - a spirit joins the dust to create an object of the universe.

Existence Of Soul Theories described in Vedas are not fictitious. These theories can be verified by observing the nature, as mentioned in the definition of truth (T1). Although the Vedas were discovered by using yogic meditation, the results can be observed in nature in every decade in every century, by any careful observers, like Galileo. Ian Stevenson³⁸ was one such observer, and the following descriptions can be found from some of his research papers. Some say – Stevenson will be considered as the Galileo of the modern century. Both Galileo and Stevenson were high level yogis. The two examples will prove the existence of soul among other things.

Observation-3 A baby boy was born in a hospital with birthmarks of a bullet wound on his chest and back. When the boy learned to speak, he casually but spontaneously, talked about his past life, which can be summarized as the following. His name was N in previous life. He died in hospital H of town T on date D, due to a gunshot wound on his chest. Over time, the research scholars, news reporters, parents visited the hospital H and verified everything that the boy had said from the autopsy records of the man named N, who indeed died on the date D. Such a kid, who remembers his/her past life, is known as Jatiswar in Sanskrit.

On another such jatiswar case³⁹, the boy had complications, and the doctors had to perform surgery on the boy to save him. The doctors found the complete straight line bullet path inside the body of the baby, exactly matching the autopsy record of the dead man of the boy's previous life. For more observations and details see⁴⁰, and the references mentioned there.

Consequences Of Observation-3 From the above Observation-3 we can draw the following conclusions. (a) The babies are not naturally grown inside the mother's womb. The soul of the baby manufactures the human body according to its own destiny. That is why every

³⁴ Virupakashnanda, *Samkhya Karika*.

³⁵ Tagore, *Rabindra rachanabali*.

³⁶ Prabhupada, *Gita*.

³⁷ Das, “Theory of destiny”

³⁸ Stevenson, *Cases of reincarnation*.

³⁹ Pasricha, “Previous Lives”

⁴⁰ Das, *Soul Theory*.

baby is different, both physically and mentally. (b) Since during the growth period, there was no brain for the baby, all intelligences and effects came from the soul of the baby, which is the origin of the efficient cause. (c) Soul controls all our activities, including the genetic code, according to the destiny of our life, right from the conception. (d) Nothing can happen to, or can be performed by any object in the universe, without the explicit command from the soul of that object⁴¹ (SK.31). (e) Thus physical changes found in fossils cannot happen due to the evolutionism theory, and these Jatiswars prove the existence of soul, reincarnation, yogic powers, gods, and also the creationism. (f) All objects are different, including two animals, and two humans.

THERE IS NO GOD

This research is not about religions and is also not about atheism or theism. It is about giving proofs by direct observation of nature, just like Galileo did, and can be found in Vedas as pointed out. Veda is not about religions, Hinduism is, and Hinduism does not follow Vedas, just like Christianity does not also follow Bible.

Brahma, Vishnu, and Shiva are considered as Gods by Hinduism. Some Upanishads say that they are the creators of the universe, but such Upanishads are not known to be written by seer yogis. And Vedas do not say that they are the creators of the universe. They are the highest level seer yogis. They also reincarnate like humans, and they are also guided by the global destiny of the universe.

From the discussions on Observation-3, and the analysis of root causes, we find that every object is created by its own individual soul. That is, you are created by your own soul and I am created by my own soul. This then means that there is no God who has created the entire universe. If we accept that there is such a God then it will create two contradictions: (1) who created such a God and (2) such a God will be under the control of destiny, since all events in nature are precisely predictable by any high level yogi.

YOGIC POWERS

In this section we discuss briefly yogic powers of humans (adults and children), animals, physical materials, man-made objects, and UFO-ETs. We also discuss yogic power acquired by meditation and also by births. In short, every object in the universe has yogic powers.

Nothing from any religious books, like Vedas or Bible, can be understood without a thorough knowledge of yoga, yogic meditation, and yogic powers. Yoga is the foundation of Vedas. Vedas are considered to describe eternal knowledge or truths, recorded permanently in the memory of the universe, and were discovered only by yogic methods. You can see this truth by your own eyes if you acquire such yogic powers via yogic meditation. There are many books, Govinda⁴², Rama⁴³, Yogananda⁴⁴, Brunton⁴⁵ etc., in the yogic literature written by yogis about their own Master yogis (Gurus). Some of these magical powers have been reviewed, and summarized their contents, in the yogic power chapter of the free e-book on soul theory⁴⁶.

One such yogi was Swami Rama, who visited a research institute in USA during the early part of 1970s. He was the first yogi from India, to allow himself for scientific testing on his yogic powers of human physical bodies. These experimental results are documented in the

⁴¹ Virupakashnanda, *Samkhya Karika*.

⁴² Govinda, *White clouds*.

⁴³ Rama, *Himalayan Masters*.

⁴⁴ Yogananda, *Autobiography of a yogi*.

⁴⁵ Brunton, *Secret India*.

⁴⁶ Das, *Soul Theory*.

book by⁴⁷ and the relevant parts of it are available free on the internet. The results appeared on all major US TV channels, magazines, and science books during that period.

The yogic powers that modern masters have demonstrated can be found in Vedas (Ramayan, Mahabharat, Puran), in Bible, and also in the books of Judaism. This fact also proves that Vedas were known all over the world. As a result high level yogis are still here in all continents, in our present days. In the yoga world Shiva is considered as the original or first guru and inventor of all yoga methods. Nobody can surpass his powers as he demonstrated and are described in Purans. Living objects like UFO-ETs have also demonstrated the same yogic powers at much higher levels and in numbers than our present day earth yogis. If you think government or money power will tell you the truth about UFO-ETs then you will never learn about them. You must become a seeker, and only then you will find that all truths are there on the internet. Thus Vedas are not just for earth, it is for the entire universe. The fact that UFO-ETs know yoga proves that nobody invented Vedas, and it is written in the memory of the universe.

Bible says – “Be still”. This is nothing but making your mind and physical body motionless, unperturbed. This is the first principle for yogic meditation. Bible also says – “If you have the ears then you will hear.” That is, using meditation prepare your sense organs, like ear, nose, eyes, etc. Better you prepare them, better will be your connections to your soul and therefore to all the souls of the universe. You will be able to hear the sounds or songs of the synchronized nature of the destiny. Such Bible statements prove that yoga is not new to the western world.

Experiments on Yogis Swami Rama has demonstrated⁴⁸ that he can raise the temperature on two edges of the same palm of his one hand. The colors at two edges were different also. The temperatures were measured using thermistors and other recording devices. In another experiment he reduced his heart beat from 74 to 52 beats per minute. He also demonstrated that the T waves were taller than the R waves, indicating differential control of different sections of the heart. Using EKG machine he also demonstrated that his heart fluttered at a very high rate averaging 306 beats per minute for 16.2 seconds. This will show no pulse rate on chest. He could create a tumor at any place in his body and eventually make it disappear also. He was photographed with a body chakra, situated on spinal cord, glowing on his chest.

It is also well known that Masters are transparent to camera photography, that is, they cannot be seen in photographs. Thus human body can be completely changed by mental power alone. Swami Rama said a very deep level truth – “*Our entire physical body is inside our mind, but no part of mind is inside the body*”. It is then quite natural that animals also will be able to change their forms as detected in their fossils, using their own yogic powers. Thus animal body evolution is a result of soul power and guided by destiny. Animals also do not have freewill.

Placebo surgery A police officer threw his ax to a man, suspected of murdering⁴⁹ and running away from the crime scene, which partially chopped his hand. But the man was still running and severely bleeding. The police eventually stopped him, realized that he was a yogi, and expressed his deep sorrow and forgiveness. The yogi adjusted his hand back to its correct position and the bleeding stopped immediately. The yogi then said to the police officer, come

⁴⁷ Green and Green, *Beyond Biofeedback*.

⁴⁸ Same as 46.

⁴⁹ Yogananda, *Autobiography of a yogi*.

after three days, under that tree, to examine the wound. With unbelievable surprise the officer found that the wound was completely gone with no marks of cuts or scars.

An UFO-ET broke his leg when their UFO crashed in a Brazil site. The military called a local doctor to fix it. As soon as the doctor put the broken bones together, he immediately started healing, and next morning he was completely cured. This incident was described by the doctor, who was told to remain silent, almost twenty years later to a Hollywood film director who went there for research for his film on UFO. There is a YouTube video on the subject. Thus placebo surgery is a simple fact for any high level yogi.

Defying gravity Trailanga swami demonstrated floating over water, passing through walls. UFO-ETs also pass through the walls when they abduct humans. They can make their human abductees to float with them and pass through walls to their UFO. So, there are some yogic miracles on the normal human body that can make us float, pass through the walls, make our body transparent to camera, change their body forms, etc. Why not then the same things can happen for some animals and creatures on earth as demonstrated by their fossils? Therefore, these are not evolutionism, but clear cases of creationism, created by their individual souls and according to the destiny. This also shows that genetic code is not fundamental for physiology, the code is simply an effect. Such examples prove that modern science does not understand gravity.

Yogic powers by birth Nature has demonstrated that people can be born with yogic powers, but with limited capabilities and for limited areas only. Magnus Carlsen (1990-) is a world champion chess player. He could see⁵⁰ the chess boards without looking at them. He defeated ten players, playing simultaneously, sitting behind his back, and without looking at their boards. Carlsen had this divine vision (third eye) only for chess board games, and not for anything else.

Nandana (2004-) a 9-year old autistic girl could read⁵¹ her mother's mind continuously and completely. She was tested by giving her mother a large number to read from a paper, and the daughter immediately typed it correctly on her computer. Similarly, her mother was given two lines of English sentences to read, and the daughter reproduced it on her computer. We can see that such powers are very limited. But anybody can acquire them at much higher level using yogic meditation, depending on the quality of meditation. If humans can, then animals can be born with yogic powers also explaining the root cause of evolutionism.

UFO-ETs and ET-human hybrids are all very high level yogis by birth and probably they do not need any yogic meditation to acquire such powers. Such observations are not found in Vedas and even in ancient Vedic periods. ETs can transfer their yogic powers very easily to human abductees. The body implants recovered from UFO-ET human abductees have also yogic powers. Such materials can grow human tissues in them; they can even get joined together automatically when broken; they are very hard to break though; diamond cutters cannot cut them. They stop functioning when taken out of the bodies of the abductees⁵², also see⁵³.

⁵⁰ YouTube, "Magnus Carlsen"

⁵¹ Saseendran, "Miracle Girl"

⁵² Das, "Body Implants."

⁵³ Das, "RAECHEL'S EYES."

External form changes All the changes that the evolution theorists have noticed in the fossils can be explained by yogic powers of souls. It is known to biologists that certain species can change their sexes when they desire. Such observation of yogic powers prove that more sophisticated and exotic observations of completely changing or transforming human body to a different animal, like a tiger, as described in the Mahabharat story, is absolutely meaningful and feasible. Creating a human being, without human sexual relations, and out of nothing with very specialized physical and mental characteristics, are described in Bible, Vedas, and also in the books of Judaism. Modern yogic literature has described a wide variety of human experiences that cannot be documented in such a short paper. A little thinking will show that every activity is a yogic activity. The fact that I am moving my hand is the power of my soul. Without a soul I will be dead even with a perfect body; and has been demonstrated by Master yogis⁵⁴ and⁵⁵.

Transferring soul A yogi with a very old physical body came to know that a dead body in good condition, of a young man, will come floating on a river at some location. The yogi went there, picked up the dead body from the river and then cast off his own old body, his soul entered the young dead body, and he continued to live in that body as a young man⁵⁶. He had his all memory, his walking style, and voice of the old man. This was possible because he was a high level yogi. This example shows that a soul knows how to wake up and control a different dead body. It will be impossible to imagine such a capability for our computers. In a broken computer, whose program you do not know, and if you replace the memory chip with new chip, with your own program, then you can be 100% sure that the computer will not work. We do not have such a technology.

In another similar case, two young boys died around same time and in close distance. One body was very heavily damaged. The soul of the damaged body entered the other body and continued to live in that body with the memory and history of the damaged body. This boy then told people what happened to him, and gave convincing proofs to his local people⁵⁷. This boy was not a yogi, therefore this incident happened automatically by destiny only. Every event is a destiny event, but in the first example we can see many related events happened before switching the body.

These examples prove that the souls exist, we all have souls, and the soul is the controller. There are many proofs of existence of souls in the all three areas of: yogic power, destiny, and reincarnation⁵⁸. None of these capabilities can be proven by evolutionism. On the other hand the evolutionism is clearly explained by the yogic power of souls and the destiny law.

Predictions before birth It is possible to predict when and where you will be born and with what features. It will be equally feasible to do the same predictions for any object in the universe, depending on the quality of the high level yogi. Thus the evolution of every object can be predicted too before it happens.

A Himalayan yogi came down to a city to meet an old aged couple and told them that eighteen months later they will give birth to a baby boy, who will have a hole in his right ear. And the yogi will take the boy some years later as his student. This boy eventually became Swami Rama.

⁵⁴ Govinda, *White Clouds*.

⁵⁵ Rama, *Himalayan Masters*.

⁵⁶ Same as 54

⁵⁷ Stevenson, *Cases of reincarnation*.

⁵⁸ Das, *Soul Theory*.

In India there are about one million palm leaf booklets written at least ten thousand years back that describe the life events of that many people who are living now in our world. They have proven to be very accurate. They were written independently by two very high level seer yogis. Many people from all over the world go to such centers to learn about their predictions. Some prediction results are described in⁵⁹. The fact is that - the video of the entire universe and for all time is already written in the memory of the universe. Anyone with high level yogic power of third eye will be able to see this video and predict the details exactly. The examples of evolution can be visible in the same way, and will prove that it is the power of soul that controls the evolution.

Yogic Power In Animals

Oscar, the cat, used to live in a nursing home. Doctors found that he could recognize the death time of a patient, and go on to the bed of that patient, two hours before the death, and sit quietly there, to give the parting comfort. The cat was successful perfectly for all times. Doctors began to rely on his ability and used the event to call the relatives to meet their patient for the last time. The cat's performance was documented in a medical journal⁶⁰. You can explain many ways the events but that does not eliminate destiny and yogic powers of the cat. Ability to explain an event is not the same thing as ability to correctly predict the event. Destiny is a consequence of cause and effect, sow and reap, so there will be always reasons for everything. Since destiny is created by simultaneous action-reaction of all objects, there are millions of reasons for every event. As mentioned before, the last question can never be answered however, without a soul as the root cause.

Monarch butterfly is another case of yogic power of insects, which is acquired by birth, in such butterflies. They fly from the east coast of Canada to the west coast of Mexico, seasonally, for more than 3000 miles. But they cannot make it in one life; they die, reincarnate, and continue on their path again. Scientists have tried to divert them from their path by catching them and releasing them at some other place, but they go back to their original track⁶¹. It shows that the destiny trajectory cannot be broken by death. Memory is not in the brain, but it is in the universe, and a soul can know it naturally. We are all guided by the destiny, and nobody can change that. Thus evolution is not controlled by that animal or human, nor by nature, but by its soul and its destiny.

Yogic power is the highest level power, and is much stronger than the nuclear power. You can imagine the power of the sun. It has a soul too, and that soul has created that sun. The sun is protecting our entire solar system, helping them to survive using its light and energy. Anything that you can imagine, a soul can produce or create that, and has already been created by some soul, somewhere in the universe.

Yogic Power In Materials

Changing Water Crystals A Japanese scientists, Masaru Emoto, demonstrated⁶² that the physical shape of water crystals can be changed by showing our emotions to water. In his one of the experiments, he took a bottle of water and poured in two glasses, and placed two labels expressing your positive and negative emotions. Then he had frozen the water to form crystals and took photographs of them, and shown that the one with positive emotion gives better designed crystals than the other one. This experiment shows that everything around us

⁵⁹ Das, *Soul Theory*.

⁶⁰ Dosa, "Oscar the cat."

⁶¹ Bittel, "Monarch Butterflies."

⁶² Nemoto, "Message from water."

has consciousness or soul and can be influenced by our own intentions, and with appropriate technology we can detect their effects.

Controlling Electronics Princeton university carried out experiments⁶³ on human interaction with electronic circuits. A random number generator was created using electronic devices and was hooked up to a computer system display. A human operator meditated in front of the device, but was not electronically connected to the machines. It was found that the mean value of the random generator could be controlled and increased over time, gradually, by performing meditation to increase it. In the same way, the meditator was able to influence the device to lower the mean value to below the normal mean value. The experiment shows that the material objects also have souls and they can interact with human souls. Thus every object in the entire universe has a soul.

Body Implants Body implants extracted from the human abductees by UFO-ETs have significant yogic powers. Such implants can grow human tissues from them. If you break the implant, and bring them together, they can rejoin automatically. Such implants do not cause infections in the human body, and the humans do not reject them either.

WHO WROTE VEDAS

We have described the nature of yogic powers in the previous section. We have seen that using yogic power you can achieve anything and everything. Vedas are observed by yogis with third eye vision, such yogis are called seer yogis or Drashta in Sanskrit. The nature of things that a seer yogi can see is described in Mahabharat and Gita, and is presented in this article by many examples.

Veda is stored as a video in the memory of the universe. This video describes everything that has happened in the past, is happening now, and will happen in the future. This memory defines the destiny of the universe. Thus nobody has written Vedas. Many seer yogis have seen this video and then told others, and they eventually wrote it down. Only parts of Vedas that are narrated by a seer yogi are considered as Vedas. All other parts of Vedas should not be considered as eternal and universal. It is well known that Ramayan, Mahabharat, Gita, and Samkhya are written by seer yogis.

If you can acquire high quality third eye vision then you will also be able to see the Vedas even today, because the memory of the universe is protected by the law of conservation. Not anybody, like you and I, can write Vedas. We have described examples of yogic powers for UFO-ETs. Such examples prove that the written parts of Vedas are valid for the entire universe.

CONCLUSIONS

The foundation of the Vedic science is yogic power. Without a thorough understanding of yogic power, the concepts behind all religious books cannot be comprehended. All aspects of Vedic science can be observed in nature. A definition of truth is given, which includes that nature always demonstrates its truths, for all objects to learn, eventually emancipate. This article described many examples of such demonstrations. A distinct difference with the modern science is that the Vedic science recognizes two types of causes – efficient cause and material cause. Unfortunately the modern science has never considered the efficient cause, even though modern engineering always uses the efficient cause in all its activities. Vedic science also recognized the existence of root causes for both types of causes, and both of which are missing

⁶³ Jahn, “Operator Intention.”

in the modern science. Vedas call the root efficient cause as the soul. Thus every object in the universe has a soul; and that individual soul is the creator of that individual object.

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SOCIAL EVENT AND ENVIRONMENT: IMPACT ASSESSMENT AND ITS MANAGEMENT PRACTICES AMONG THE MACCAA OROMO OF WESTERN ETHIOPIA

Waktole HAILU DUGUMA¹

ABSTRACT:

THIS PAPER EXAMINES THE IMPACTS OF SOCIAL EVENTS ON ENVIRONMENT AND NATURAL RESOURCES. IN THIS INVESTIGATION PRIMARY DATA WERE GATHERED THROUGH DATA COLLECTION INSTRUMENT LIKE INTERVIEW, OBSERVATION AND FOCUS GROUP DISCUSSION. IT PROVIDES IMPACTS OF SOCIAL EVENTS ON LAND WATER, PLANT, ANIMALS, AND OTHER LIVING CREATURES EXIST AROUND THE PLACE WHERE SOCIAL EVENTS ARE CELEBRATED. THOUGH INDIGENOUS PEOPLE CARE FOR ENVIRONMENT; VISITORS DO NOT CARE FOR THEM. THIS BRINGS NATURAL RESOURCE DISTRICTION. TO MINIMIZE THESE PROBLEMS STRONG MANAGEMENT PLAN IS IMPORTANT. THE BOARD AND EVENT MANAGER SHOULD BE ESTABLISHED PRIOR TO THE EVENT AND CONTROLS EACH AND EVERY ACTIVITY THAT MAY NEGATIVELY AFFECT NATURAL RESOURCE EXISTS AROUND EVENT VENUE. THE COMMITTEE IN GENERAL AND EVENT EXPERT IN PARTICULAR SHOULD IDENTIFY POSSIBLE RISK PRIOR TO THE EVENT AND FORWARD POSSIBLE SOLUTION AND OPERATE EVENT ACCORDINGLY.

KEY WORDS: SOCIAL EVENT, ENVIRONMENT, IMPACT ASSESSMENT, MANAGEMENT

1. INTRODUCTION

On a global basis there is unprecedented interest in festivals and events – at international and national level, in cities and towns, villages and hamlets, and in rural and coastal areas. Everyone wants to celebrate their particular form of culture, tradition, difference or similarity with others. The participants involve in the event either for religious or secular activities like entertainment, economic and for other socio-cultural mission².

Festivals and events provide an opportunity for community cultural development and invisible phenomenon like a sense of place, values, and belief. Values and beliefs held by individuals in a community are inextricably linked and shape people's attitudes and the way

¹ Lecture at Jimma university, Collage of social sciences and Humanity Department of Oromo Folklore and Literature, e-mail address waktoleh@yahoo.com

² Wood, E.: *Measuring event economic and social impacts: A case study of Blackburn with Darwen Borough Council. Discussion Paper. School of Tourism and Hospitality Management*, (Leeds Metropolitan University: 2002)

they act in specific situations Ter, M.M., Boyd, W.E. and Gardiner, J.E.³. This shows how the values, interests and aspirations of individuals are influenced by their natural environment (space and place) and how this leads to a sense of community that influences how the community celebrates; that affects the community's wellbeing Craik, J.⁴.

Festivals and special events vary in nature from place to place and linked to social and cultural contexts. Thus understanding of the cultural identities of host communities shows significant festivals in human condition. The community celebrates a sense of place through organizing inclusive activities in specific safe environments. In addition, they are the outward manifestation of the identity of the community and provide a distinctive identifier of place and people Getz, D.⁵.

No matter what the reason is for hosting a festival or event, there is a wide range of participants, each with different expectations, and this will impact on the management processes considered for each individual festival or event Hall, C.M.⁶. The management model adopted needs to match the requirements of all those involved in each stage of the individual festival or event, and tools such as those employed in managing projects and quality are useful Merrett, R.⁷.

Although festivals and events are vary enormously in types and forms, the management issues relating to this wide range are often surprisingly similar and include working within an increasingly competitive environment with decreasing resources and more discerning and sophisticated consumers Gilbert, D. and Lizotte M⁸. Thus, Festivals and events can place pressure on natural environments. Therefore, it is important that organizers encourage a responsible approach to each individual's relationship with the environment in which the event occurs. Increasing attention to details of livability in more fragile event environments has provided opportunities for increased awareness and education in sustainable practices. This paper addresses the wide-ranging operational and management issues of such a diverse activity. It mainly focuses on environmental impacts of social event and its management practice in case of Oromo ethnic group in Ethiopia.

1.1. Concept of Social Event

Many definitions are given for the event. An event is a special event recognizes a unique moment in time with ceremony and ritual to satisfy specific needs Arcodia & Robb⁹. According to Getz cited in Brown¹⁰ event is themed public celebrations' which brings people together to celebrate, to demonstrate, to worship, to honors, to remember, to socialize. The definition include 'a onetime or infrequently occurring event of limited duration that provides the consumer with a leisure and social opportunity beyond everyday experience'. This definition is taken as embracing the other subcategories of events, including community festivals and mega-events.

³ Belhaven Press. ter, M.M., Boyd, W.E. and Gardiner, J.E.; *Heritage Landscapes: Understanding Place and Communities*; Lismore, (NSW: Southern Cross University Press. 2001)

⁴ Craik, J.. *Are there cultural limits to tourism?*; Journal of Sustainable Tourism, 1995

⁵ Getz, D.; *Event Management and Event Tourism*. (New York: Cognizant Communication Corporation, 1997)

⁶ Hall, C.M. , *Hallmark tourist events: impacts, management and planning*: (London: Belhaven Press, 1992)

⁷ Merrett, R., *Making sense of how festivals demonstrate a community's sense of place. Conference paper, Events and Place Making: Building Destinations and Communities through Events*; UTS, Sydney, 2002

⁸ Gilbert, D. and Lizotte, M.; *Tourism and the Performing Arts*. (Travel and Tourism Analyst, 1998).

⁹ Arcodia, C. & Robb, A, 'A future for event management: Taxonomy of Event management terms, 2000

¹⁰ Brown, L. , *The New Shorter Oxford English Dictionary*. (Oxford University Press, 1993).

Social events are public celebrations take place at single space and point. Though some of social events are limited to majority of them are publically performed without age, sex color and religious belief, in social event any interesting group or individual can take part. Though the scholars define event, there is no universally accepted definition since they are define from different perspective. But the common element to most of these scholars definition is that event is a celebration of ceremony or ritual were a reflection of a culture and a community is reveal. Most events come from a good idea that is linked to the culture of the community and are underpinned by a reflection of place and a reflection of that culture.

1.2. Major Cultural Festivals and Events

Baker and Associates¹¹ in an assessment of the economic impacts of the Glastonbury Festival, expand on this 'general' approach by pointing out the less quantifiable economic impacts, such as trading opportunities for not-for-profit organizations and the contribution of the festival to local entrepreneurial culture. Data for this was gathered mainly through stakeholders' interviews. Snowball and Willis¹² take a significantly different approach. In their (academic) study of the South African National Arts Festival, they use Choice Experiments (CE) to value the utility visitors derive from various sections of the festival. They argue that this methodology is particularly useful for estimating benefits of the various aspects of the festival and how these are differently valued by the audience. A detailed comparison of four existing economic impact studies of major festivals in the UK and Spain by Vrettos¹³ found that all studies used different methodologies and justifications, especially in relation to the multipliers used. While all studies reported positive impacts, none questioned whether these impacts occurred because of the artistic or rather the social nature of the festival. Only one study noted that the net effect of the festival could be negative as well; however, no attempts were made to calculate the monetary value of any of the possible negative impacts (e.g. litter, noise, and criminality).

1.3. Social Impacts of Festivals and Events

Although there has been a strong focus on economic impacts, there are other types of impacts of events and festivals including social impacts. These include reinvigorating existing facilities and creating an image for the tourist destination, as well as promoting tourism sustainability Getz¹⁴. While there is a reasonable amount of literature on the social impacts of tourism, particularly through the sustainable tourism literature, less research has concentrated on the social impacts of events and festivals. Issues such as safety trust and 'a sense of personal and collective efficacy' form part of the social capital concept and would appear to have relevance in an investigation of the social impacts of events and community festivals. Drummond & U. McMahan-Beattie¹⁵ social impacts instrument for community festivals investigates a number of key elements pertinent to this study.

These include the impact of the festival on the friendliness, safety, tolerance and creativity of the community. Delamere concentrates his questionnaire on the social costs and

¹¹ Baker Associates; *Glastonbury Festival; economic impact assessment*. Shepton Mallet: Mendip District Council, 2007

¹² Snowball, J.D., & Willis, K.G.: *Estimating the marginal utility of different sections of an arts festival: the case of visitors to the South African National Arts Festival*: Leisure Studies. 2006

¹³ Vrettos, A: *The economic value of arts & culture festivals. A comparison of four European Economic impact studies*: University of Maastricht, 2006

¹⁴ Getz, D.; *Event Management and Event Tourism*. (New York: Cognizant Communication Corporation, 1997)

¹⁵ Drummond & U. McMahan-Beattie; *Festival and events management: An international arts and culture perspective*: Oxford, Elsevier Butterworth-Heinemann. (311-328).

benefits of community festivals. For the purposes of this paper, social impacts are defined as any impacts which potentially have an impact on quality of life for local residents. Thus, economic outcomes of events (such as employment opportunities) and environmental effects (such as litter) are included because perceptions of such impacts are likely to contribute to residents' overall reactions to an event. This is consistent with most of the previous work in this area. Ritchie and later Hall¹⁶ suggested a classification of potential event impacts comprising six dimensions; economic, tourism/commercial, physical, socio-cultural, psychological and political.

Mason and Beaumont-Kerridge¹⁷ have examined visitor and residents' attitudes towards the economic, socio-cultural, environmental and political (community) impacts of the Sidmouth International Festival, using visitor surveys and focus groups with local residents during and after the festival. This study contains an extensive discussion of earlier publications and concludes that 'the majority of festival research has tended to ignore or at least play down the other impacts that can be classified under the headings of environmental, sociocultural or political'. Similar criticism can be found in the work of Carlsen et al.¹⁸ explicitly call upon other festival researchers to 'move beyond economic impacts in order to understand the complex and comprehensive set of benefits and dis benefits associated with festivals'. Writing on the Edinburgh Festivals, they argue that the cultural, community and social benefits of major festivals have not been systematically studied, while they point at the limitations of focusing on more narrow economic outcomes, such as comparability, reliability, and utility of estimates. As an alternative, they propose an 'inclusive research agenda', focused on 'the benefits of the festivals for the arts, culture, community, economy, society, and stakeholders.

1.4. Materials and Methods

In this investigation observation used as principal research method, because irreacha celebration is relevant for observation .it contains various activities, material culture, performance, dancing, which is easily visible and understood by noticing at its natural setting or spot. I observed activities performed and material used on the irreacha celebration from the beginning to the end and wrote what I understood.

Interview can be of two types, informal and formal. Formal interview refers to systematic asking of the same question of every individual given sample. This means the researcher proposed well-structured and meaning full question focusing on specific topic of interest and ask his or her respondents either by feuding or distribute it to them. Informal interview involves asking open ended question at field and it gives tremendous freedom to explain his or her idea. From these types of interview I used informal interview which is mainly done at spot.

2. MAIN TEXT

2.1. Social Event and Oromo

Social event is universal phenomena Even though time, place and, objectives behind celebrating social event different from culture to culture. Society of this world has his own

¹⁶ Ritchie, J.R.B., *Assessing the impact of hallmark events: conceptual and research issues*: Journal of Travel Research, 1984 and Hall, C.M., *Hallmark tourist events: impacts, management and planning*: (London: Belhaven Press,1992)

¹⁷ Mason, P., & Beaumont-Kerridge, J. .: *Attitudes of visitors and residents to the impacts of the 2001 Sidmouth International Festival*: Ali-Knight, 2004

¹⁸ Carlsen, J., Ali-Knight, J., & Robertson, M.; *ACCESS - a research agenda for Edinburgh Festivals*; Event Management, 2007

ritual event which is highly connected to culture. Especially social events are frequently performed by society governs by culture and nature. Among the society of this universe who are live by culture and nature Oromo ethnic group is one.

Oromo ethnic group is a branch of Cushitic family living in the horn of Africa. Oromo society has appreciable culture which has heroine's relation with nature. Oromo respect, each other and live together live in peace, love. Oromo society treat not only human being but also other all creatures like forest, animals, water, and other biodiversity created by waaqa. For Oromo *Waaqa*, *safuu* and *ayyana* have great position. Waaqa is creator of all universe and all other creatures, keeper, and potentate of all creatures. As Oromo philosophy Waaqa keeps human, gives peace, prosperity. Thus why the Oromo prey for waaqa every time in his/her life.

Nagana nu olchitee nagana bulchi
As you kept us in daytime, retain us at night too
Hamaa nuraa qabi
Protect us from depraved fortune
Dogoggora nu olchi
Protect us from inaccuracies
Nagaa nuu buusi
Give us harmony and prosperity

Among the Oromo the other grateful things is ayyaana. Oromo perceived ayyaana as divine keeper that is given from *waaqaa* (god) to all creatures. As Bartle¹⁹ *ayyaanaa* communicates creatures and creator. it keeps all creatures from bad fortune. Thus why, the killer prays for *Dachee* while he goes to forest to kill animal for trophy. While seceded they explain their filling through different songs.

The other concept highly connected to Oromo world view is safuu. As Gemuchu Megersa²⁰ stated *safuu* is law of creator that everybody must respect. According to Oromo customary law the one who breaks the law of creator will encounter bad fortune, lacks peace, fertility and harmony. Thus all individual members of the society carefully keep it. Unconsciously if acts against law of waaqaa are committed by individual or group of society, Oromo performs ritual purification and reconcile himself to *waaqaa*. Since it belief that the doer lacks, peace and fertility prey for Waaqa. On such social event it is mandatory for all member of the society to avail and fully participate in the incident. as Oromo view all wrong and crime has consequences on harmonies life human being and nature. as Oromo view individual act which violate law of creator has direct consequences on society as whole and other living things. Thus everybody actively involved in the activity of ritual purification. Individual who fail to participate in such public activity is punished by customary enforcing mechanism like exclusion.

2.2. Impacts of Social Event

Social event has both positive and negative impacts on socio cultural life, economic and environment where the occasion taking place.

¹⁹ Bartels, L., *Oromo Religion: Myth and Rites of western Oromo of Ethiopia: An attempt to understand*. (Berlin. Reimer, 1983)

²⁰ Gemechu Megersa; *Identity, Knowledge System and the Colonizing Structure*: (London: School of Oriental and African Studies, 1993)

2.2.1. Positive Impacts

Social events are performed in group. Most of the time, such events are carried out by number of individual who share common culture. Some it participant of the even can have various culture; people who has different culture can take part in the celebration for visiting and recreation and other purpose. Though it constructed from people of the same culture or people different culture it is crowd of people collected single spaces specific purpose. The purpose of the event can be social, political, cultural or religious for whatever it is when people come together for single purpose they have similar attitude and objective on that issue. These contribute for participants in particular and ethnic group in general. Strength solidarity and love among the participants, reveal identity, serve as source of tourism, conserve and promote culture.

Social event bind people together promote peace love, and unity among themselves. They understood it, purpose of the event in the same manner; they interpret performance, activity, outcome of the event the manner. These linkages strengthen their relationship and develop tolerance for the different exist between them.in this way it promotes sustainable peace and love between individual members of the society and enter-ethnic group.

On the other hand social event has great contribution in marking the identity of the participants. Activities and performance take place on the stage by participant shows the performers and their culture. Costumes wore on celebration, materials, jewelry, and other materials used on the event are meaningful and convey message. Body movement, non-verbal communication, dance, songs, cursing, blessing, worship and stage in general are the reflector of identity of participants.

Not only showing identity but also Social event serves as source of tourism. On one it keeps and preserve culture and history of participant on other it generate income for host community and country in general by attracting tourist from other areas. Generate extra money for country, sources of employment for society. Contributes for sustainable development of one country and transforms social, economic, cultural and political activities of society.

On the other hand social event protect and preserve material and spiritual element of culture. Ritual, festival and other non-cultural events are self-protective, cannot easily degraded by both internal and external factors. Social event not conserve themselves but also other spiritual elements of culture. Because the existence social event are encourage the existence of dance, song, belief and other intangible culture. In addition, it also basis material culture like costume, symbolic material jewelry and other which mandatory on the stage.

Likewise it gives attention for the place where the social event celebrated. This is especially true for the event take place in outdoor on open air. The place/s are taken as historical site get attention to be conserved and protected. In this way it play key role in environmental conservation and protection.

2.2.2. Negative Impacts

Social event can Cause damaging and distraction of plant and animals from their place. Participant of different social event can cut branch of tree for different purpose like cleaning and seating. Cutting down of tree on the other hand, cause migration animals from their place. Likewise different creatures live in water can be affected by social event doe to wastage of contaminated things in to water. Such contaminated things wasted in to water affect living creatures live in water body which results to the dying of living things in water body and surround the place where social events are carried out. Dying of different insects like bees' aunt, and etc which leads to the decrement of the polarization of plants from one are to other.as results of social event soil erosion and land degradation can be emerged. Though host

community take care for environment and surrounding living creatures, visitors and other guest invited from other culture do not. On occasion of social event which contains large number of people affect ecosystem, while the participant move here and there grass, tree, sacred tree and place may damage.

On the other hand social event can cause reduction of bio diversity in the environment. Activity and performance take place on social event Cause disturbing on host community Due to crowd movement on a place where event carried out unstable condition can be happened on the surrounding habitant like loud sound which may disturb their living. Similarly harmonious relationship exist between livings creatures can be disturbed as a result of alienation single creatures.

Social event is not only disturb local inhabitant but also it can Cause environmental pollution .most of social event celebrated in open air are performed continuously for long period of time at single place. The participant involve in the incident up to the end. During the course of the event they caste wastes material on the surrounding environment. Similarly littering liquid of washed material used in on the event can also pollute the areas of the event. This eradicates and contaminates the stage and surrounding place.

Similarly materials and paper used for event promotion pollute venue and surrounding areas. Dozens of materials like soft drink, high land, candy and gamy, bought from local shop that people use on the event can also Cause environmental pollution. People use them through their container on the environment. Promotional papers, soft and other materials that participant and committee used in the course of the event can contaminate environment. The pollution can goes beyond the specific venue where event takes place.

The pollution can causes for the distraction surrounding living things like plants, animals and other creature surround the place where social event takes place. Littering, urine and other waste materials mixed in to water which directly cause water pollution which in turn affect host community and other living things living in the area. This especially true for social event takes place in outdoor at river basin, sea, salty water, ocean and stream.

Likewise social event affects plants and other living creatures live in it. Prior to social event everything needed for event must be prepared. This pre-preparation can be road, stage preparation, and temporary hotel and other facilities. These activities causes for the clearing of the tree and distraction of animals from their home. In addition to this, the crowd of people come together at single place for celebrating event eradicates grass and plants exist at event venue.to see the stage very well the participant climb on the tree and breaks the branch of the tree. Either for seating or for shadow, the participant breakdowns the branch of the tree where the there is no prepared seating. Degradation of plant leads the migration or disruption living creatures from their place. This is the main obstacle for the sustainability of social event itself and need serious control and management.

2.3. Management

To avoid or to minimize the above mention negative impacts of social event appropriate management is compulsory. Qualified event manager to gather with management committee should be organized prior to event. Event manager should manage each and every activity performed in relation to the event and possible side effect and potential hazards from the beginning to the end. The committee should consider both sides the interest of participant and facility and side effect it may has on environment and surrounding natural resources and host community. In generally the following tasks should be considered by event manager.

He/she must coordinate all activities performed in pre-event, post event and during event. Among these, coordination giving clear orientation for participants, guests and visitors are consenting facility, environmental protection. Their does and don't should be introduced very well with its location.so that participant, guest and visitors should act accordingly.

Event manager should also consider the interest of local people. He/she should manage sound, microphone, music, and other activity which disturb local communities. If the event do not have permanent and pre-established venue it is preferable if it is far away from local resident. Based on numbers of expected participants the event manager should prepare stage and setting temporary toilet food stall at event place. Mere preparation is not enough still giving clear orientation about its location is very important. So that participants use it throughout the course of the event.

Similarly event manager should prepare place for waste materials (for both solid and liquid). Among these putting container and preparing hole are necessary. Additionally, putting basket several place for waste material like highland water, paper and soft and telling the participant to put unwanted material in prepared vessel only. Preparing sewage for littering liquid and pour at prepared place. On the other hand if possible providing permanent material like glass, pot and other material kept for use in future can minimize environmental pollution.

Take care for the natural resource found around the place where that event is performed. Protecting discarded materials and scattering water in order not mix with water source exist in the area. The same is true for living creatures around the event venue; enclosing grass, insect and other living creatures found in the venue and surround place.Taking care for plant and other animals in the area is important. The committee should insure that participant should not breaks the tree either for shadow and seating purpose. Preparing enough seating as per expected number of participants with well-prepared shadow either for san or rain.in this way the event manager can minimize unexpected risk on natural resource and environment. On the other hand such strong plane can contribute for the success and sustainability of the event.

3. CONCLUSION

Social event is universal phenomenon and has both positive and negative impacts. Positively it contributes to preservation and promotion of culture and history of particular group where it originates. On the other hand it negatively affects host community, environment and natural resource found around venue where it takes place. Positive side of social event should be strengthen and continues. Whereas side effect of social event should be minimized. The effect of social event environment and natural resource can minimizes through organizing qualified management committee.

The event manager should have skill and should have detail knowledge about culture, history, religion, and world view of the participant and host community. He/she should analysis the side effect of single social event on which he/she becomes manager and settle possible solution prior to the event. Similarly, interest and facility that should be provided for participant at venue should be identified and delivered to participants at event place relatively as anticipated participant number.

On the other hand objective and mission of the event should be introduced to the target audience before the date of event. Promotion should be done on issue like seating place, right and obligation of participant and committee natural resource and environment related discipline, service and its location.so that participant can easily asses and use it without confusion. Likewise putting basket in which waste materials are casted is also important and reduces environmental pollution. In generally strong plan on side effect of social event on

environment, natural resource and host community and effectively work on its implementation reduces possible risk and promotes for the sustainability of social event.

SYMBOLIC MEANINGS AND FOLK BELIEFS IN THE ROMANIAN LITERATURE

Mirabela Rely Odette CURELAR¹

ABSTRACT:

THE FICTIONAL PROSE IS AN IMPORTANT SUBJECT FOR THE ROMANIAN LITERATURE. DEVELOPING A LARGE NUMBER OF THEMES WHICH ARE REPEATED FROM ONE STORY TO ANOTHER, IN ROMANIAN LITERATURE CREATES A MEMORABLE TYPOLOGY OF FANTASTIC CHARACTERS AND AN IMAGINARY GREAT SPACE. THIS IS THE ROMANIAN SPACE, A PLACE FULL OF SIGNS, SYMBOLS, POPULAR BELIEFS OF INITIATING, A PLACE WITH STREETS THAT HIDE ANCIENT MYSTERIES, AND INDIVIDUALS WEARING THEM WITHOUT KNOWING, THE MYTHS.

KEYWORDS: SYMBOLIC MEANINGS, FOLK BELIEFS, PARTICULAR REPRESENTATION, MYTHOLOGICAL, CREATION, TRANSMIGRATION OF SOUL

Eminescu is one of the greatest creators of fantastic prose in Romanian literature, he is a writer which can be comparable with the great German romantics, Jean Paul Richter, Novalis, ETA Hoffmann, A. Chamisso, the great French romantic Th. Gautier and Gérard de Nerval and the great American romantic, Edgar Allan Poe. The fantastic of Eminescu is a philosophical fantastic, a fantastic of ideas. Eminescu's prose has a solid philosophical basis, consisting of reflections on time and space doctrine and concepts, the theory of the reincarnation after death, the avatar, the archetype and the history, features which assure the originality of the text.

Eminescu wants to shine from inside, like the character from the Romanian fairytale The Prince-Charming, he has a mythical air through the image of harmony, specific to the young age boy, and which creates a perfect agreement with the fragile and the poetic story. The fantastic is very advanced during our great classic writers.

Eugen Simion said, „I can not believe the great vocation of Eminescu was lost and the golden key prose never has been found by anybody. Not only the great vocation for Eminescu's

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fantastic is lost, but his prose learned so many Romanian writers over time, including: M.Sadoveanu, Liviu Rebreanu (Adam and Eve), IL Caragiale."²

The most authentic form of fantastic literature is the lyrical fantastic romance, regardless of the species was confirmed, the lyrical autobiographical novel, the fairy tale written by Brentano, Tieck or Eminescu, Novalis novel's symbolic, Centuries Legend of V. Hugo, Vigny's ancient poems and Memento Mori by Mihai Eminescu.

With the exception of Victor Hugo and Mihai Eminescu, the fictional or the fantastic lyrical affirmation belongs to the period of genesis and romance, justifying and reporting provided by the social situation is contradicted of the romantic initial situation.

The identity come from plurality at Eminescu, in the multiplicity of individual forms of life, is the greatest mystery of Eminescu, the greatest mystery of life. *Poor Dionis*, and philosophical fantasy novel, has a rather complicated structure. Bond is formed, but the dream - „the reason world as a dream”.

The novel is built on the deliberate the confusion between dream and reality. Considered a dream novel by insertion into everyday life dream, *Poor Dionis* can be compared with Hoffmann's short stories, particularly *Gold pitcher*. The same dream is a reality contraposition of the place, petty and prosaic, a meet of Eminescu. And here is the rupture in the order of reality, in order daily, which after Roger Caillois, as a distinguishing mark of the fantastic. *Poor Dionis* answer to thesis „the reader's hesitation” which falls under the definition of fantasy, as confusion between dream and reality is maintained skillfully of Eminescu.

The transmigration philosophy, and the concept of avatar is the Eminescu's idea, which comes from the primordial unity. Mystery of the world and life is the desire. Wishing to create the universe where was born, first by creating the feminine principle, which was founded the male principle, these ideas appear in the Rigveda. In the concept of the Upanishads, the individual soul (atman) merges with the universal (Brahman), 'One is in all, so as one is in everything.'³

The fiction of I.L.Caragiale is a strange and terrifying fantastic trunk grafted on the native mythology. Caragiale's declared the sympathy for the great American writer Edgar Allan Poe, one of his favorite authors, from whom he borrowed in fact the title of his masterpiece, *A Lost Letter*, and translated and that we can not provide such key perhaps more valuable for interpreting caragialesque fantastic.

The novel charm comes from the storyteller knows how to evoke the strange and the terrifying atmosphere of the inn and here its mark obvious influence of Edgar Allan Poe. At the Inn of Mânjoală example we can send it to the famous novel, *Boogeyman*, the presence of demonic and satanic atmosphere gradually inoculate inn, the innkeeper made the pact with the devil.

The most representative novel of fantasy fiction is *The Inn of Mânjoală*, the literary fiction masterpiece of Caragiale. Caragiale discovers with this novel, masterfully constructed, the reason of inn in Romanian literature, anticipating the later stories of Sadoveanu, to hang passionate, agents of eros. Caragiale's novel is permeated by a Balkan sensualism, juicy,

² Eugen Simion, *Vocation of fiction*, Literary Romania, no. 11, 1969, 78

³ Mihai Eminescu, *Poetry*, The Letter I, (e.d.p., Buc., 1997), 49.

slightly masked by clear and abusive language in a similar manner to that of Creanga in *Old Nichifor Coțcariul* work.

Caragiale exploits the novel and the mythical-magical thinking, the superstition and the popular beliefs and make acquaints us with a new category, of satanic, and the demonic. The erotic magic of Mânjoala, that has on about the young man who arrives at the inn, is placed in the conspiracy with the evil spirits. Mânjoala seems to have demonic powers.

Horse Devil(1909) is a short symbolic tale inspired by local folklore, the facts occur in the same atmosphere saturated with magic and popular superstitions. Violation of the prohibition to enter in a Romanian foreign concerns, witchcraft, leading to a dramatic metaphor of a young girl in an old beggar king, which may be issued under the burden of the curse.

Considering the existing of supernatural, Caragiale creates hierarchy between the evil and the human beings, and the devils are mostly cheated by a human being unable to endure the human existence. Supreme Creator has no wisdom in Star of Eminescu, is not a good man, a little fearful, as in, Ivan Turbincă". This explains the outcome of *Kir Ianulea* where Dardarot may prohibit the entry into Hell's Ianuloaiei and Negoită. Hierarchy exists within the human species. When the man wants to change the subject, going through troubles, until it reaches what it was, and Abu-Hasan the hero from the tale of the same name, who for a time take place of Caliph Harun-al-Rashid.

On the theme of change and the difficulty on existential condition that goes from here to the impossible, it is imbued with melancholy as a metaphor and the horse devil fairytale universe unexpectedly cheerful and Caragiale's jolly history. The fantastic of Caragiale works here only as an element of motivation, it is not operated as vision, but appears as a slight oddity, explained rationally. Ambiguity of normal-abnormal, explain inexplicable supernatural is generated real-ironic understood the text. Using a supernatural ipotetico-symbolic Caragiale considering its views on art as a break with reality, which can not be changed.

The writer creates several scenes of virtuosity demonology in which appear several women oppressed by the devil. Eternal feminine mystery rooted as Christian doctrine, relations with the devil woman. Origin demonic feminine charm and crazy behavior is being watched by trying to explain the haunting existence and his love.

The short stories of Caragiale *Kir Ianulea*, *The inn of Mânjoală* takes place in an atmosphere of realistic fiction. Fantastic required by the very structure of the female characters, whose advantage over men evil escapes rational understanding, and is reported to cause superhuman evil. In the short stories of Caragiale, wandering characterize evil people, miraculous and ends with return to where they were marked destiny, after a journey of discovery, where error and return appear to be the result of magical practices. Caragiale, oscillation between the real and the fantastic comic gives a special flavor description. The fantastic function is purely aesthetic part of it „human normality" of a world in a particular historical time, beyond which transpires always fascinating dimension of the eternal feminine, unpredictable behavior. „, Fantastic, even where it is introduced directly, it works only as motivating factor."⁴

⁴ Paul Zarifopol, *I.L. Caragiale's Works*, (National Culture Publishing, 1930), 149

In Caragiale's work the fantastic is treated absolutely as a poesc style. *The inn of Mânjoală* was the most representative short story that is reflected in the collapse of the *House of Usher* mirage of Edgar Poe. The structural elements of the story are the same and fantastic plays a similar role.

The fantastic of Caragiale is driven by the emergence of women appearance and even mastered the female spirit. Manifesting itself as the emblem of femininity, fantastic embarrass him who loves, meeting a break in rational conduct of life and drawing him in a disquieting. Elements of fantasy does not have any other nationality. Goat and cat are representations which have existed in all times and in all places endowed with elements of folk magic or mirage night. We encounter in Arabic, Persian, Greek mythology, the sorcery first, then in medieval Germany and France. Novel interest but not falls to the Inn, or landscape, or the psychology of the characters, but only on its elements combining fantastic.

Caragiale imagines the fantastic as a lack of effective reaction to the events recounted of hero. The main character of the novel always accept extraordinary adventures through which current as inevitable, natural, and leave them worn like normal things, barely, at times, more of surprise than fighting with it *îmbujorează* by a cross. Such a character back to his own home may not have a specific or nationality..

In time of war is the story of a robber king and then volunteer, his brother innkeeper, in a way, another kind of thief. The latter, in comparison with the first, is like a beast. There are some kind of fantastic here. Story by evil acuity through some very beautiful and psychological notations great fair, yet fall into a human general that no ethnic link no longer where to spend the environment around them and the characters come fully in their social, cultural and spiritual.

The fiction prose is an important work for Romanian literature. Developing a number of themes that go from one story to another, Caragiale created a memorable typology and imaginary space that is only him. Is the Romanian space: a place full of signs, initiating, a place with streets that hide ancient mysteries and individuals wearing them without knowing, the myths.

The literary criticism considers that the Romanian writer is not intended for fantastic. Caragiale showed that it is sufficient to show a great talent and prejudices critics retire then, ashamed of the way of evidence. His prose is dominated by mystery, takes place in a world marked by fantastic extrasensory and paranormal. In general, his short stories are grafted on existential issues. It is noted that the writings have a strong fantasy and fiction make up the majority of Caragiale.

Caragiale presents itself as an advocate of knowledge verified using the data available to scholars of folklore and ethnographic documents. He believed that folk material and may serve a different knowledge than that which gives us the philosophy of culture. Specifically, he believed that issues directly related to man, with his knowledge of the structure and limits can be worked almost to their final absolution, from folklore and ethnographic data.

Caragiale demonstrates the uniqueness and the superiority of our popular genius if it is compared with the Romanian archaic myths in literature. Referring to the origin of folklore, Caragiale shows that agricultural rural societies have created the very beginning of history more games arising from the presence of ceremonial and fantasy. Legends, tales, riddles in

various forms using mysterious and enigmatic element. Authenticity, depth and uniqueness of our popular creations can not be questioned.

In his speeches, Caragiale presented the great importance of religions stemming from folklore works, distinguishing non-value of value. A mechanical copy can not give rise only to insignificant things. Even it is a myth or a legend, there is an anecdotal significance. To create a viable work is not to reproduce versification of popular poetry. Only a few were able to assimilate the essence of folk, conceived masterpieces, of which we can mention: Mihai Eminescu, Lucian Blaga, Tudor Arghezi and Emil Botta.

Caragiale's novel, *The Inn of Mânjoală* is a good example of these mutations. The reason that develops narrative is fantastic. Wanting to keep her room clean reckless lad for one night, the beautiful hostess, initiated in magical practices makes it way to return something exorcise in the hat and then using the tomcat that can be transformed into goatling. Novel does not develop as terror because the writer focuses on other sides of fables, obtaining an ambiguity style, a result of overlapping of meaning. Furthermore unusual tension on the double meaning of Caragiale is concerned with observations. Lady Inn has no icon in room and the tomcat reaction is unnatural by rationality: ☒

"Real female! I sat at the table making cross after my custom, when suddenly, a roar: stepped is seen with horseshoe old boots on a cat that's under the table ...The woman, taken in thought, sitting on the bed with my hat in their hands, an ever-spinning and twist...I said go on the road! And I crossed, when I heard right door thudding sound of a cat. My host knew no longer seeing her, entered rather 'the heat and grab the cat door, of course "⁵

What made valuable of our writer is the performance of lucidity style. The same word can have meaning and the real plan, and the assumed fantastic. It's an expression, not an ambiguity of feeling that the end does not leave any doubt about the lack of integration in fantastic from his irony.

Another way of referral lucidity act of creation, perhaps the most prominent, highlighting the presence of irony, used by Caragiale, proof of abilities of creator of the work of world. It is a general feature of degraded forms of modern fiction, present in style and purpose of creation. The most interesting is the ironic attitude required with justification, to express themselves, fantastic language.

The fantastic is always a constant direction of the human spirit and literature of all time. There are researchers who believe that science fiction is part of fantastic literature. Both types are based on fantasy, on increasing function and potentiation imaginative factor explaining their genetic relatedness which can lead to their eventual confusion.

The fundamental difference between them is that fantasy's literature assumes a mythical-magical mentality to exist, and science-fiction is fed from a scientific mentality.

The magic in the imagination of the fantastic literature author is replaced by powers of science-fiction, science and technology, the author, he used the „intentional actions”⁶ to create a world full of mistery that can offer magic situations. Place is taken by scholar magician, magic wand and substituting the machine or invention. Eminescu fantastic philosophical

⁵ IL Caragiale, *Novellas*, (Book Romanian, Bucharest, 1997), 174.

⁶ Ana-Maria Dudău, linguistic and discursive means in james joyce's short stories, *Annals of the „Constantin Brâncuși” University of Târgu Jiu, Letter and Social Science Series*, 3/2016, 98.

influence is manifested in a number of Romanian prose writers such as Gala Galaction (Califar's Mill), Alan Rebreanu (Adam and Eve) and, especially Mircea Eliade, one of the greatest artists of the century prose fiction.

Liviu Rebreanu is another writer attracted of mitical and magic theme and beliefs. He creates the novel *Adam and Eve* in 1925. The primordial couple thesis reach eternal metempsychosis doctrine in transmigration of soul. Eternal couple designed to recover primordial unity is maintained only by the transmigration of the soul. Metempsychosis works only on this site erotic Rebreanu's vision. To achieve torque eternal souls of lovers, partners should be free from spatial and temporal determinations and overcome obstacles to social and moral conventions.

„A man from millions of men wants only one woman from millions of women, one single and only one! Adam and Eve! Mutual search unconscious and irresistible is the sense of human life itself ! To facilitate searching this, do recover and undo all moral and social laws and conventions”⁷

Liviu Rebreanu is an artist of philosophical and fantastic novel, being closer to Th.Gautier and Camil Petrescu than Sadoveanu or Eminescu. Transmigration of souls like us is presented as a descent and ascent through the inner hell orgies, the darkness being the hero, modeled inside a romantic trip without their plastic inventiveness and without sunny landscapes reveals pictorial quality and great music, images visual and auditory unusual.

Mircea Eliade wants to differentiate itself from other authors of fantasy literature in the world of the German romanticism, by Edgar Allan Poe or Borges. At the origin of Mircea Eliade's fantastic, is the fantastic of Eminescu, philosophical, metaphysical, mythical doctrinally and not because myth is always exceeded the philosophy. What interests of Mircea Eliade is the philosophical meanings of myths. The trajectory of Eliade's prose fiction is from myth to philosophy. His conception fantastic mythical conception is determined by creating parallel universes newspaper, revealing us another dimension of time and space.

Miss Cristina (1936), the first fantastic prose of Mircea Eliade, is designed for a range of movement theme in literature, love between a „live man” and a „dead woman” a common theme in fiction prose, often populated by specters, ghosts, vampires, as messengers of the underworld. Writer exploit what could be called „strange coincidences” which is gradually adding the terrifying feeling. Isolated mansion in plain Baragan atmosphere, which invited young painter Edgar and archaeologist Nazarie who started emanating from careless air castles inhabited by ghosts and ghouls, the unusual events occur, common in western fantasy stories.

Mircea Eliade created in the novel *Miss Cristina* an allegory of aspiration towards absolute impossibility of fulfilling the erotic and, of incompatibility between two different orders. The idea of transgression limits of human existence is that supplying novel idea of romantic origin. Not only direct references in the text, but also the entire issue, *Miss Cristina* is a response to *Star* of Eminescu.

In other novels *The Secret of Dr. Honigberger* and *Nights at Serampore*, the fantastic of Eliade reveals the other side of India, unseen, hidden, one side of occult practices and initiatives. Appears to us here with a fantastic exotic twist. Eliade emphasizes, „the miraculous evidence” that aspires to reach initiative, meditation technique, the deepening of the inner life,

⁷ Rebreanu Liviu, *Adam and Eve*, (Book Romanian, Bucharest, 2003), 63.

thinking, from this perspective, superior Buddhist yogi practices. Dr. Honigberger secret novel is built on the concept of mystery, fantasy literature specifically, the author making the statement „the mystery is so active in our lives" as such is present and hidden in everyday life.

Youth without old age (1978) is set up as a response to the famous Romanian folk tale, *Youth Without Old Age and Life without Death*, on eternal youth. Novel illustrates a scientific hypothesis, the possibility of regeneration body. From myth, Eliade reaching science fiction narrative, traveling is the author of the science fiction to fairytale. The hero, Dominic Matei, embodies humanity posthistory. Through the simple act of concentration and intense thought, the man may recover post-historical, cultural memory based on much stronger symbols and beliefs than the historical man. The novel is fantastic from its deconcertrant end, narrator and hero giving freedom to return to the old condition. The rules of fantastic story proved highly resistant while other voltages ambiguous communication of subjectivity, sometimes becoming carriers of symbolic meanings.

Mircea Eliade's masterpiece, *The Gypsy*, preserves all special agreements. The action begins in the real sphere, Gavrilescu character enters in a place called "The Gypsy" because this place is cool and heat outside is very strong. In this strange space occurs "rupture" that speaks R. Caillois. Following the return to order, to real change. He puts out heat changes. However, real change is "almost unbearable", so is the space character pit house, where he fulfills his destiny with young love - Hildegarg. Ambiguity prevails, especially at the end and Eliade emphasizes the reluctance reader and character.

Gavrilescu it is drawn into a dark adventure in the end finds astounded that it casts over time in life, returning it in a strange world. Conducting discreet narrative is dotted with fantastic event details by which nature carries symbolic meanings. In one day, sitting on a bench, Gavrilescu student thinks that he lost because of indefinite nature, the beautiful Hildegard. Now he can not guess what gypsys's think and he can not take a final decision only after that, but before he became useless. Presence in narrative takes fantastic feeling to designate the great qualities of this type of creative accommodation throughout the ages, the possibilities range of events offered by the rigors very broad genre.

From the reasons circulation and images, the creative interplay with the educated folks are arguments in favor of recording the attitudes of the general issues integration in fairytale the epic material evidence that beyond designing loan outstanding personality of the poet, which is a fabulous way of visionary asserting. The Romanian tradition of fictional or fantastic literature, even in contemporary prose, which is in a report of continuity, has major evolutionary directions as: „fantastic mythological", „the fantastic philosophy", „fantastic enigmatical and absurd ", „fantastic realism " and will add several connections of science fiction prose. For us, the fantastic is in a permanently relation with the realism.

The slowdown and cancellation of time are extremely fertile as processes of real fantasy and informed by acute perception, the event features normal. These are generally valid reasons to claim that fantasy genre. Signs of individuality (subjectivity represented, fabrication, use time) are convincing enough to have set up an originality able to provide some independence diachronic development. The fantastic field is of great importance and supremacy of him squaring off with the realism, the suspicion are mirrored in life.

Dramatic or obscure, stance greatness lack, the specific features of sublime object are fantastic and creates a specific feeling of high acuity.

The fantastic represents the need of people to perceive what is beyond of our understanding and the reality. People's desire is to find answers to inexplicable and overcome the limitations of space and time has created the phenomenas of fantastic, which are also a bridge to the unknown, bizarre and terrifying world without rules of reason.

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REVIEW ON SMART HOSPITAL MANAGEMENT SYSTEM TECHNOLOGIES

Najeh LAKHOUA¹

ABSTRACT:

A SMART HOSPITAL SYSTEM IS AN INFRASTRUCTURE COMPONENT THAT RELIES PROFOUNDLY ON THE ACTUAL RESOURCES MADE ACCESSIBLE TO IT FOR ITS PROPER FUNCTIONING, OPERATION AND MAINTENANCE. THE OBJECTIVE OF THIS PAPER IS TO PRESENT THE TECHNOLOGIES USED FOR A SMART HOSPITAL MANAGEMENT SYSTEM. IN FACT, THE EXTENSIVE USE OF INTERNET OF THINGS (IOT) PLAYS AN IMPORTANT ROLE IN IMPROVING THE QUALITY OF MEDICAL CARE, BRINGING CONVENIENCE FOR PATIENTS AND IMPROVING THE MANAGEMENT LEVEL OF HOSPITALS. THEN, A REVIEW ON SMART HOSPITAL SYSTEM AND SOME METHODS FOR THE ANALYSIS AND MODELING ARE PRESENTED.

KEY WORDS: SMART HOSPITAL SYSTEM; INFORMATION SYSTEM; SYSTEM ANALYSIS.

INTRODUCTION

Smart systems include functions of sensing, actuation, and control in order to represent and analyze a situation, and make decisions based on the accessible data in a predictive or adaptive manner, thus performing smart actions. In fact, a healthcare system is the organization of people, institutions, and resources that deliver health care services to meet the health needs of target populations.

Based on the advancements in healthcare our perception of healthcare is changing quite fast. For any standard existing Hospital Information System there are several main problems that hinder automation like, fixed information point or inflexible networking mode.

Improving patient flow is a way to refine health services. In fact, an efficient patient flow can improve the quality of services and the utilization of resources. A smart environment could facilitate the experience of individuals within a physical space, such as a hospital. Meanwhile, a smart healthcare environment could improve patient flow through an efficient scheduling policy and the utilization of healthcare resources by an optimized capacity plan.

This paper can be loosely divided into four parts: First, we present a review on smart health systems in particular the infrastructure of the smart hospital system. Then, we present the need for technology for smart hospital systems. In section three, we present some methods for analysis of smart hospital systems. We review some methods here for the motive that we

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think them to be reasonably representative of the general kinds of methods in use. The methods include SADT (Structured Analysis Design Technique), UML (Unified Modeling Language), GRAI (Graphs with Results and Actions Inter-related) and GIM (GRAI Integrated Methodology). Finally, the last section presents conclusion and future work.

THE NEED FOR TECHNOLOGY FOR SMART HOSPITALS SYSTEMS

Healthcare is very important feature in every body's life and Information technology². It is playing an important role in providing better health with number of advancements.

As Internet of Things (IoT) is aimed to connect everything to Internet, there are billions of sensors which are attached to things to access data and connect these things to internet. So the data provided by these sensors is increasing very fast. We require handling this big data on personals gadgets as well on central databases.

Due to its popularity in technology and internet world, IoT is rising in every field of life and so in health sector. Health is something in which its center is more concentrated due to its hypnotic features.

The scheduling is a plan of procedure for a proposed objective especially with reference to the sequence of and time allotted for each item or operation necessary to its completion. In fact, the scheduling policy can be built in a smart hospital environment through wireless sensor networks and smart healthcare systems.

Monitoring and supervision concepts are also essential. Talking about supervision implies a hierarchical organization of the smart hospital system. Supervision optimizes its operation and ensures safety. Monitoring is used to detect anomalies without necessarily acting directly on the system. In this case it is a help to the human operator, a tool that can be used to better fulfill his task.

Continuous monitoring and gathering of vital signs are important for the treatment of critical care patients in the hospital. In fact, surveillance is the monitoring of behavior, activities, or other changing information for the purpose of influencing, managing, directing, or protecting people.

REVIEW ON SMART HEALTH SYSTEMS

The development of information system in smart hospital systems has been presented in various researches. In fact, Information Systems is an academic study of systems with a specific reference to information and the complementary networks of hardware and software that people and organizations use to collect, filter, process, create and also distribute data³.

Researchers Youjun and al.⁴, have presented a smart hospital information frame to deal with diverse medical information. First, a ubiquitous smart hospital information system model under Wisdom as Service architecture is presented. With this model, medical information can be organized into varied levels. In this model, many methods of organizing medical information (offline computing) and smart services delivering (online computing) are presented. The methods are used to provide medical knowledge advice services to patients according to their personalized condition and context. As an example, a smart medical knowledge

² I. Wigmore, Internet of Things (IoT), TechTarget, June 2014.

³ R. Fakhfakh, F. Khanchal, A. Klouz, N. Achour, Determinants of tobacco use habits among hospital staff in Tunisia, Preventive Medicine, 52(6), April 2011, pp. 478-479.

⁴ L. Youjun, Z. Wan, J. Huang, J. Chen, Z. Huang and N. Zhong, A Smart Hospital Information System for Mental Disorders, IEEE/WIC/ACM WI-IAT, Vol.1, 2015, pp.321- 324.

recommendation system, namely SKeWa, was built to reveal the usefulness of the model and the methods.

Researchers Nadeem and al.⁵, have presented an application of Radio Frequency Identification (RFID) technology in healthcare sector to give better, reliable and secure services. RFID systems are integrated into hospital information systems and present complete automation and streamline the significant modules of patient identification, staff allocation, doctors, medicines and treatments. The authors have proposed RFID based conceptual framework for smart hospital management system which provides a safe and secure patient data management system. They too underline the significance of RFID in healthcare domain with the help of an example case study with a working prototype application.

Researchers Chaczko et al.⁶, have proposed an approach in architecting solutions which can be exploited as framework to deal with general issues in integration of enterprise level solutions. The methodologies discussed in TOGAF version 9 are exploited to demonstrate the feasibility of proposed solution. The authors have introduced the problem space/scenarios, constraints, requirements, enablers, risks, sample legacy application architectures and proposed integration solution presented with TOGAF components. The increasing number of waiting lists, rising pressure on medical professionals and accountability for medical inattention are only part of the motivation to take initiative towards holds a core model integration strategy in different legacy infrastructure systems.

IoT is the network of physical devices, vehicles, home appliances, and other items embedded with electronics, software, sensors, actuators, and connectivity which enables these things to connect and exchange data, creating opportunities for more direct integration of the physical world into computer-based systems, resulting in efficiency improvements, economic benefits, and reduced human exertions.

Researchers Muhammad and al.⁷, have presented IoT based architectural framework with context awareness for hospital management systems. They have exploited context awareness as middleware on top of network layer to overcome the problem of data management. Furthermore they did review to investigate the decision to assume the IoT based system in Pakistani Hospitals. Review was questionnaire based. The accumulated results indicate that participants want to acknowledge this system and most of the population agreed that IoT based HMIS would suggest better monitoring, communication and early diagnosis.

Researchers Zhang and al.⁸, have proposed architecture to connect intelligent things in smart hospitals based on NB-IoT, and introduce edge computing to deal with the necessity of latency in medical process. As a case study, they have developed an infusion monitoring system to monitor the real-time drop rate and the volume of remaining drug during the intravenous infusion. Finally, they have discussed the challenges and future directions for building a smart hospital by connecting intelligent things.

⁵ M. Nadeem, A. Shah, A. Waqas and Z. Bhatti, A. Abubakar, H. Abid M. Malik, RFID based smart hospital management system: A conceptual framework, The 5th International Conference on Information and Communication Technology for The Muslim World (ICT4M), 2014.

⁶ Z. Chaczko, C. Chiu, A.S. Kohli and V. Mahadevan, Smart Hospital Management System: an integration of enterprise level solutions utilising open group architecture framework, International Conference on Computer Science and Information Technology, Vol.5, 2010, pp. 8-15.

⁷ P. Muhammad, M.U. Akram and M.A. Khan, Survey Based Analysis of Internet of Things Based Architectural Framework for Hospital Management System, 13th International Conference on Frontiers of Information Technology (FIT), 2015, pp. 271 - 276.

⁸ H. Zhang, J. Li, B. Wen, Y. Xun and J. Liu, Connecting Intelligent Things in Smart Hospitals Using NB-IoT, IEEE Internet of Things Journal, 2018, Vol. 5, Issue: 3, pp.1550-1560.

Researcher Catarinucci and al.⁹, have proposed a novel, IoT-aware, smart architecture for automatic monitoring and tracking of patients, personnel, and biomedical devices within hospitals and nursing institutes. Staying true to the IoT vision, they have proposed a smart hospital system, which relies on various, yet complementary, technologies, particularly RFID, WSN, and smart mobile, interoperating with each other through a Constrained Application Protocol (CoAP)/IPv6 over low-power wireless personal area network (6LoWPAN)/representational state transfer (REST) network infrastructure. The simple proof of concept implemented to confirm the proposed a smart hospital system has highlighted a quantity of key capabilities and aspects of innovation, which represent a significant step forward compared to the actual state of the art.

Scheduling is the method by which work specified by some means is assigned to resources that complete the work. The work may be virtual computation elements such as threads, processes or data flows, which are in turn scheduled onto hardware resources such as processors, network links or expansion cards.

Researchers Chen and al.¹⁰, have considered the performance of diverse scheduling policies in a smart environment. Models are generated under a hospital scenario, and are exploited to simulate patient flow under three scheduling policies. SimJava 2.0 is exploited as the most important simulator in this work. The findings frequently show that the dynamic scheduling policy has enhanced performance than the static scheduling policy.

Researchers Wang and al.¹¹, have explored a dynamic scheduling policy to get better the patient flow, and a professional capacity scheme based on the varying patient flow. This scheduling policy and the capacity scheme can be built in a smart hospital environment through wireless sensor networks and smart healthcare systems. The research applies a formal modeling approach that can give a quantitative analysis of systems. This approach, performance evaluation process algebra, can provide strict definitions for the patient flow in order to model the dynamic scheduling policy and the capacity scheme; moreover, it provides a scalable performance analysis by the fluid flow approximation. To conclude, this paper is concerned with how formal method might be exploited to model and analyze the scheduling policy and the capacity plan on improving the healthcare service previous to exploitation.

Researchers Guru and al.¹², have presented a Smart Hospital Gown that contains one or more compute units, a multitude of sensors for collecting the patient's temperature, breathing rate, sweating, pulse rate, and other vital information. The patient can immediately wear the gown without requiring any additional external wires or sensors/monitors to be attached to the patient. In this demo, they have demonstrated the Smart Hospital Gown and showed its user openness and usefulness in giving a better, low-cost, and continual monitoring system for critical care patients.

⁹ L. Catarinucci, D. de Donno, L. Mainetti, L. Palano, L. Patrono, M.L Stefanizzi and L Tarricone, An IoT-Aware Architecture for Smart Healthcare Systems, IEEE Internet of Things Journal, 2015, Vol.2, Issue: 6, pp. 515-526.

¹⁰ X. Chen, N. Thomas and M. Harrison, Performance Evaluation of Scheduling Policies in a Smart Hospital Environment, International Conference on Cyber-Enabled Distributed Computing and Knowledge Discovery, 2011, pp. 585-592.

¹¹ L. Wang, X. Chen, J. Ding and N. Thomas, Patient Flow Scheduling and Capacity Planning in a Smart Hospital Environment, IEEE Access, 2016, Vol.4, pp. 135-148.

¹² M. Guru, R. Hasan and R. Khan, Towards non-intrusive continuous healthcare monitoring with the Smart Hospital Gown, IEEE Annual Consumer Communications & Networking Conference, 2017.

ANALYSIS AND MODELING OF SMART HOSPITAL SYSTEMS

In this part, we review here some methods for analysis and modeling of smart hospital systems for the motive that we think them to be reasonably representative of the general kinds of methods in use.

In fact, the methods of analysis and modeling consist in solving a problem while using them according to the established rules and permitting to describe the evolution of the system.

The systems analysis is a process of collecting and interpreting facts, identifying the problems, and decomposition of a system into its components. In fact, system analysis is conducted for the reason of studying a system or its parts in order to identify its objectives. It is a problem solving technique that improves the system and ensures that all the components of the system work efficiently to achieve their purpose.

Analysis system, or system approach, belongs today to the scientific current that analyzes the elements of complex processes as components of a together where they are in relationship of dependence mutual. His area of study is not limited to the mechanisation of idea: systemic analysis is a methodology that organizes information to optimize action. The system approach aims to simplify any complex, lead to a model that allows acting on it, once we have understood its hardware configuration and dynamic structure.

A team of a method development must be composed of members having a big experience in the methodology and modeling languages.

For system modeling, there are numerous methods oriented functions, or decisions, or organization or reorganization, or information, or resources¹³.

The SADT represents an image of the system. It is a method of analysis to understanding why a system exists, or must be designed, what functions it must fulfill and finally, how they are realized, and whatever of the complexity. The method is based on a graphical model, proceeds by down approach in the sense that are going from general to more detailed, by focusing on system activity¹⁴.

The purpose of SADT is to recognize and model, in an information flow diagram, decision-making processes and management tasks related with systems. SADT is a graphical language, generally used for the analysis of complex the specifications of a system during the design but can also apply to existing system.

The SADT method seems adapted to the modeling of smart hospital systems for at least one reason: this method applies perfectly to the multi-technological systems, that is to say, it adapts to electric, electronic and software systems that we get in a smart hospital system¹⁵.

UML is a standardized general-purpose modeling language in the field of software engineering. UML includes a set of graphic notation techniques to create visual models of software-intensive systems.

UML offers a standard way to visualize a system's architectural blueprints, including elements such as: actors; business processes; logical components; activities; programming language statements; database schemas and reusable software components.

UML combines techniques from data modeling (entity relationship diagrams), business modeling (work flows), object modeling, and component modeling. It can be used with all

¹³ M.N. Lakhoua and M. Rahmouni, Investigation of the study of the methods of the enterprise modeling, African Journal of Business Management, ISSN: 1993-8233, Vol. 5(16), 2011, pp. 6845-6852.

¹⁴ D. T. Ross, Structured Analysis (SA): A language for communicating ideas, IEEE Transaction On Software Engineering, 3(1), 1977, pp. 16-34.

¹⁵ M.N. Lakhoua, F. Khanchel, Overview of the methods of modeling and analyzing for the medical framework, Scientific Research and Essays, Academic Journals, vol. 6, no. 19, 2011, p. 3942 - 3948.

processes, throughout the software development life cycle, and across different implementation technologies. UML has synthesized the notations of the Booch method, the Object-modeling technique (OMT) and Object-oriented software engineering (OOSE) by fusing them into a single, common and widely usable modeling language. UML aims to be a standard modeling language which can model concurrent and distributed systems. UML is a de facto industry standard, and is evolving under the auspices of the Object Management Group (OMG).

The GRAI method (Graphs with Results and Actions Inter-related) has been developed to the University of Bordeaux. It consists in analyzing the present decisional system of the enterprise and to conceive the future system while guaranteeing the functional and temporal global consistency. It is about a matrix representing functions (in column) and time (in line) fundamental for the decision making to short, medium and long term. The GRAI model is based on theories of the complex systems and on the discreet activity theory. This approach is characterized by three elements: models of reference, formalisms of modeling and structured approaches¹⁶.

The GRAI modeling is the only existing modeling that proposes a representation of the decisional structure of the enterprise. This representation is important to detect incoherencies in the coordination and the synchronization of decision making and in the dynamics of evolution of the enterprise¹⁷.

The GIM method (GRAI Integrated Methodology) has been developed to the GRAI laboratory of the University of Bordeaux in 1988. It assured the consistency of modeling formalisms. It made references to the GRAI model to study and to improve the performance of the enterprise.

The model presented (Table.1) illustrates eight specific objectives to achieve the global objective (OG): Information System of a Smart Hospital System.

The decomposition of these specific objectives into results lead to intermediate results, activities, sub-activities, tasks and under tasks is presented (Table.1).

Table.1. Model of Information System of a Smart Hospital System

N°	Code	Activity
1	OG	<i>Information System of a Smart Hospital System defined</i>
2	OS1	Management of the Information System of a Smart Hospital System assured
3	R1.1	Improvement of the Information System assured
4	R1.2	Assessment of the Information System assured
5	R1.3	Control of the Information System assured
6	R1.4	Maintenance of the Information System assured
7	R1.5	Functioning of the Information System assured
8	OS2	Security of the Information System of a Smart Hospital System assured
9	R2.1	Security of the information assured
10	R2.2	Confidentiality of the information assured
11	OS3	Circulation of the information of a Smart Hospital System assured
12	R3.1	Implementation of a secure information flow circuit assured

¹⁶ G. Doumeingts, La Méthode GRAI. PhD. Thesis, University of Bordeaux I, Bordeaux, France, 1984.

¹⁷ M.N. Lakhoua and H. Wertani, Overview of Conceptual Modeling for Complex Systems, CMSAM 2018, Wuhan China, September 27-28, 2018.

13	R3.2	Availability of timely information assured
14	OS4	Appropriate information media of a Smart Hospital System assured
15	R4.1	Operation of information media assured
16	R4.2	Conviviality of supports assured
17	R4.3	Availability of supports assured
18	R4.4	Supports of the information identified
19	OS5	Analysis of effective information of a Smart Hospital System assured
20	R5.1	Actions of Improvement proposed
21	R5.2	Causes of failure identified
22	R5.3	Failures detected
23	R5.4	Informations traited interpreted
24	OS6	Efficient information processing of a Smart Hospital System assured
25	R6.1	Efficiency of the treatment system assured
26	R6.2	Informations enregistred
27	R6.3	Informations collected
28	OS7	Archive information of a Smart Hospital System assured
29	R7.1	Security of archived informations assured
30	R7.2	Locations of archival information identified
31	R7.3	Supports of archival information identified
32	R7.4	Duration of archival information determined
33	R7.5	Archival informations identified
34	OS8	Characterization (properties / elements) of the information of a Smart Hospital System assured
35	R8.1	Information needs identified
36	R8.2	<i>Information source defined</i>
37	R8.3	Destinations for the informations defined

CONCLUSION

The hospital is a center of healthcare services that, nowadays, can be considered as a very technological corporation. Then, the integration of information and communication technology (ICT) in the healthcare sector has been one of the important areas of research since last two decades.

The system analysis allows us to describe exchanges of information among the diverse components of a smart hospital system and to describe the diverse parameters presented in the constitution of models. This is why the need for a system approach has been presented.

Starting from this study of smart hospital systems discussed in this paper, work is in progress to extend general strategy for analysis and modeling of a smart hospital system based on structured methods.

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NEUROENDOCRINE CELLS ALTERATIONS IN COLONIC MUCOSA OF PATIENTS WITH INFLAMMATORY BOWEL DISEASE

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ABSTRACT:

BACKGROUND AND AIMS: SEVERAL PUBLISHED STUDIES ON HUMAN AND ANIMAL MODELS SHOWED INCREASED DENSITIES OF NEUROENDOCRINE CELLS (NE) CELLS IN COLONIC MUCOSA OF INFLAMMATORY BOWEL DISEASE (IBD) COLITIS. THE AIM OF OUR STUDY IS TO DETERMINE THE (NE) CELLS DENSITIES IN COLONIC MUCOSA OF PATIENTS WITH (IBD).

METHODS: COLONIC BIOPSIES FROM 18 PATIENTS WITH IBD (8 ULCERATIVE COLITIS, 10 CHRON'S DISEASE) AND 16 HEALTHY CONTROLS WERE EVALUATED HISTOPATOLOGIC WITH HEMATOXYLIN-EOSIN AND IMMUNOHISTOCHEMICAL WITH CHROMOGRANIN A (CGA) AND SYNAPTOHYSIN(SYN) ANTIBODIES.

RESULTS: NE CELLS WERE COUNTED ON A TOTAL MEDIAN NUMBER OF 24.1(7,56) CRYPTS FOR CGA, 24(5,57) FOR SYN IN IBD GROUP AND 29 (11,64) CRYPTS FOR CGA AND 29,2(11.52) CRYPTS FOR SYN IN CONTROLS.

THE TOTAL DENSITIES/SUBJECT OF NE CELLS WERE SIGNIFICANTLY HIGHER IN IBD GROUP COMPARED TO CONTROLS FOR BOTH CGA AND SYN: 1.45(0.72,2.78) AND 0.86(0.43,1.73) FOR CGA (P= 0,006), 0.89(0.22,1.63) AND 0.63(0.28,1.28) FOR SYN (P=0,025)

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CONCLUSIONS: OUR STUDY SHOWED AN INCREASED DENSITY OF CGA AND SYN POSITIVE NEC IN PATIENTS WITH IBD.

KEY WORDS: ENDOCRINE CELLS, INFLAMMATORY BOWEL DISEASE, CHROMOGRANIN A, SYNATOPHYSIN

INTRODUCTION

Inflammatory bowel disease (IBD) which includes ulcerative colitis (UC) and Crohn's disease (CD) is a condition of unknown aetiology thought to arise from an interaction between genetic, environmental and immunological factors that create an abnormal response against a luminal antigen possible a component of the microbiota.

IBD is a chronic, relapsing condition with reduced quality of life and important social and economic burden.

Different paths have been explored for determining the aetiology of IBD. Abnormalities concerning mucosal cells in the epithelium of patients with IBD have determined a recent focus of understanding the correlation with IBD physiopathology.

Intestinal homeostasis is maintained by a system called "intestinal barrier", a dynamic structure that separates intestinal contents from the host tissues and allows interactions between the resident bacterial flora and the mucosal immune system. It also acts like a filter between pathogens and lamina propria⁹

When the integrity of the intestinal epithelial layer is broken, the permeability of the epithelium is increased which allows a high influx of intestinal contents and/or a high burden of microorganisms is thought to initiate and maintain a sustained inflammatory response, which is considered to be one of the mechanisms underlying IBD¹⁰.

The gastrointestinal neuroendocrine (NE) cells are localized in the mucosa of the gastrointestinal tract and are present in all segments with the exception of esophagus, comprising less than 1% of all epithelial cells. Along the intestinal epithelial cells they are distributed isolated from one another interspersed by non-endocrine epithelial cells¹¹.

NE cells present secretory vesicles large dense core vesicles (LDCV) and synaptic-like microvesicles (SLMV). Gut endocrine cells are recognized by the expression of several "general" markers, including the LDCV marker chromogranin A, a matrix soluble glycoprotein and the SLMV marker synaptophysin, a membrane glycoprotein. There are at least 15 different types of NEC classified upon the hormone they produce and the structure of their secretory granules¹².

⁹ Roda G, Sartini A, Zambon E, et al. "Intestinal epithelial cells in inflammatory bowel diseases", *World Journal of Gastroenterology*: 16(34) 2010:4264-4271, doi:10.3748/wjg.v16.i34.4264.

¹⁰ Kim, Duk Hwan, and Jae Hee Cheon. "Pathogenesis of Inflammatory Bowel Disease and Recent Advances in Biologic Therapies." *Immune Network* 17.1 (2017): 25–40

¹¹ Ashok R., Gunawardene ,Bernard M. Corfe, Carolyn A. Staton," Clasiffication and function of the enteroendocrine cells of the lower gastrointestinal tract", *International Journal of Experimental Pathology*, 92(2011): 219–231, doi: 10.1111/j.1365-2613.2011.00767

¹² Ashok R., Gunawardene ,Bernard M. Corfe, Carolyn A. Staton," Clasiffication and function of the enteroendocrine cells of the lower gastrointestinal tract", *International Journal of Experimental Pathology*, 92(2011): 219–231, doi: 10.1111/j.1365-2613.2011.00767

A NE cell can produce up to 7 different hormones and two hormones can be found in the same type of NE cell. These hormones include somatostatin, serotonin, peptide YY, glicentine, oxyntomodulin, glucagon-like peptide 1 and glucagon-like peptide 2 and have endocrine and paracrine functions with different functions including gut absorption and secretion, motility, modulation of immune response like lymphocyte proliferation, immunoglobulin production by inducing T helper cells differentiation, cytokine secretion, cells activation and phagocytosis¹³.

There were reports of an increased distribution of NE cells in the mucosa of patients with IBD also case reports of neuroendocrine neoplasms arising in IBD patients.

The present study investigates the densities of NE cells in colonic mucosa of patients with IBD.

MATERIALS AND METHODS

Cases

We included 18 patients with IBD (8 with UC and 10 with CD). All patients had colonic involvement of IBD. All patients had continuous treatment for IBD from diagnosis. Only one patient had antecedents of surgery (segmental ileal resection for stenosing CD). No patient with CD had fistulising disease. Controls were represented by 16 subjects: 9 Females and 7 males median age 56 years, range 50-68 years) without personal medical history of gastrointestinal tract conditions who underwent colonoscopy for colorectal cancer screening. Both groups signed the study consent form.

Patients' characteristics are summarized in (table 1).

Table 1. Patients characteristics

Patients	UC	CD
Male	4	7
Female	4	3
Age (years)	38 (23,54)	39 (25,56)
Duration of disease (years)	5 (2,13)	4 (2,8)
Phenotype E2 Montreal	2	-
Phenotype E3 Montreal	6	-
Phenotype L2B1 Montreal	-	1

¹³ Ashok R., Gunawardene ,Bernard M. Corfe, Carolyn A. Staton," Clasiffication and function of the enteroendocrine cells of the lower gastrointestinal tract", International Journal of Experimental Pathology, 92(2011): 219–231, doi: 10.1111/j.1365-2613.2011.00767; Magdy El-Salhy, Tefera Solomon, Trygve Hausken, Odd Helge Gilja, Jan Gunnar Hatlebakk, "Gastrointestinal neuroendocrine peptides/amines in inflammatory bowel disease", World Journal of Gastroenterology 23(28) 2017: 5068-5085, doi: 10.3748/wjg.v23.i28.5068; Rindi G, Leiter AB, Kopin AS, Bordi C, Solcia E., "The "normal" endocrine cell of the gut: changing concepts and new evidences", Annals of the New York Academy of Science,. 1014(2004):1-12 doi:10.1196/annals.1294.001; May CL, Kaestner KH, " Gut Endocrine Cell Development", Molecular and cellular endocrinology,323(1) 2010:70-75. doi:10.1016/j.mce.2009.12.009.

Phenotype L3B1 Montreal	-	7
Phenotype L3B2 Montreal	-	2
Mayo clinical < 2	4	-
Mayo clinical >=2	4	-
CDAI < 150	-	7
CDAI > 150	-	3
Mayo endoscopic <2	4	-
Mayo endoscopic > 2	4	-
CDEIS < 3	-	6
CDEIS >=3	-	4
Conventional treatment	4	4
Anti-TNF alpha	4	6

Colonoscopy

Patients with IBD who underwent colonoscopy had indication for endoscopic examination in context of their IBD.

Five biopsies were taken one from each anatomical segment of the colon (rectum, sigmoid, descending, transverse, ascending and cecum) through colonoscopy examination from each subject (IBD group and controls). Macroscopic normal tissue specimens were biopsied from controls. All biopsy samples were oriented using nitrocellulose filter.

Histopathology

Biopsies were fixed in 10 % formalin for 24 hours and prepared in addition to standard protocol: gradual dehydrated through graded alcohols, paraffin embedded, microtome sectioned at a thickness of 4 microns and stained with hematoxylin-eosin.

Immunohistochemistry

Before proceeding with the IHC protocol, the sections were deparaffinized and rehydrated. According to the type of the antibody and the technical specifications of the producer, in specific cases enzymatic or termic pre-treatment was applied. The tissue sections were cooled, washed with distilled water, treated with TRIS based solution and peroxide and left for incubation with antibodies for cromogranin A (CgA) and synaptophysin (Syn) for 10 and 30 minutes. Lightning-Link staining, Streptavidin and chromogen DAB were subsequently added upon sections which were previously marked and repeatedly washed with TRIS solution and dried according to standard protocol. Hematoxilyn saining is used for 1-2 minutes. The sections were afterwards dehydrated with graded alcohols and examined at the optic microscope.

The antibodies clones that were used were: IMPATH, monoclonal, clone MRQ-40, dilution 1:500 for Syn and Cell Marque, monoclonal, clone LK2H10, dilution 1:100 for CgA.

Examination of the tissue sections

The sections were examined at optic microscope for hematoxylin-eosin staining and IHC. The diagnosis of chronic colitis and the differential diagnosis between IBD colitis and other forms of chronic colitis were established. Histological activity of IBD was established using Geboes score for UC and Global Histologic Disease Activity Score (GHAS) for CD.

The IHC technique allowed the evaluation of the presence, the distribution and the densities of NE cells which were positive for the general markers of differentiation CgA and Syn. The counting of NE cells was performed manually on the most representative sections and on a maximum number of crypts available on the microscopic field.

The examination of the sections was performed by the same person (Prof. MD.Gabriel Becheanu) who was blinded about the origin of the samples from the studied groups.

Statistical analysis

Results were reported as means and standard deviations for variables with a normal distribution and median, minimum and maximum respectively for variables with an abnormal distribution. We looked for differences concerning the independent variables by outcome in bivariate analysis (Mann-Whitney *U* test or Fisher's exact test, depending on variables). Two-sided hypothesis testing was used, with a *P* value of less than 0.05 considered statistically significant. Data analyses were performed using statistical software SPSS version 20.0 from IBM Corporation, Armonk, NY, USA.

RESULTS

Histopathological examination

We obtained a total of 180 slides (90 biopsy specimens from each study group). From a total of 40 biopsy specimens in UC group 34 were represented by quiescent colitis and 6 segments with active disease out of which 4 with mild-moderate activity and 2 with severe activity. In CD group from a total of 45 biopsy specimens we found 9 segments with active disease 5 segments with mild-moderate involvement and 4 segments with severe activity. Histological examination in controls showed normal aspect of the mucosa.

Immunohistochemistry

NE cells were counted on a total median number of 24.1(7,56) crypts for CgA, 24(5,57) for Syn in IBD group and 29 (11,64) crypts for CgA and 29,2(11.52) crypts for Syn in controls.

The total densities/subject of NE cells were significantly higher in IBD group compared to controls for both CgA and Syn: 1.45(0.72,2.78) and 0.86(0.43,1.73) for CgA ($p=0,006$), 0.89(0.22,1.63) and 0.63(0.28,1.28) for Syn ($p=0,025$). (figure 1)

We also evaluated the NE cells densities of each colonic segment with significantly higher values for IBD group in CgA (table 2).

The median number of crypts/segment on which we made de calculation is summarized in (table 3).

According to the type of IBD we obtained a median number of NE cells/crypt for UC of 1.33(0.92,2.66) for CgA, 0.88(0.5,1.32) for Syn and 1.48(0.72,2.78) for CgA and 0.89(0.22,1.63) for Syn for CD, $p=0.89$, $p=0.9$.

The median NE cells densities were analysed according to disease duration as follows: disease duration of less than 4 years 1.53(0.8,2.78) for CgA, 0.95(0.68,1.63) for Syn, disease duration

of more than 4 years 1.37(0.72,2) for CgA and 0.87(0.22,1.43) for Syn, $p=0,33$, $p= 0,093$ respectively.

According to endoscopic activity of the disease the median NE cells densities were 1.36(0.72,2.78) for CgA, , 0.87(0.22,1.63) for Syn in the segments with endoscopic activity and 1.43(0.72,2.78) for CgA and 0.88(0.2,2.78) for Syn in the segments with quiescent colitis, $p =0,26$, $p=0,8$).

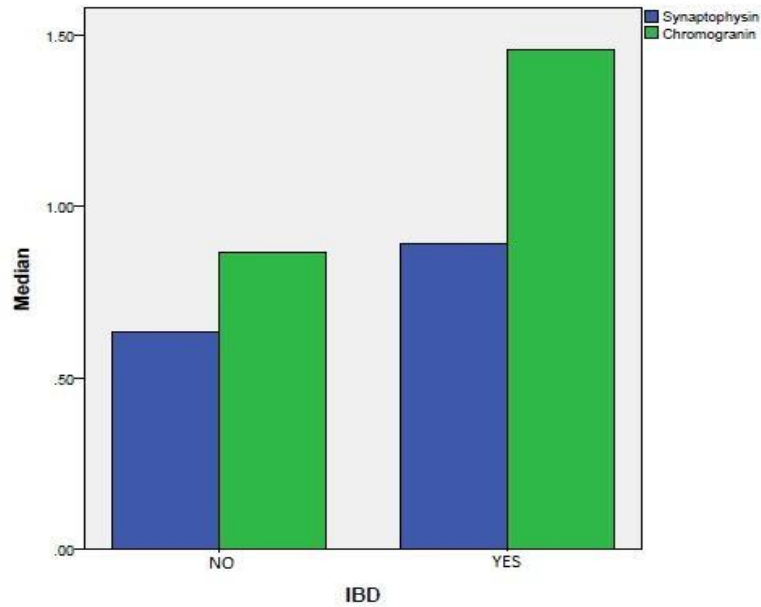


Figure 1. Median NE cells densities

Table 2. Median NE cells densities/crypt/colonic segment

Segments	IBD		Control		P value	
	CRO	SYN	CRO	SYN	CRO	SYN
Rectum	2.28(0.37,4.73)	0.99(0.07,2.28)	1.01(0.41,2.11)	0.67(0.23,1.53)	0.001	0.046
Sigmoidum	1.61(0.61,2.63)	0.66(0.2,1.38)	0.99(0.44,1.91)	0.73(0.34,1.36)	0.006	0.87
Descending	1.29(0.45,2.6)	0.66(0.21,1.8)	0.79(0.25,1.85)	0.63(0.18,1.15)	0.048	0.55
Transverse	1.65(0.25,3.25)	0.77(0.21,2.88)	0.92(0.23,2.58)	0.7(0.2,1.48)	0.036	0.79
Ascending	1.35(0.82,5.8)	0.89(0,4.42)	0.9(0.19,2.06)	0.61(0.21,1.35)	0.01	0.154

Table 3. Median number of crypts/colonic segment

Segments	IBD		Control	
	CRO	SYN	CRO	SYN
Rectum	28.7 (12,56)	28.2(9,57)	28.3(12,40)	28.1(12,40)

Sigmoidum	26.6(16,56)	26.5(13,56)	26.3(11,40)	27(11,40)
Descending	23.7(8,46)	24.4(9,45)	35.1(19,64)	35.3(20,50)
Transverse	20.7(8,42)	21(8,35)	29.4(12,52)	29.3(12,52)
Ascending	20.8(7,38)	19.9(5,35)	26.3(12,45)	26.4(13,45)

DISCUSSIONS

The present study identified that the densities of NE cells are higher in patients with IBD than in controls with normal colonic mucosa.

The presence of NE cells, both in patients with IBD and in those without histopathological changes, is easier to evaluate using CgA compared to SYN. CgA has a more intense, diffuse and uniform tissue signal. NE cells positive for SYN are present in a significantly lower number of cells with weak-moderate signal.

The number of NE cells positive for CgA is, in all studied cases, higher than the number of NE cells positive for Syn. NE cells have a uniform distribution in normal colonic mucosa and a non-uniform distribution in colonic mucosa with active IBD.

In normal mucosa, NE cells have a predominantly basal distribution being localised at the level of intestinal crypts, are rarely superficial, isolated NE cells can be found in the superficial epithelium. They are not organized in clusters or in micronodules in comparison with the inflamed mucosa where NE cells exhibit high but non-uniform density, with clustered areas in some crypts, frequently forming groups and nests of 3 to 5 cells. (figure 2, figure 3)

In the inflamed mucosa NE cells are frequently superficially arranged, also can be found in the surface epithelium. We did not find NE cells dysplasia in the studied group.

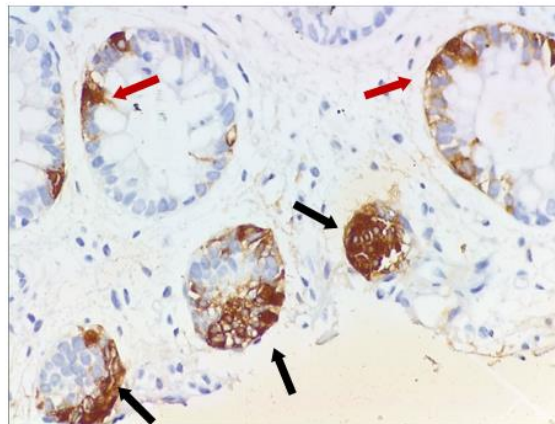


Figure 2. Immunohistochemistry with CgA: micronodules of NE cells (black arrows) localised at the base of crypts. Hyperplastic NE cells (red arrows). Chronic active colitis. 200x

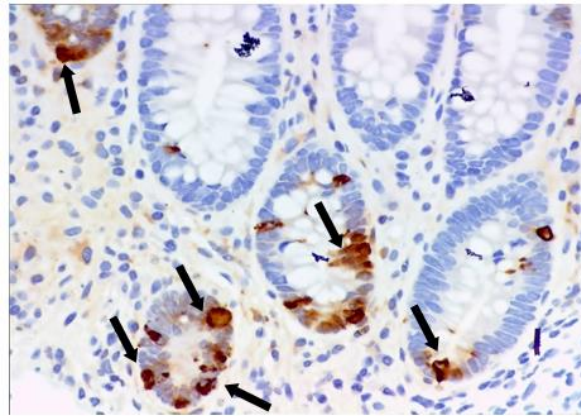


Figure 3. Immunohistochemistry with CgA: NE cells in groups of 3-4 cells at the base of the crypts (black arrows). Chronic active colitis. 200x

CgA is a general marker of differentiation for NE cells. All of the gastrointestinal (GI) endocrine cell types produce members of the granins family (including chromogranins A and B) that are co-stored and co-released from the GI endocrine cells¹⁴.

Ferrero et al. stated in a mouse model study that Cg A prevents the vascular leakage induced by tumour necrosis factor (TNF). Cg A inhibits TNF induced vascular permeability by preventing endothelial cytoskeleton rearrangements. Secretion of CgA could contribute to the regulation of endothelial barrier function and protection of vessels against plasma leakage in inflammatory diseases¹⁵.

In a study that evaluated the serum concentration of CgA in patients with IBD showed higher values of CgA serum concentrations than in non-IBD group and a decrease in the value in patients under biologic treatment in comparison to those under conventional treatment indifferent of the activity of the disease¹⁶.

We didn't find statistical significant differences regarding NE cells densities when subjects were divided accord to disease type, disease duration or endoscopic activity probably due to the small sample groups. We were interested in finding out if the changes in NE cells are reversible with disease duration taking in consideration that all patients were under treatment for IBD from diagnosis.

After proximal small bowel, the rectum is the location with the next greatest frequency of NECs and the only location in the GI tract where NECs are occasionally seen adjacent to each other or in clusters¹⁷. In our study higher densities of NE cells were observed in rectum in both IBD and controls independent of the endoscopic activity in IBD group.

¹⁴ Bartolomucci A, Possenti R, Mahata SK, Fischer-Colbrie R, Loh YP, Salton SRJ, "The Extended Granin Family: Structure, Function, and Biomedical Implications". *Endocrine Reviews*, 32(6) 2011:755-797, doi:10.1210/er.2010-0027

¹⁵ Ferrero E, Magni E, Curnis F, Villa A, Ferrero ME, Corti A., "Regulation of endothelial cell shape and barrier function by chromogranin A", *Annals of the New York Academy of Science*, 971(2002):355-358, doi: 10.1111/j.1749-6632.2002.tb04495

¹⁶ Zissimopoulos A, Vradelis S, Konialis M, Chadolias D, Bampali A, Constantinidis T, Efremidou E, Kouklakis G, "Chromogranin A as a biomarker of disease activity and biologic therapy in inflammatory bowel disease: a prospective observational study", *Scandinavian Journal of Gastroenterology*,49(8) 2014: 1-8, doi: 10.3109/00365521.2014.920910

¹⁷ Rindi G, Leiter AB, Kopin AS, Bordi C, Solcia E., "The "normal" endocrine cell of the gut: changing concepts and new evidences", *Annals of the New York Academy of Science*,. 1014(2004):1-12 doi:10.1196/annals.1294.001

We found 2 similar studies in literature that evaluated the NE cells densities in patients with IBD.

In 1997 El Salhi include a number of 17 patients with UC, 11 patients with CD and showed an increased density of both chromogranin A expressing cells in IBD group¹⁸.

Chojnacki and colleagues evaluated the number of enterochromaffin cells in 30 patients with active ulcerative proctitis and 30 patients with active ulcerative colitis and found an increased number of enterochromaffin cells in these groups on rectal respectively colonic biopsies compared to healthy controls¹⁹.

Both studies evaluated the NE cells densities on a number of 10 microscopic fields.

Our study confirmed the increased densities of NE cells in patients with IBD positive for CgA that were counted on a median number of a minimum 20 crypts.

We may conclude that NE cells hyperplasia in IBD is an intestinal epithelial change due to chronic inflammation. Further we intend to enlarge our study group in order to evaluate the reversibility of the NE alteration in the disease course, the treatment influence and the clinical implication of NE cells alterations in IBD

ACKNOWLEDGEMENTS

All authors equally contributed in the research and drafting of this paper.

All authors report no potential conflict of interest.

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MANAGEMENT OF AN IDIOPATHIC ZONE I RETROPERITONEAL HEMATOMA

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ABSTRACT:

RETROPERITONEAL HEMATOMAS ARE USUALLY A COMPLICATION OF A BLUNT ABDOMINAL TRAUMA, AORTIC ANEURYSMS, NEOPLASMS SITUATED IN THE RETROPERITONEAL SPACE OR VASCULAR INJURIES. IDIOPATHIC HEMATOMAS ARE A VERY RARE FINDING IN PATIENTS WITH ACUTE SURGICAL ABDOMEN AND BECAUSE OF THE RARITY OF THIS PATHOLOGY, DIAGNOSIS AND TREATMENT IS OFTEN DELAYED AND MAY POTENTIALLY BE FATAL. MRI OR AN ENHANCED COMPUTER TOMOGRAPHY ARE THE ELECTIVE METHODS FOR DIAGNOSING RETROPERITONEAL HEMATOMAS, BUT IN SOME CASES RESULTS MAY BE INCONCLUSIVE, THE NEXT STEP BEING A DIAGNOSTIC LAPAROSCOPY. WE PRESENT THE CASE OF A 47 YEAR OLD MALE PATIENT WHO

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PRESENTED IN THE EMERGENCY ROOM WITH NO HISTORY OF RECENT TRAUMA OR ANTICOAGULATION TREATMENT FOR KNOWN PATHOLOGIES ACCUSING PAIN IN THE RIGHT ILIAC FOSSA AND RIGHT UPPER QUADRANT, LUMBAR PAIN AND SIGNIFICANT WEIGHT LOSS. AFTER A CT SCAN WAS PERFORMED THAT SHOWED A RETROPERITONEAL MASS HE WAS ADMITTED IN OUR SURGICAL WARD FOR FURTHER INVESTIGATION AND TREATMENT.

KEY WORDS: RETROPERITONEAL HEMATOMA IDIOPATHIC ACUTE ABDOMEN

INTRODUCTION

The retroperitoneum is part of the extraperitoneal compartment between the diaphragm and subperitoneal pelvic space. It is located between the parietal peritoneum and muscular fascia¹⁰. It's divided into three areas that correlate with underlying structures and likelihood of injury to those structures¹¹. Zone I hematomas concern major vascular injuries to the great vessels such as inferior vena cava, aortic injuries or proximal iliac injuries.

Hemorrhage in the retroperitoneal space and retroperitoneal hematomas were first described in 1909 and named 'abdominal apoplexy'.

Signs and symptoms of retroperitoneal hematoma usually mimic an acute abdomen: severe abdominal pain, nausea and anorexia. Signs of hypovolemic shock such as tachycardia, confusion, anuria and low blood pressure appear late thus delaying the diagnosis.

If there are no signs of recent trauma, idiopathic hematomas are hard to diagnose. Tumors, hematomas or abscess in the retroperitoneal cavity are very rare and have unusual symptoms; patients present late at the emergency room due to their silent growth¹² and in most cases because of the involvement with the large vessels and their size a radical resection is impossible.

Acute retroperitoneal hemorrhage can cause intra-abdominal hemoperitoneum that can be fatal, so emergent surgery is required. The strategy for retroperitoneal hematoma depends on the vital signs and the cause of the hemorrhage. Chronic hematoma is mostly removed intraoperatively or by tube drainage; its prognosis appears to be better than that of the acute type¹³.

After diagnosing a retroperitoneal mass, it's very important to know the type of the tumor so a C.T guided biopsy is required. Their wide histological diversity and unspecific clinical presentation make them a challenge for the surgeon. In order to improve their detection immunohistochemistry seems to show promising results. Methods of detection have evolved over time to identify as much as possible the histological type of tumor. Because of this extreme

¹⁰ Monib, Sherif; Ritchie, Andrew; Thabet, Ezzuldin: *Idiopathic retroperitoneal hematoma*. J Surg Tech Case Rep. 2011 Jan-Jun; 3(1): 49–51; Hayes, Seth; Levi D, Allen: *Surgical exposure/Anatomy of the lateral lumbar spine and plexus in Nerves and Nerve Injuries* (Chapter); <https://doi.org/10.1016/B978-0-12-802653-3.00061-0>

¹¹ Hamm, Aidan; Cothren, Clay; Moore, Ernest: *Penetrating abdominal trauma*, FACS (chapter25)

¹² Marcu, Dragos; Radu-Ionita, Florentina; Iorga, Lucian; Manea, Maria; Socea, Bogdan; Scarneciu, Ioan; Isvoranu, Gheorghita; Costache, Raluca; Diaconu, Cristina; Bratu, Ovidiu: *Vascular Involvement in primary retroperitoneal tumors*. Rev. Chim. (Bucharest) 2019; 70(2):445-448

¹³ Kawashima A; Sandler M; Ernst D; Takahashi N; Roubidoux MA; Goldman SM; Fishman EK; Dunnick NR: *Imaging of nontraumatic hemorrhage of the adrenal gland*, Radiographics 1999;19:949-963; Constantin, Vlad; Carâp, Alexandru; Socea, Bogdan; Berteşteanu, Şerban; Motofei, Ion; Ciudin, Alexandru: *Retroperitoneal hematoma following left renal vein erosion by a staghorn calculus*. American Journal of Medical Research, 2014, 1(1): 37-46

variability immunohistochemistry through its various markers is the one that often sets the definitive diagnosis, the simple histopathological examination being insufficient¹⁴.

A C.T- guided biopsy can be performed when the patient is stable and when the retroperitoneal mass isn't life threatening. In most cases a retroperitoneal hematoma is an acute pathology that requires immediate surgical intervention.

CASE REPORT

We present the case of a 47 year old male who came into the emergency room complaining of persistent pain the in right upper quadrant and right iliac fossa, weight loss (almost 20kg in 2 months) and lumbar pain. Patient had no known pathologies and no history of recent trauma. Clinical exam revealed rebound tenderness at palpation of the abdomen, a positive Lasague sign and *pale conjunctivae*; in the emergency room patient was tachycardic and hypotensive. Laboratory results showed severe anemia (hemoglobin 6 mg/dl), leukocytosis (WBC 18.600), renal failure with a creatinine level of 2.27 mg/dl and blood urea 70 mg/dl.

We performed an abdominal CT scan without intravenous or oral contrast which revealed a retroperitoneal mass that comes in contact with the head of the pancreas, transverse colon and has in its close vicinity the inferior vena cava and the abdominal aorta (Figure 1). The radiologist also describes a pathologic fracture of the lumbar spine (L4-L5)(Figure2) and demineralization of the sacrum.



(Figure 1)

¹⁴ Bratu, Ovidiu; Marcu, Dragos Radu; Socea, Bogdan; Neagu, Tiberiu Paul; Diaconu, Cristina Camelia; Scarneci, Ioan; Turcu, Liliana Flavia; Radavoi, George Daniel; Bratila, Elvira; Berceanu, Costin; Spinu, Arsenie Dan: *Immunohistochemistry particularities of retroperitoneal tumors* Rev. Chim. (Bucharest) 2018, 69(7):1813-1816



(Figure 2)

Patient was cleared out by the neurosurgeons; not being a traumatic fracture, managing the bleeding was a priority before repairing the lumbar spine.

After 3 days in the intensive care unit patient's renal function was normal so a contrast enhanced computer tomography could be performed. Results were similar with the first examination; the radiologist suspected that the retroperitoneal mass was a tumor (leiomyosarcoma) or an infected abscess.

As a differential diagnosis before surgery multiple hypothesis were made regarding the retroperitoneal mass such as: sarcoma, infected abscess, renal tumor, rupture of the psoas muscle with active source of bleeding¹⁵.

We decided to perform an exploratory laparotomy which revealed free fluid in the peritoneal cavity and a zone I retroperitoneal hematoma (Figure 3).

¹⁵ Constantin, Vlad; Socea, Bogdan; Moculescu, Cezar; Sireteanu, George; Popa, Florian; *Enteral non Hodgkinian lymphoma in young age – difficult diagnostic*, Chirurgia, 2009, 104(5): 601-604; Marcu, Radu Dragos; Spinu, Arsenie Dan; Socea, Bogdan; Bodean, Maria Oana; Diaconu, Camelia Cristina; Vasilescu, Florina; Neagu, Tiberiu Paul; Bratu, Ovidiu Gabriel: *Castleman's Disease - Clinical, histological and therapeutic features*. Rev. Chim. (Bucharest) 2018, 69(4):823-830; Drăghici, T; Negreanu, Lucian; Bratu, Ovidiu Gabriel; Pantea Stoian, Anca; Socea, Bogdan; Neagu, Tiberiu Paul; Stănescu, AMA; Mănuc, D; Diaconu, Camelia Cristina: *Paraneoplastic syndromes in digestive tumors: a review*. Romanian Biotechnological Letters 2018, 23(6):1-10, <https://doi.org/10.26327/RBL2018.185>; Lupu, Sorin; Brînză, Adrian; Socea, Bogdan; Marcu, Dragos; Peride, Ileana; Stănescu, Ana Maria Alexandra; Neagu, Tiberiu P.; Maxim, Laurian: *A brief review of the literature on the malignant ureteral obstruction*. J Mind Med Sci 2018; 5(2): 189-194 doi: 10.22543/7674.52.P189194.



(Figure 3)

With the patient being hemodynamically unstable and without knowing the cause of it draining the entire hematoma was impossible. So we removed all the blood clots from the cavity of the hematoma (Figure 4) and used hemostatic gauzes to stop the diffuse bleeding from the adjacent area;



(Figure 4)

also we left 2 external drainages in the peritoneal cavity, one in cul-de-sac Douglas and one near the hematoma.

In the intensive care unit 12 hours after surgery patient presented tachycardia, anuria and had almost 4000ml of blood in the external drainages. Patient underwent another surgical intervention in the same day, intraoperatively we discovered a small source of bleeding from

the mesenteric vessels and from the residual cavity. Hemostasis was successfully obtained using wound clot gauze and ligation of the bleeding sources.

Bacteriological exam of the fluid from the peritoneal cavity was negative, also cytology examination was negative for cancerous or precancerous changes.

Patient remained in the ICU for another 7 days for blood transfusions and close monitoring, according to objective criteria¹⁶; he was admitted in our surgical ward when he regained his renal function, creatinine levels were normal, no signs of bleeding and a hemoglobin level of 11 mg/dl.

Because the inferior vena cava was compressed by the hematoma (vena cava syndrome) the patient had excess fluid in the peritoneal cavity so we maintained the peritoneal drainage for 20 days postop.

He had a slow recovery, because of the lumbar spine fracture, two invasive laparotomies and severe anemia patient needed a chiropractor therapist for mobilization and to regain his muscle strength. Patient was discharged after a month with the following recommendations: hematological consult, autoimmune diseases specialist and surgical consult after six months.

Also a very important aspect is deep vein thrombosis prophylaxis so we avert this possible complication by administration of low molecular weight heparin for another 20 days after discharge¹⁷.

CONCLUSION

Idiopathic hematomas are a very rare finding; usually they appear as a complication after a traumatic injury of the abdomen, anticoagulation therapy or as a complication of a preexisting tumor. There are very few cases described in the current literature and the therapeutic methods are unclear. Emergency surgical intervention is recommended when the size of the hematoma compresses the retroperitoneal vessels and organs, such as the aorta, inferior vena cava or kidneys. After the acute moment has passed no idiopathic bleeding of the retroperitoneum should be left undiagnosed¹⁸; also patients should benefit from a hematological consult and biannual evaluation from the surgery team.

Although retroperitoneal hematomas are rare and hard to diagnose, surgeons must keep this in mind as a differential diagnosis in their surgery practice¹⁹, because the outcome of this pathology depends on timing.

ACKNOWLEDGEMENTS

All authors equally contributed in the research and drafting of this paper.

All authors report no potential conflict of interest.

¹⁶ Socea, Bogdan: *Admission criteria in Intensive Care Units following an objective evaluation or a personal decision*. Journal of Experimental Research on Human growth & Aging (JERHA), 18 Feb 2019, 2(1): 1-3

¹⁷ Safta, Andreea Nicoleta; Constantin, Vlad; Socea, Laura; Socea, Bogdan – *The efficiency of low molecular weight heparins in the prophylaxis of venous thromboembolic complications in general surgery*; Farmacia, 2012 60(1) : 127-137; Manea, Maria; Marcu, Dragos; Diaconu, Camelia; Socea, Bogdan; Dimitriu, Mihai; Baleanu, Vlad Dumitru, Bratu, Ovidiu – *Thromboprophylaxis in surgical patients*. Research and Science Today. 2018 16(Suppl. 2): 57-65.

¹⁸ Socea, Bogdan; Carap, Alexandru; Bobic, Simona; Constantin, Vlad – *Psychological barriers in long term non-operative treatment of retroperitoneal hematoma*. Journal of Mird and Medical Sciences, 2015, 2(1): 67-71

¹⁹ Spanu, Arsenie; Marcu, Dragos; Manea, Maria; Diaconu, Camelia; Berechet, Mihail; Socea, Bogdan; Oprea, Ioana; Mischianu, Dan – *Bone metastases from retroperitoneal tumors*. Proceedings of the first national conference of romanian society of the musculoskeletal oncology – ROMSOS, April 2018; Filodiritto Publisher, ISBN 978-88-85813-18-2, p. 73-79

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COMPLICATION OF TUBERCULOSIS IN THE INFANT

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ABSTRACT:

TUBERCULOSIS IS A DISEASE PRESENT IN A LEADING POSITION IN WHO ANNUAL STATISTICS. INFANT AGE IS SPECIAL IN TERMS OF SOMATIC EVOLUTION AND ANTI-INFECTIOUS DEFENCE. THE INFECTIONS MAY HAVE SEVERE PATTERN, AS LONG AS THE DISSEMINATIONS ARE MORE FREQUENT IN THE CHILD THAN IN OTHER AGES. THE CASE PRESENTED REFLECTS A MAJOR COMPLICATION OF PULMONARY TB, THE OCCURRENCE OF NEUROLOGICAL DETERMINATIONS BEING A PECULIARITY OF SMALL AGE. THE RISK OF CHIMIORESISTANCE INDICATES POLICHIMIO THERAPY IN TRIPLE OR QUADRUPLE ASSOCIATION FOR 9 MONTHS, WITH CEREBRAL EDEMA BEING TREATED IN TURN. THE ANAMNESIS IS VERY IMPORTANT FOR THE DISCOVERY OF POSSIBLE INFECTION WITH THE BK BOVIUM FORM, THE RECOVERY OF THE INFECTIOUS OUTBREAK HAVING THE SAME IMPORTANCE AS THE CORRECT TREATMENT OF THE DISEASE.

KEY WORDS: TUBERCULOSIS, NEUROLOGICAL AFFECTION.

Tuberculosis is a bacterial infection with endemic evolution caused by etiological agents called the "Mycobacterium tuberculosis complex" comprising 3 species - M. tuberculosis, M. bovis, M. africanum⁷. Romania, unfortunately remains the top European leader in spreading the disease. Practically, the location may be extremely polymorphic, the

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⁷ World Health Organization, Childhood TB Subgroup. Guidance for national tuberculosis programmes on the management of tuberculosis in children, Geneva. WHO/HTM/ TB/2006.371 WHO/FCH/CAH/2006.7

pulmonary site is responsible for the dissemination of the disease, but there are extrapulmonary sites in the pleura, lymph nodes, joints, spine, genitourinary system, CNS, abdomen⁸. The tuberculous host-bacillary relationships have histopathological and immunological features that explain the different evolution of the disease in different patients⁹.

The World Health Organization (WHO) publishes global TB data including new and relapse cases by age. In its 2018 report, the WHO estimates that of the estimated 10 million incident cases of TB in 2017, approximately 1 million (10 percent) occurred among children <15 years; similar numbers of boys and girls were affected¹⁰. In 2018, the WHO estimated that there were 234,000 deaths due to TB in children <15 years (40,000 occurring in HIV-infected children)¹¹. These deaths represent 15 percent of all TB deaths (which is higher than the estimated proportion of cases in children), suggesting a higher mortality rate in this age group¹².

Intracranial tuberculomas occur in 13% of children with neurotuberculosis¹³. Brain tuberculomas are generally asymptomatic¹⁴, but their symptoms depend largely on their anatomical location¹⁵, with seizures being the commonest presenting symptom¹⁶. Clinical presentations are due not to tubercle bacilli or their antigens but to pressure effects of space-occupying lesions¹⁷.

Diagnosis of TBM based on clinical history and examination findings, cerebrospinal fluid (CSF) findings and tomography of brain. CT scan has been proved helpful in diagnosis and evaluation of the complications of TBM.

Due to the peculiarities of the age, rapid growth rate, immunity in consolidation, infant age, tuberculosis is prone to severely potential infection¹⁸.

⁸ Stop TB Partnership Childhood TB Subgroup World Health Organization. Guidance for National Tuberculosis Programmes on the management of tuberculosis in children. Chapter 1: introduction and diagnosis of tuberculosis in children. *Int J Tuberc Lung Dis* 2006; 10:1091

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¹⁴ Thwaites GE, Macmullen-Price J, Tran TH, Pham PM, Nguyen TD, Simmons CP, et al. Serial MRI to determine the effect of dexamethasone on the cerebral pathology of tuberculous meningitis: an observational study. *Lancet Neurol*. 2007;6(3):230-6

¹⁵ Nicolls DJ, King M, Holland D, Bala J, del Rio C. Intracranial tuberculomas developing while on therapy for pulmonary tuberculosis. *Lancet Infect Dis*. 2005;5(12):795-801

¹⁶ Rajeswari R, Sivasubramanian S, Balambal R, Parthasarathy R, Ranjani R, Santha T, et al. A controlled clinical trial of short course chemotherapy for tuberculoma of the brain. *Tuber Lung Dis*. 1995;76(4):311-7

¹⁷ Mukherjee S, Das R, Begum S. Tuberculoma of the brain - a diagnostic dilemma: magnetic resonance spectroscopy a new ray of hope. *J Assoc Chest Physicians*. 2015;3:3-8

¹⁸ Mandalakas AM, Starke JR. Current concepts of childhood tuberculosis. *Semin Pediatr Infect Dis* 2005; 16:93; World Health Organization, Childhood TB Subgroup. Guidance for national tuberculosis programmes on the management of tuberculosis in children, Geneva. WHO/HTM/ TB/2006.371WHO/FCH/CAH/2006.7

CLINICAL CASE

A 7 months old baby admitted to the clinic for altered general condition, rhinorrhea, wheezing.

Anamnesis. It is the third child of the family born in term, G = 3500g, Agar = 9, naturally fed 3 months, subsequently with cow's milk, prophylaxis of incomplete rickets performed, neonatal physiological jaundice, incomplete vaccination (in maternity and 2 months).

Hereditary chronic history did not mention chronic illness among family members, despite poor socio-economic status.

The child presented with two bronchiolitis episodes at 2 and 3 month and several treated episodes of acute upper respiratory infections.

The objective exam assessed an influenced state of health, pale, poor nutritional state, coughing, wheezing, expiratory dyspnea, FR = 40 per minute, right paravertebral subcrepitant rales, rhythmic heart sounds, AV = 100b / min, inflamed pharynx, abdominal bloating, persistent skinfold, liver at 1.5 cm under below the rib cage, reduced urinary output, normal stool, anterior fontanelle sunken = 2 / 1.5 cm, dry lips, sunken eyes, patellar reflex, skin reflexes, neurological development corresponding to age.

The initial diagnosis was: Acute Viro-Bacterial Pneumonia, Secondary IRA. Acute rhinopharyngitis. Dystrophia gr. I. Acute renal insufficiency (prerenal), Acute dehydration syndrome 5%. Intra-infectious anemia.

Laboratory test showed leukocytosis (L = 16,800 / mm³), anemia (Hb = 10,8%), Lymphocyte (= 68%), Neutrophil= 21%, Monocyte = 8% Eosinophil = 3%, ESR=15 / 30mm / h. The liver, kidney tests have normal values, the ionogram shows acidosis, hypoglycemia (Glycemia = 55mg / dl), hyponatremia (Na = 129mEq / l), SaO₂ = 91%.

Pulmonary radiography - condensation in the right pulmonary region (figure 1).

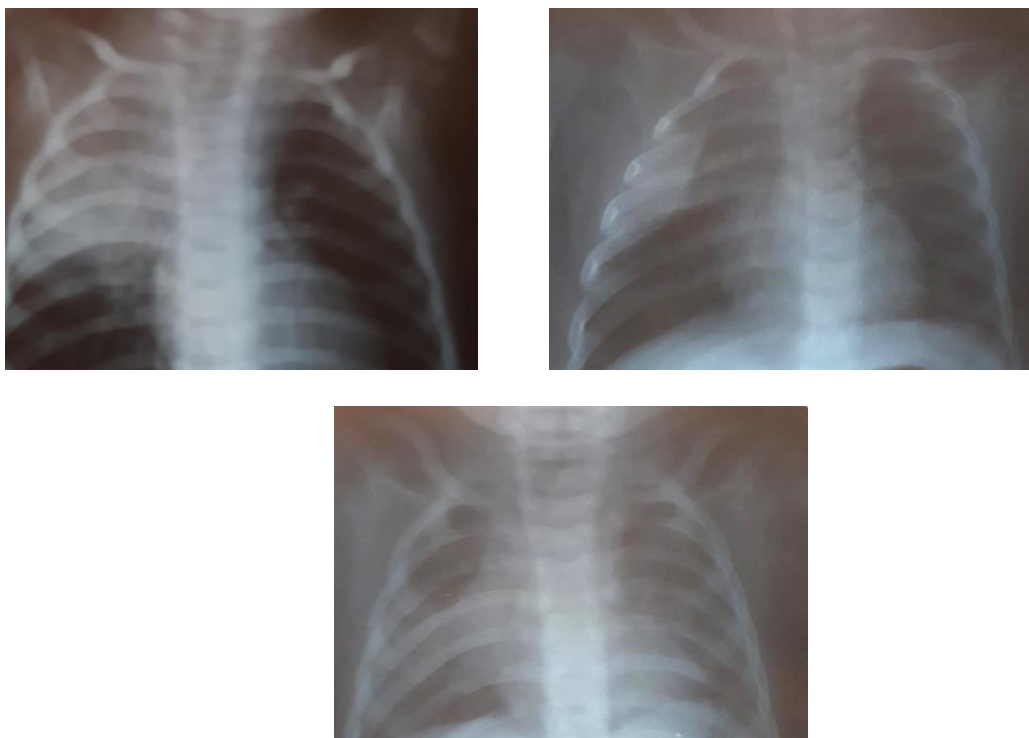


Fig. 1 Evolution under treatment

Antibiotic treatment (cephalosporins), hydroelectrolytic rebalancing with intravenous administration of fluids, oxygen therapy, nasal obstruction treatment, adrenaline in aerosols have been established.

Evolution of the case was unfavorable after 24 hours, with neurological signs; the infant is no longer in the seating position, the presence of vomiting in jet, anisocoria, difficult to catch objects, accentuated cough. Breath bronchoalveolar lavage is performed for the bacteriological examination of bronchial secretion (by bronchoscopy) and lumbar puncture for CSF examination.

The bacteriological examination revealed BK and Cerebrospinal fluid analysis showed - Glucose=23,2 mg/dL, Pandy++++, albumin=264 mg/dL, chlorides=702 mg/dL, cell count=310/mm³,

CT shows tuberculoma and perilesional cerebral edema, confirming the stage of cerebral TB. (figure 2)



Fig. 2 CT scan

Treatment is adjusted for diagnosis with 9 months tuberculostatic medication (isoniazid, ethambutol, pyrazinamide and rifampicin) and anti-inflammatory corticoid (dexamethasone) for cerebral edema. Evolution was good, the patient being discharged after 1 month.

DISCUSSIONS

- Children are an easy target for TB, implicit for its complications
- Unhealthy hygiene rules for food preparation had an increased risk for various diseases, implicitly TB.
- The cow's milk offered to the baby up to 1 year of age is a "mistake" for various reasons: hypersomolarity overloading the kidney, beta-lactoglobulin incriminated in the etiopathogenesis of occult haemorrhages, implicitly of the iron deficiency anemia of the infant in rural areas, where almost any family had animals whose products feed the children, veterinary control of domestic animals is not achieved¹⁹.

¹⁹ Cruz AT, Starke JR. Clinical manifestations of tuberculosis in children. Paediatr Respir Rev 2007; 8:107

- The potential of *M. Bovis* to trigger pulmonary TB is increased in infants where defense mechanisms are immature and ineffective²⁰.
- The poor socio-economic level, poor educations are risk factors for TB infection.
- The polymorphism of the disease indicates complex explorations (bronchoscopic lavage, CT with contrast substance, etc.) for rapid and complete diagnosis.
- BK with chemotherapy resistance indicates complex therapy with 3-4 tuberculostatic associations in 9-12 months.
- Eradication in the outbreak is equally important for the sterilization of other family members and the animals.

CONCLUSIONS

Cerebral tuberculomas are a rare and serious form of tuberculosis due to the haematogenous spread of *Mycobacterium Tuberculosis*

Symptoms and radiologic features are nonspecific, leading sometimes to misdiagnosis.

If diagnosed early, tuberculomas respond well to antituberculostatic treatment alone.

Serial CT scans allow an objective assessment of the effect of medical treatment on both the tuberculoma and the surrounding oedema

ACKNOWLEDGEMENTS

All authors equally contributed in the research and drafting of this paper.

All authors report no potential conflict of interest.

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PNEUMOPERITONEUM DIAGNOSED USING ULTRASONOGRAPHY A NARRATIVE REVIEW OF THE LITERATURE

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ABSTRACT:

ULTRASOUND IS COMMONLY USED AS AN INITIAL EVALUATION OF THE PATIENTS WITH ACUTE ABDOMEN TO IDENTIFY THE CAUSE AS FAST AS POSSIBLE. THE TYPICAL IMAGE OF PNEUMOPERITONEUM IS FORMED BY HIGH AMPLITUDE LINEAR ECHOES WITH DISTAL ARTIFACTUAL REVERBERATION ECHOES. ABDOMINAL SONOGRAPHY IS ESSENTIAL IN A RAPID DIAGNOSIS OF THE PNEUMOPERITONEUM. THE STUDIES CONDUCTED SO FAR SHOWED IN SOME

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CASES THE SUPERIORITY OF THE METHOD, AND IN ALL CASES NO INFERIORITY. SONOGRAPHIC SIGNS OF PNEUMOPERITONEUM SHOULD BE INCLUDED IN EMERGENCY PROTOCOLS SUCH AS FAST AND RUSH.

KEYWORDS: ULTRASONOGRAPHY, PNEUMOPERITONEUM, DIAGNOSE, ACUTE ABDOMEN, EMERGENCY

INTRODUCTION

Pneumoperitoneum stands for the presence of air into the peritoneal cavity and its most common cause is the perforation of a hollow abdominal viscus such as a perforated ulcer or a perforation of any part of the bowel. Other causes may include malignancy of some level of the bowel, trauma, diverticulitis, appendicitis, bowel ischemia. A pneumoperitoneum appears frequently after abdominal surgery and may persist from 24 hours to 6 days¹⁰.

The pneumoperitoneum may be diagnosed using conventional radiology, ultrasonography or computered tomography. There are some signs that indicate the presence of the pneumoperitoneum at the radiological examination such as Rigler's sign (visualization of the both sides of the bowel wall), the faciform ligament sign (visualization of the falciform ligament as a linear and thin density in the right upper quadrant), the right upper quadrant gas sign (visualization of localized extraluminal gas collections at this level)¹¹.

The signs most common found on the CT examination of a pneumoperitoneum are the ligamentum teres sign (free gas outlining the intrahepatic fissure and the ligamentum teres, commonly after a perforation of the stomach or duodenum), the periportal free gas sign (found in upper gastrointestinal tract perforations) and the falciform ligament sign (free gas crossing the mid-line and accentuating the falciform ligament)¹². The CT scan is considered standard criterion for the diagnosis of the pneumoperitoneum and is more sensitive than plain abdominal radiography, but is not absolutely required when we have a suspicion of pneumoperitoneum because of its cost and radiation burden and the erect chest x-ray is very sensitive on detecting the free air into the abdomen¹³.

The ultrasound is commonly used as an initial evaluation of the patients with acute abdominal pain to identify the cause as fast as possible. If the source of the pain is a perforation of a hollow abdominal viscus, it becomes essential and critical to establish an accurate diagnosis. A gas collection appears on a sonography as a result of a total sound reflection at the interface between the soft tissue and air and it is accompanied by reverberation of sound

¹⁰ "Pneumoperitoneum Imaging." Overview, Radiography, Computed Tomography. December 06, 2017. <https://emedicine.medscape.com/article/372053-overview>; Kumar A, Muir MT, Cohn SM, Salhanick MA, Lankford DB, Katabathina VS (2012) The etiology of pneumoperitoneum in the 21st century. J TraumaAcute Care Surg 73:542–548

¹¹ Levine MS, Scheiner JD, Rubesin SE, Laufer I, Herlinger H (1991) Diagnosis of pneumoperitoneum on supine abdominal radiographs. Am J Roentgenol156:340–345

¹² Coppolino F, Gatta G, Di Grezia G, Reginelli A, Iacobellis F, ValloneG, Giganti M, Genovese E (2013) Gastrointestinal perforation: ultrasonographic diagnosis. Crit Ultrasound J 5(Suppl 1):S4. doi:10.1186/2036-7902-5-S1-S4

¹³ "Pneumoperitoneum Imaging." Overview, Radiography, Computed Tomography. December 06, 2017. <https://emedicine.medscape.com/article/372053-overview>

between the gas and the transducer. As a result, the typical image of a pneumoperitoneum is formed by high amplitude linear echoes with distal artifactual reverberation echoes¹⁴.

As we published before, we obtained good result in using chest ultrasound for detection and follow-up of pneumotorax¹⁵.

METHODS

In the period between 1996 and 2007 the literature published on PubMed and MEDLINE was searched for studies on the ultrasonographic diagnosis of the pneumoperitoneum. The search was performed by two investigators (A.C. and B.S.) who have found four relevant studies.

RESULTS

In 2002 a prospective clinical study of the accuracy of ultrasound in the detection of the pneumoperitoneum was published in which a population of 132 patients from March 1996 to March 1999 with suspected hollow organ perforation was examined⁷. The suspected hollow organ perforation was defined as peptic ulcer perforation and appeared at patients presenting with sudden onset of a severe abdominal pain.

The results of this study showed that the abdominal sonography is superior to the right chest radiography and left lateral decubitus abdominal radiography. The ultrasound examination had a sensitivity of 93% while the radiography had 79%, the specificity was the same for both (64%), positive predictive value 97% for the sonography and 96% for radiography and the negative predictive value 44% in the case of sonography and 21% for chest radiography.

The conclusion of the study was that ultrasonography is superior to plain radiography in the case of diagnosis of the pneumoperitoneum. The ultrasound can diagnose it when the radiography failed to reveal pneumoperitoneum in patients with hollow organ perforation suspicion¹⁶.

Also in 2002 was performed a study comparing ultrasonography with plain abdominal radiography on a population of 188 patients with suspected hollow organ perforation. As a result, the sonography had better sensitivity (92% while the radiography had 78%), negative predictive value (39% versus 20%) and accuracy (88% for ultrasound and 76% for radiography) and the same specificity (53%) and positive predictive value (95% ultrasound and 94% the radiography). Their conclusion was that the ultrasound is more sensitive than the plain abdominal radiography in the diagnosis of the pneumoperitoneum¹⁷.

A prospective study was performed in 2004 on seventy-two patients with suspected gastrointestinal tract perforation, who were examined radiographic and ultrasonographic. A new ultrasonographic technique was tested (the scissors maneuver) consisting in applying and then releasing slight pressure onto the abdominal wall with the caudal part of a parasagittally oriented linear array probe.

¹⁴ Pattison P, Jeffrey RB Jr, Mindelzun RE, Sommer FG (1997) Sonography of intraabdominal gas collections. *Am J Roentgenol* 169:1559–1564

¹⁵ Constantin V, Carap AC, Zaharia L, Bobic S, Ciudin A, Brătilă E, Vlădăreanu V, Socea B. High correlation of lung ultrasound and chest X-ray after tube drainage in patients with primary spontaneous pneumothorax: can we omit X-rays for tube management? *Eur Surg* 2015, 47(4):175-180. DOI 10.1007/s10353-015-0333-9

¹⁶ Chen SC, Wang HP, Chen WJ, Lin FY, Hsu CY, Chang KJ, Chen WJ (2002) Selective use of ultrasonography for the detection of pneumoperitoneum. *AcadEmerg Med* 9:643–645

¹⁷ Chen SC, Yen ZS, Wang HP, Lin FY, Hsu CY, Chen WJ (2002) Ultrasonography is superior to plain radiography in the diagnosis of pneumoperitoneum. *Br J Surg* 89:351–354

The specificity and sensitivity of the radiography and sonography were the same, sensitivity 94% and specificity 100% and the scissors maneuver was positive in all patients with pneumoperitoneum detected ultrasonographically. The conclusion of the authors was that the maneuver is useful to improve the pneumoperitoneum sonographic diagnosis¹⁸.

Another prospective study was published in 2007, which had the purpose to validate the Enhanced Peritoneal Stripe Sign in the diagnosis of the pneumoperitoneum in patients with acute abdomen signs. The population studied was admitted in a period of 3 months in the emergency department and their work up included abdominal sonography, plain radiographs and/or abdominal computed tomography.

The Enhanced Peritoneal Stripe Sign was positive in all 21 patients with pneumoperitoneum and other three were found to have false positive results, but there were none false negatives. The Enhanced Peritoneal Stripe Sign has a sensitivity of 100%, specificity of 99%, positive predictive value of 87.5% and negative predictive value of 100%. Therefore, the Enhanced Peritoneal Stripe Sign is an accurate sonographic sign and it can be reliable for the diagnosis of the pneumoperitoneum¹⁹.

CONCLUSIONS

The abdominal sonography is essential in a rapid diagnosis of the pneumoperitoneum because it can be performed quickly at the bedside of the patient.

The search of the sonographic signs of pneumoperitoneum should be included in emergency protocols such as FAST and RUSH.

Most of the studies found by the investigators have a low statistic value because they were not randomized controlled trials.

In the near future we suggest initiating a randomized control trial to see the accuracy of the sonography compared with computed tomography and plain radiography in the diagnosis of the pneumoperitoneum.

ACKNOWLEDGEMENTS

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All authors report no potential conflict of interest.

¹⁸ Karahan OI, Kurt A, Yikilmaz A, Kahrman G (2004) New method for the detection of intraperitoneal free air by sonography: scissors maneuver. *J Clin Ultrasound* 32:381–385

¹⁹ Asrani A (2007) Sonographic diagnosis of pneumoperitoneum using the 'enhancement of the peritoneal stripe sign'. A prospective study. *Emerg Radiol* 14:29–39

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CARDIOVASCULAR COMORBIDITIES IN PARKINSON DISEASE PATIENTS

Irene RASANU¹

ABSTRACT:

PARKINSON'S DISEASE (PD) IS THE SECOND MOST COMMON NEURODEGENERATIVE DISORDERS, AND THESE PATIENTS CAN HAVE A WIDE RANGE OF CARDIOVASCULAR COMORBIDITIES THAT INFLUENCE THE CLINICAL COURSE OF THE DISEASE².

A CLINICAL, CROSS-SECTIONAL, OBSERVATIONAL STUDY HAS BEEN PERFORMED ON A GROUP OF 86 CONSECUTIVE PATIENTS WITH IDIOPATHIC PARKINSON'S DISEASE. THE PATIENTS HAVE BEEN INTERVIEWED ABOUT DISEASE DURATION, ASSOCIATED MEDICAL CONDITIONS AND CURRENT MEDICATIONS. THE MOST PREVALENT CARDIOVASCULAR COMORBIDITIES IDENTIFIED IN OUR STUDY POPULATION WERE: ARTERIAL HYPERTENSION (48.83%, 95%CI 38.27-59.39), CHRONIC CARDIAC ISCHEMIC DISEASE 40.69%, 95%CI 30.31-51.07). DATA ANALYSIS SHOWED NO STATISTICALLY SIGNIFICANT DIFFERENCE BETWEEN MALES AND FEMALES REGARDING THE PREVALENCE RATES FOR BOTH ARTERIAL HYPERTENSION (P=0.5) AND CHRONIC ISCHEMIC HEART DISEASE (P=0.5). COMPARING THE PREVALENCE VALUES IN ROMANIAN GENERAL POPULATION FOR THESE TWO IMPORTANT CARDIO-VASCULAR DISORDERS WITH OUR STUDY RESULTS LEADS TO THE CONCLUSION THAT ARTERIAL HYPERTENSION HAS BEEN FOUND NOT STATISTICALLY SIGNIFICANT MORE PREVALENT IN STUDIED ROMANIAN PARKINSONIAN PATIENTS THAN IN GENERAL POPULATION (P=0.49) AND THAT CHRONIC ISCHEMIC HEART DISEASE WERE STATISTICALLY SIGNIFICANT MORE PREVALENT IN STUDIED ROMANIAN PARKINSONIAN PATIENTS THAN IN GENERAL POPULATION (P<0.0001).

KEY WORDS: CARDIOVASCULAR, COMORBIDITIES, PARKINSON DISEASE

INTRODUCTION

There are increasing number of reports in the scientific literatures which support a link between some of the most prevalent cardiovascular (hypertension, coronary heart disease, arrhythmias, etc) and neurodegenerative diseases (eg Parkinson disease, Alzheimer disease). Even clinically defined by specific motor symptoms, PD includes a wide range of non-motor manifestations (cardiovascular, gastrointestinal, genito-urinary, etc) as well as various

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² McLean G, Hindle JV, Guthrie B, Stewart W. Mercer. Co-morbidity and polypharmacy in Parkinson's disease: insights from a large Scottish primary care database. BMCNeurology. (2017) 17:126 DOI 10.1186/s12883-017-0904-4

comorbidities; among the last ones, cardiovascular disorders have been most frequently reported³

Currently, supine hypertension and orthostatic hypotension are considered as manifestations of cardiovascular autonomic dysfunction in Parkinson disease⁴.

Two recent studies tried to clarify the controversial relation between hypertension and PD:

- a meta-analysis of seven cohort studies performed in 2018 found that hypertension history was statistically significant associated with an increased risk of clinically manifested PD (motor symptoms)⁵.
- a second meta-analytical study (including 9 cohort and 18 case-control studies) reported in February 2019 that hypertension might increase the risk of PD⁶.

This paper will present the assessed prevalence of cardiovascular comorbidities in a group of PD patients, as part of a study aimed to explore the non-motor symptoms in Parkinson's disease patients from the Southeastern Romania.

MAIN TEXT

This clinical study (cross-sectional, observational) has been performed on a group of 86 consecutive patients with idiopathic Parkinson's disease from 5 Outpatients Clinics of Constanta, between 01 January 2017 and 31 May 2018.

The study subjects have been diagnosed as idiopathic Parkinson's disease according to the United Kingdom Brain Bank criteria⁷. Patients who presented atypical neurological features, suggestive for multiple system atrophy or other causes for parkinsonism have been excluded.

Sex, age, disease duration, associated medical conditions and current medications have been recorded. In order to reveal the presence of non-motor symptoms, all the patients have been assessed using the Scale for Outcomes in Parkinson's Disease for Autonomic Symptoms (SCOPA-AUT)⁸ as a self-administered questionnaire.

The results will be presented as absolute or mean values, median values and/or percentages, together with the corresponding standard deviations, 95% confidence intervals and parametric tests for statistical relevance, using Word Excel and MedCalc applications.

Main characteristics of studied population: sex distribution (44% females and 56% males); the patients were aged 51 to 89 years; mean age = 70.63 years [SD = 9.74]; mean age

³ McLean G, Hindle JV, Guthrie B, Stewart W, Mercer. Co-morbidity and polypharmacy in Parkinson's disease: insights from a large Scottish primary care database. *BMCNeurology*. (2017) 17:126 DOI 10.1186/s12883-017-0904-4; Scorza FA, Fiorini AC, Scorza CA, Finsterer J. Cardiac abnormalities in Parkinson's disease and Parkinsonism. *J Clin Neurosci*. 2018 Jul;53:1-5. doi: 10.1016/j.jocn.2018.04.031

⁴ Espay AJ, LeWitt PA, Hauser RA, Merola A, Masellis M, Lang AE. Neurogenic orthostatic hypotension and supine hypertension in Parkinson's disease and related synucleinopathies: prioritisation of treatment targets. *Lancet Neurol*. 2016 Aug;15(9):954-966. doi: 10.1016/S1474-4422(16)30079-5

⁵ Hou L, Li Qiujuan, Jiang L, Qiu H, Geng C, Hong JS et al. Hypertension and Diagnosis of Parkinson's Disease: A Meta-Analysis of Cohort Studies. *Front Neurol*. 2018; 9: 162

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⁷ Hughes AJ, Daniel SE, Kilford L, Lees AJ. Accuracy of clinical diagnosis of idiopathic Parkinson's disease: a clinico-pathological study of 100 cases. *Journal of Neurology, Neurosurgery, and Psychiatry* 1992;55:181-184

⁸ Visser M, Marinus J, Stiggelbout AM, Van Hilten JJ. Assessment of autonomic dysfunction in Parkinson's disease: the SCOPA-AUT. *Mov Disord* 2004; 19:1306-12

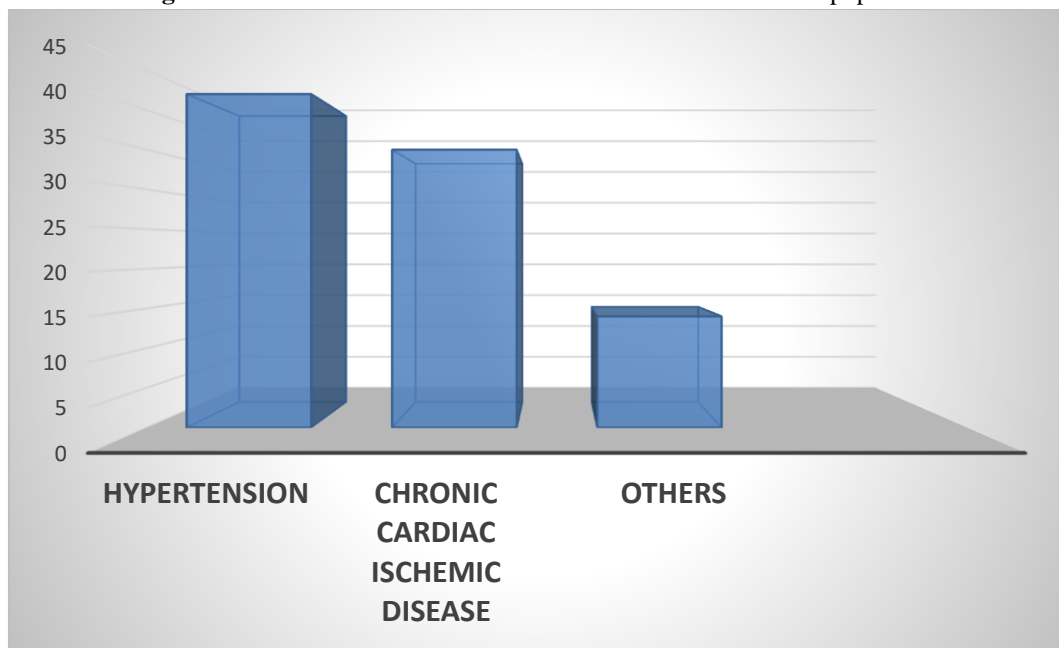
in women =71.89 years [SD 10.2]; mean age in men = 69.64 years [SD 9.35]. Median = 71 years.

Disease duration varied between 1 and 16 years in the studied group; mean 6.33 years [SD 2.98]. Mean disease duration in women was 6.25 years [SD=2.87]; mean disease duration in men was 6.35 years [SD=3.03] .

The most prevalent cardiovascular comorbidities identified in our study population were:

- arterial hypertension 42 patients (48.83%, 95%CI 38.27-59.39)
- chronic cardiac ischemic disease 35 patients – 40.69%, 95%CI 30.31-51.07)
- others: 14 patients 16.27%, 95%CI 4.47-24.07 (paroxysmal or chronic atrial fibrillation, aortic or mitral insufficiency, aortic stenosis, restrictive cardiomyopathy, cardiac failure, tachycardia, carotid endarterectomy, cardiac pacemaker, venous insufficiency).

Figure 1: Cardiovascular comorbidities identified in the studied population



The main cardiovascular comorbidities identified in male patients were:

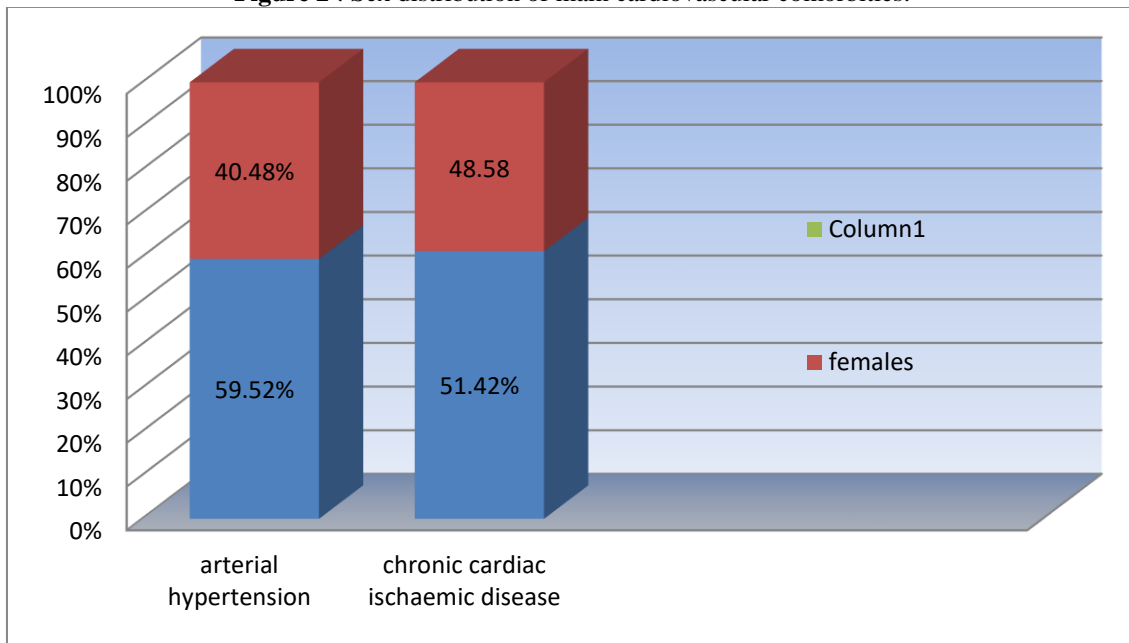
- arterial hypertension 52.08% (95%CI 37.95-66.21)
- chronic cardiac ischaemic disease 37.50% (95%CI 23.8-51.2)

The main cardiovascular comorbidities identified in female patients:

- arterial hypertension 44.73% (95%CI 28.92-60.54)
- chronic cardiac ischaemic disease 44.73% (95%CI 28.92-60.54).

Data analysis showed no statistically significant difference between males and females regarding the prevalence rates for both arterial hypertension (p=0.5) and chronic ischemic heart disease (p=0.5).

Figure 2 : Sex distribution of main cardiovascular comorbidities:



Reported values for hypertension prevalence in general population of Romania (according to SEPHAR III study results, assessed on a representative sample of 1970 adult subjects obtained by a multi-stratified sampling procedure) are 45.1 %⁹.

Chronic ischemic heart disease prevalence in general population in Romania has been estimated by CARDIO-ZONE study as 14.2% (cross-sectional study performed on 3124 adult subjects aged between 18 – 85 years, 61% female)¹⁰.

Comparing the prevalence values in Romanian general population for these two important cardio-vascular disorders with our study results leads to the conclusion that:

- arterial hypertension has been found not statistically significant more prevalent in studied Romanian parkinsonian patients than in general population ($p=0.49$);
- chronic ischemic heart disease were statistically significant more prevalent in studied Romanian parkinsonian patients than in general population ($p<0.0001$).

A recent study conducted in the northern region of Romania, which aimed to assess the cardiovascular risk factors in 126 PD patients using laboratory tests (fasting blood glucose test, serum lipid fractions dosage), Doppler ultrasound, brain CT or MRI as well as an interview regarding the personal history of hypertension, diabetes, cerebrovascular and cardiovascular diseases, reported a prevalence of 58.73% for hypertension, with a slight predominance of female patients (65.38% vs 47.92%, $P = 0.05$); carotid or vertebral atheromatosis was present in 30.95% and 22.22% of studied patients¹¹.

⁹ Dorobantu M, Tautu OF, Dimulescu D, Sinescu C, Gusbeth-Tatomir P, Arsenescu-Georgescu C et al. Perspectives on hypertension's prevalence, treatment and control in a high cardiovascular risk East European country: data from the SEPHAR III survey. *J Hypertens.* 2018 Mar;36(3):690-700

¹⁰ Cinteza M, Pana B, Cochino E, Florescu M, Margulescu A, Florian A, Vinereanu D. Prevalence and control of cardiovascular risk factors in Romania Cardio-Zone national study. *Maedica* 2007, 2. 277-288

¹¹ Perju-Dumbravă L, Muntean ML, Muresanu DF. Cerebrovascular profile assessment in Parkinson's disease patients. *CNS Neurol Disord Drug Targets.* 2014;13(4):712-7

International studies dedicated to comorbidities prevalence rates assessment in PD reported also hypertension (41.1%) as being the most prevalent, followed by constipation (27.5%), coronary heart disease (25.1%) and painful conditions (21.7%)¹².

It seems that hypertension not only increase the risk for clinically manifest PD but also have a defavourable effect on cognitive functions in the course of the disease¹³.

On the other hand, it has been showed that recognizing and treating earlier the cardiovascular dysfunction in PD could prevent sudden death in these patients¹⁴.

For a more appropriate therapeutic approach, some authors have even proposed that chronic comorbidities should be used for identifying PD subtypes and subsequently promoting individualized treatment for these patients (personalized medicine)¹⁵.

CONCLUSION

Cardio-vascular dysfunction is quite a common condition in Parkinson's disease, very often symptomatic and leading to serious alterations of life quality in these patients.

Even further more complex studies are needed to elucidate this complex part of parkinsonian pathophysiology, the presented study revealed that the most prevalent cardiovascular comorbidities identified in the studied PD patients were arterial hypertension and chronic ardiac ischemic disease, with no statistically significant difference between males and females. Chronic ischemic heart disease were statistically significant more prevalent in studied Romanian parkinsonian patients than in general population

The continuation of the study, including more PD patients and more investigated clinical parameters, would increase the statistical significance of the results.

ACKNOWLEDGEMENTS

I would like to thank Raican George and Darawsha Khalil for their help to accomplish this work.

¹² McLean G, Hindle JV, Guthrie B, Stewart W, Mercer. Co-morbidity and polypharmacy in Parkinson's disease: insights from a large Scottish primary care database. *BMCNeurology*. (2017) 17:126 DOI 10.1186/s12883-017-0904-4

¹³ Jones JD, Jacobson C, Murphy M, Price C, Okun MS, Bowers D. Influence of Hypertension on Neurocognitive Domains in Nondemented Parkinson's Disease Patients. *Parkinson's Disease*. Volume 2014, Article ID 507529, doi.org/10.1155/2014/507529

¹⁴ Scorza FA, Fiorini AC, Scorza CA, Finsterer J. Cardiac abnormalities in Parkinson's disease and Parkinsonism. *J Clin Neurosci*. 2018 Jul;53:1-5. doi: 10.1016/j.jocn.2018.04.031

¹⁵ Santiago JA, Bottero V, Potashkin JA. Biological and Clinical Implications of Comorbidities in Parkinson's Disease. *Front Aging Neurosci*. 2017; 9: 394. doi:10.3389/fnagi.2017.00394

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ALTERATION OF SEROTONIN POSITIVE CELLS IN COLONIC MUCOSA OF PATIENTS WITH INFLAMMATORY BOWEL DISEASE

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ABSTRACT:

BACKGROUND AND AIMS: THERE HAVE BEEN DESCRIBED INCREASED MUCOSAL DENSITIES OF SEROTONIN POSITIVE NEUROENDOCRINE CELLS IN INFLAMMATORY BOWEL DISEASE (IBD) . THE AIM OF OUR STUDY IS TO DETERMINE THE SEROTONIN POSITIVE NEUROENDOCRINE CELLS DENSITIES IN COLONIC MUCOSA OF PATIENTS WITH IBD.

METHODS: COLONIC BIOPSIES FROM 18 PATIENTS WITH IBD (8 ULCERATIVE COLITIS, 10 CHRON'S DISEASE) AND 16 HEALTHY CONTROLS WERE EVALUATED HISTOPATOLOGIC WITH HEMATOXYLIN-EOSIN AND IMMUNOHISTOCHEMICAL WITH SEROTONIN ANTIBODIES.

RESULTS: NE CELLS POSITIVE FOR 5-HT WERE COUNTED ON A TOTAL MEDIAN NUMBER OF 20.7 (1,80) CRYPTS IN IBD GROUP AND 25.65(2,64) CRYPTS IN CONTROLS.

THE TOTAL DENSITIES/SUBJECT OF 5-HT POSITIVE CELLS WERE SIGNIFICANTLY HIGHER IN IBD GROUP COMPARED TO CONTROLS: 0.56(0.11,1.87) FOR IBD GROUP AND 0.28(0.14,0.71) FOR CONTROLS, P=0.004.

CONCLUSION: OUR STUDY SHOWED AN INCREASED DENSITY OF SEROTONIN POSITIVE NEUROENDOCRINE CELLS IN IBD COLITIS WHEN COMPARED TO HEALTHY CONTROLS.

KEY WORDS: ENDOCRINE CELLS, INFLAMMATORY BOWEL DISEASE, SEROTONINE

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INTRODUCTION

Gastrointestinal (GI) neuroendocrine (NE) cells are components of the intestinal barrier localized in the digestive tract mucosa.

There have been described three types of NE cells: enterochromaffine (EC) cells the most frequent GI NE cells with serotonin as the main secretion product. They represent the majority of NE cells localized in the intestinal mucosa (with the exception of duodenum), the appendix and the colon (with the exception of rectum).

Other types of NE cells are represented by G cells and D cells (which secrete serotonin) localized in the antrum and duodenum, L cells (which secrete enteroglucagon) localized in the terminal ileum and in the appendix and EC-like cells from the gastric mucosa which secrete histamine⁹.

An increased number in NE cells expressing serotonin (5HT) has been observed in patients with Crohn's disease (CD) and ulcerative colitis (UC).

GI tract is the site of secretion of about 95% of serotonin of which neurons are responsible for about 10% of the secretion and the rest is secreted by the EC cells.

In the mucosa of digestive tract serotonin activates neural reflexes associated with intestinal motility, secretion and sensation through at least two receptors 5-HT₃, 5-HT₄¹⁰.

Serotonin has an important role in inflammation and in immune response. Mast cells, macrophages/ monocytes, and T cells produce serotonin. Neutrophils, eosinophils, monocytes, macrophages, dendritic cell, mast cells, and natural killer (NK) cells and lymphocytes express serotonin receptors. Serotonin activates lymphocytes, whose proliferation protects NK cells and T-helper cells and endorses the recruitment of T cells¹¹.

The role of 5-HT in adaptive immunity of GI tract and the implication in intestinal functions are interesting paths to be evaluated for the underlying mechanism of inflammatory bowel disease (IBD) and its clinical impact.

We aim to investigate the densities of 5-HT expressing NE cells in colonic mucosa of patients with IBD.

MATERIALS AND METHODS

Cases

We included 18 patients with IBD (8 with UC and 10 with CD). All patients had colonic involvement of IBD. All patients had continuous treatment for IBD from diagnosis. Only one patient had antecedents of surgery (segmental ileal resection for stenosing CD). No patient with CD had fistulising disease. In IBD group 11 patients were in clinical remission of the disease (4 with UC and 7 with CD) and 7 patients had clinical active disease (4 patients with UC and

⁹ Magdy El-Salhy, Tefera Solomon, TrygveHausken, Odd Helge Gilja, Jan Gunnar Hatlebakk, "Gastrointestinal neuroendocrine peptides/amines in inflammatory bowel disease", *World Journal of Gastroenterol* 23(28) 2017: 5068-5085, doi: 10.3748/wjg.v23.i28.5068; Ashok R., Gunawardene, Bernard M. Corfe, Carolyn A. Staton, "Classification and function of the enteroendocrine cells of the lower gastrointestinal tract", *International Journal of Experimental Pathology* 92 (2011): 219-231, doi: 10.1111/j.1365-2613.2011.00767; Rindi G, Leiter AB, Kopin AS, Bordi C, Solcia E., "The "normal" endocrine cell of the gut: changing concepts and new evidences", *Annals of the New York Academy of Science*, 1014(2004):1-12 doi:10.1196/annals.1294.001

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¹¹ Magdy El-Salhy, Tefera Solomon, TrygveHausken, Odd Helge Gilja, Jan Gunnar Hatlebakk, "Gastrointestinal neuroendocrine peptides/amines in inflammatory bowel disease", *World Journal of Gastroenterol* 23(28) 2017: 5068-5085, doi: 10.3748/wjg.v23.i28.5068

3 patients with CD Controls were represented by 16 subjects :9 Females and 7 males median age 56 years, range 50-68 years) without personal medical history of gastrointestinal tract conditions who underwent colonoscopy for colorectal cancer screening. Both groups signed the study consent form.

Patients' characteristics are summarized in (table 1).

Colonoscopy

Patients with IBD who underwent colonoscopy had indication for endoscopic examination in context of their IBD.

Five biopsies were taken one from each anatomical segment of the colon (rectum, sigmoid, descending, transverse, ascending and cecum) through colonoscopy examination from each subject (IBD group and controls). Macroscopic normal tissue specimens were biopsied from controls. All biopsy samples were oriented using nitrocellulose filter.

Table 1. Patients characteristics

Patients	UC	CD
Male	4	7
Female	4	3
Age (years)	38 (23,54)	39 (25,56)
Duration of disease (years)	5 (2,13)	4 (2,8)
Phenotype E2 Montreal	2	-
Phenotype E3 Montreal	6	-
Phenotype L2B1 Montreal	-	1
Phenotype L3B1 Montreal	-	7
Phenotype L3B2 Montreal	-	2
Mayo clinical < 2	4	-
Mayo clinical >=2	4	-
CDAI < 150	-	7
CDAI > 150	-	3
Mayo endoscopic <2	4	-
Mayo endoscopic > 2	4	-
CDEIS < 3	-	6
CDEIS >=3	-	4
Conventional treatment	4	4
Anti-TNF alpha	4	6

Histopathology

Biopsies were fixed in 10 % formalin for 24 hours and prepared in addition to standard protocol: gradual dehydrated through graded alcohols, paraffin embedded, microtome sectioned at a thickness of 4 microns and stained with hematoxylin-eosin.

Immunohistochemistry

Before proceeding with the IHC protocol, the sections were deparaffinized and rehydrated. According to the type of the antibody and the technical specifications of the producer, in specific cases enzymatic or termic pre-treatment was applied. The tissue sections were cooled, washed with distilled water, treated with TRIS based solution and peroxide and left for incubation with the specific antibody between 10 and 30 minutes. Lightning-Link staining, Streptavidin and chromogen DAB were subsequently added upon sections which were previously marked and repeatedly washed with TRIS solution and dried according to standard

protocol. Hematoxylin staining is used for 1-2 minutes, the sections are afterwards dehydrated with graded alcohols and examined at the optic microscope.

For serotonin we used an polyclonal antibody, Leica, dilution 1:100

Examination of the tissue sections

The sections were examined at optic microscope for hematoxylin-eosin staining and IHC. The diagnosis of chronic colitis and the differential diagnosis between IBD colitis and other forms of chronic colitis was established. Histological activity of IBD was established using Geboes score for UC and Global Histologic Disease Activity Score (GHAS) for CD.

The IHC technique allowed the evaluation of the presence, the distribution and the densities of NE cells which were positive serotonin. The counting of NE cells was performed manually on the most representative sections and on a maximum number of crypts available on the microscopic field.

The examination of the sections was performed by the same person (Prof.MD.Gabriel Becheanu) who was blinded about the origin of the samples from the studied groups.

Statistical analysis

Results were reported as means and standard deviations for variables with a normal distribution and median, minimum and maximum respectively for variables with an abnormal distribution. We looked for differences concerning the independent variables by outcome in bivariate analysis (Mann-Whitney *U* test or Fisher's exact test, depending on variables). Two-sided hypothesis testing was used, with a *P* value of less than 0.05 considered statistically significant. Data analyses were performed using statistical software SPSS version 20.0 from IBM Corporation, Armonk, NY, USA.

RESULTS

Histopathological examination

We obtained a total of 180 slides (90 biopsy specimens from each study group). From a total of 40 biopsy specimens in UC group 34 were represented by quiescent colitis and 6 segments with active disease out of which 4 with mild-moderate activity and 2 with severe activity. In CD group from a total of 45 biopsy specimens we found 9 segments with active disease 5 segments with mild-moderate involvement and 4 segments with severe activity. Histological examination in controls showed normal aspect of the mucosa.

Immunohistochemistry

NE cells positive for 5-HT were counted on a total median number of 20.7 (1,80) crypts in IBD group and 25.65(2,64) crypts in controls.

The total densities/subject of 5-HT positive cells were significantly higher in IBD group compared to controls: 0.56(0.11,1.87) for IBD group and 0.28(0.14,0.71) for controls, $p=0.004$. (figure 1, figure 2, figure 3)

We also evaluated the 5-HT positive cells densities of each colonic segment with higher values in IBD group. (table 2).

The median number of crypts/segment on which we made de calculation is summarized in (table 3).

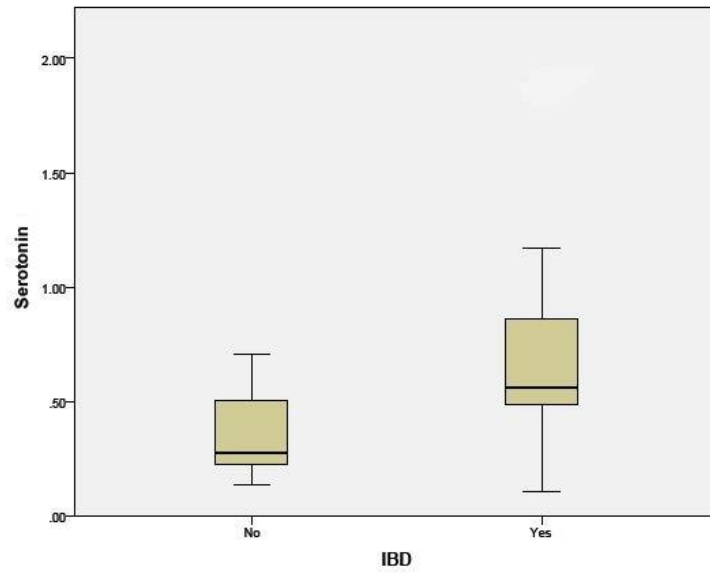


Figure1. Median densities of 5-HT positive cells in IBD and controls

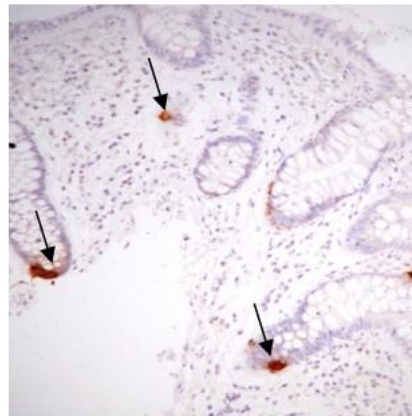


Figure 2. Immunohistochemistry with serotonin – normal colonic mucosa. 200x. (NE cells expressing serotonin arrows)

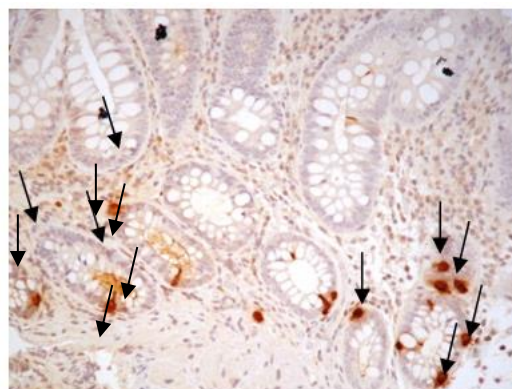


Figure 3. Immunohistochemistry with serotonin – chronic quiescent colitis. 200x. (NE cells expressing serotonin arrows)

Table2. Median 5-HT cells densities/crypt/colonic segment

Segments	IBD	Controls	P-value
Rectum	0.69(0.07,3.09)	0.39(0.17,1.47)	0.09
Sigmoidum	0.45(0.04,2.5)	0.3(0.07,1.2)	0.03
Descending	0.49(0.11,1.71)	0.19(0.03,0.65)	0.001
Transverse	0.65(0.07,1.75)	0.36(0.05,1.25)	0.02
Ascending	0.57(0.22,1.42)	0.27(0.09,0.56)	0.001

Table 3. Median number of crypts/colonic segment evaluated for 5-HT positive cells.

Segments	IBD	Controls
Rectum	28.3(9,57)	28.2(12,38)
Sigmoidum	17.7(1,80)	9.9(2,33)
Descending	23.6(5,45)	34.25(19,64)
Transverse	15.27(5,39)	29.8(12,37)
Ascending	18.66(7,35)	26.12(12,45)

According to the type of IBD we obtained a median number of 5-HT positive cells/crypt for UC of 0.7(0.23,1.87) for UC and 0.51(0.11,0.98) for CD, p value=0.16

When compared the densities of 5-HT positive cells between the group with clinically active disease and the group in clinical remission we found a median density of 5-HT positive cells of 0.59(0.49,1.87) and 0.5(0.11,1.17) in patients with clinically active disease and in patients in clinical remission respectively, p value=0.2

According to endoscopic activity the median 5-HT densities were 0.72 (0.49,1.48) in patients with endoscopic active disease and 0.54(0.11,1.87) in patients with endoscopic remission p=0.12

DISCUSSIONS

The increased density of serotonin expressing cells in colonic mucosa of patients with IBD explaining a possible correlation between gut hormones, immune reactivation and inflammatory response and being responsible of the gastrointestinal distmotility, visceral sensitivity, appetite influence via increase satiety, common findings in IBD patients¹².

Serotonin has an important role in inflammation and in immune response. Mast cells, macrophages/ monocytes, and T cells are capable produce serotonin. neutrophils, eosinophils, monocytes, macrophages, dendritic cell, mast cells, and natural killer (NK) cells and

¹² Ashok R., Gunawardene ,Bernard M. Corfe, Carolyn A. Staton,” Clasiffication and function of the enteroendocrine cells of the lower gastrointestinal tract”, International Journal of Experimental Pathology 92 (2011): 219–231,doi: 10.1111/j.1365-2613.2011.00767; Moran GW, Pennock J, McLaughlin JT,” Enteroendocrine cells in terminal ileal Crohn's disease”, Journal of Crohns and Colitis, 6(9) 2012:871-80,doi: 10.1016/j.crohns.2012.01.013; Khan WI, Ghia JE. “Gut hormones: emerging role in immune activation and inflammation”, Clinical and Experimental Immunology,161(1) 2010:19-27, doi:10.1111/j.1365-2249.2010.04150; Moran GW, Leslie FC, McLaughlin JT, “Crohn's disease affecting the small bowel is associated with reduced appetite and elevated levels of circulating gut peptides”, Clinical Nutrition, 32(3) 2013 :404-411, doi: 10.1016/j.clnu.2012.08.024

lymphocytes express serotonin receptors. Serotonin activates lymphocytes, whose proliferation protects NK cells and T-helper cells and endorses the recruitment of T cells¹³.

The pathway of 5-HT regulation in IBD is still unclear.

There is conflicting data upon the role of mucosal serotonin in the GI tract arising from both neural and mucosal sources of serotonin within the gut and the widespread and overlapping distribution of specific serotonin receptor subtypes¹⁴.

Two experiments from the same animal model were published. The authors proposed removal of colonic mucosa prior to analysis of a stereotyped motor pattern, the colonic migrating motor complex (CMMC). The published results were contradictory. Keating and Spencer reported that the CMMC persists after complete removal of the mucosa in conclusion it doesn't depend on the release of mucosal serotonin but Heredia et al stated that reported that removal of colonic mucosa abolished spontaneous CMMCs, but could still trigger CMMCs mechanically confirming that the neural circuitry was intact. Another paper published by Li et al. in 2011 used knockouts of tryptophan hydroxylase 1 (TPH1), the rate limiting enzyme for mucosal synthesis of serotonin, and TPH2 (the neural form) to delete serotonin from both sources on mice. The TPH1 knockouts did not differ from the initial form in any function measured including motility and transit, in contrast TPH2 knockout mice had alteration in every function suggesting a minor role of the intestinal mucosa release of serotonin on GI functions¹⁵.

In 1997 El Salhi showed an increased density of serotonin expressing cells in IBD group¹⁶.

However Magro et al. found lower levels of 5-HT in the mucosa of patients with UC and CD compared to controls¹⁷.

Coates and al. assessed the enteric 5-HT signalling on rectal biopsies of patients with UC compared to patients with inflammatory bowel syndrome (IBS) and normal controls and the result was a decrease in the EC expressing cells in the mucosa of patients with severe UC compared to patients with non-severe UC, IBS and controls suggesting that UC may interfere with the differentiation of EC cells. No difference in the mucosal level of 5-HT was observed suggesting that intraluminal concentration is not influenced by the cells number¹⁸.

Our study demonstrated increased colonic densities in 5-HT positive cells in UC and CD when compared to subjects with normal colonic mucosa assessed on a minimum of 10 crypts. We did not find statistical significant difference between 5-HT positive cells according to clinical and endoscopical activity of IBD.

¹³ Magdy El-Salhy, Tefera Solomon, Trygve Hausken, Odd Helge Gilja, Jan Gunnar Hatlebakk, "Gastrointestinal neuroendocrine peptides/amines in inflammatory bowel disease", *World Journal of Gastroenterol* 23(28) 2017: 5068-5085, doi: 10.3748/wjg.v23.i28.5068

¹⁴ Costedio MM, Hyman N, Mawe GM, "Serotonin and its role in colonic function and in gastrointestinal disorders", *Diseases of the Colon and Rectum*, 50(3) 2007:276-388

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There are limitations to our study. We included a small number of patients. Other markers such as serum and fecal 5-HT levels that could better evaluate the clinical impact of mucosal alterations were not included in our study.

Further studies are needed in order to understand the behaviour of serotonin positive cells in IBD with potential implication in clinical management of the disease.

ACKNOWLEDGEMENTS

All authors equally contributed in the research and drafting of this paper.

All authors report no potential conflict of interest.

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INTERRELATION OF THYMUS HYPERTROPHY - SEVERE PNEUMONIA IN A NEWBORN FROM THE TWIN PREGNANCY

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ABSTRACT:

THYMUS HYPERTROPHY IS AN ANATOMICAL-PHYSIOLOGICAL ENTITY THAT IS SPECIFIC TO THE NEWBORN AGE. TWINNING PREDISPOSES TO "RISKS", PREMATURE BIRTH, LOW WEIGHT, INCREASED (SECONDARY) SUSCEPTIBILITY TO INFECTIONS. WE HAVE CONDUCTED A STUDY OF TWO PAIRS OF UNIVITELINE TWINS THAT SHOW A POSSIBLE LINK BETWEEN THYMIC HYPERTROPHY AND THE SEVERE POTENTIAL EVOLUTION OF A NEWBORN PNEUMONIA, THE EXPLANATION BEING GIVEN BY ANATOMICAL FEATURES, MECHANICAL, INFECTIOUS FACTORS, AND POOR IMMUNE CAPITAL.

KEY WORDS: THYMUS, PNEUMONIA.

INTRODUCTION

Thymus is an organ placed in the upper portion of the anterior mediastinum. It regresses in size with age, the adult is completely involuted. In the baby, the examination is done during the radiological examination in the inspiration / expiration and during crying and the concretization is made in the form of an opacity located in the upper mediastinum, overlapping the vascular pedicle, exceeding it. Differential diagnosis includes a wide range of conditions: adenopathy, segmental atherosclerosis, pleurisy, and upper lobe pneumonia, cardiac malformations with cardiomegaly, thyroid hypertrophy, or even enlargement of the mediastinal shadow (cough, after sucking). The newborn has a "physiological" immaturity of locally

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mediated immune mechanisms in the respiratory or digestive mucosa. Twinning pregnancy may usually be a risky pregnancy requiring close monitoring of pregnancy and predisposing to premature delivery, with all the consequences derived from it: low birth weight, poor neonatal adaptation, and insufficient amount of lung surfactant. Therefore, newborn pneumonia requires "a priori" antibiotic therapy before determining the blood cultures.

Thymus can be quite prominent in the newborn but very little to be seen after the age of two years⁶.

Platter described thymic hyperplasia in infants as the enlargement of the thymus, which compresses the airway, resulting in mors thymica or "sudden infant death"⁷. The diagnosis of thymic hyperplasia is formed on the weight and size of the thymus: the thymus is bigger than the predicted maximum range for the age⁸ or the thymus weighs over 100 g⁹. In respect to a 1994 report, cellular growth is similar in thymic hyperplasia and the normal thymus; thus, thymic hyperplasia is a benign enlargement of the thymus¹⁰.

Diagnosis of an enlarged thymus on a chest radiograph may be troublesome as its size, position, shape, and growth pattern are variable¹¹. Other anterior mediastinal masses that present in children are: teratomas, lymphangioma, lymphosarcoma, hemangioma, substernal thyroid, thymic tumor and thymolipomas and must be considered in differential diagnosis. CT scan is helpful in differentiating the thymic lesion from others. The management of large thymic mass is controversial. When the mass is asymptomatic and the patient is less than two years of age, the patient can be followed under close observation; the mass often regresses with or without steroid administration¹². Thymolytic effects of steroids are well established, but this test is inconsistent and lacks specificity¹³. In children under 2 years of age, asymptomatic mass can be observed and a trial of steroid given, as in this age group lymphoma is not a major diagnostic consideration¹⁴.

One of the major functions of the thymus, the maturation of thymocytes, has been researched extensively with molecular and cellular biology. It is now known that various inductive, hormonal, and proliferative signals from epithelial cells has a major role to the

⁶ Parker LA, Gaisie O, Scatliff JH Computerized and ultrasonographic findings in massive thymic hyperplasia. Clin. Pediatr.. 1985;24: 90-4

⁷ Hofmann WJ, Moller P, Otto HF. Thymic hyperplasia. I. true thymic hyperplasia. review of the literature. Klin Wochenschr 1987;65:49-52

⁸ Ruco LP, Roasti S, Palmieri B, Pescarmona E, Rendina EA, Baroni CD. True thymic hyperplasia : a histological and immunohistochemical study. Histopathology 1989;15:640-3

⁹ Arliss J, Scholes J, Dickson P, Messina JJ. Massive thymic hyperplasia in an adolescent. Ann Thorac Surg 1988;45: 220-2

¹⁰ Rice HE, Flake AF, Hori T, Galy A, Verhoogen RH. Massive thymic hyperplasia : characterization of a rare mediastinal mass. J of Pediatric Surg 1994;29:1561-4

¹¹ Dimitriou G, Greenough A, Rafferty G. et al. Respiratory Distress in a neonate with an enlarged thymus. Eur, J. Pediatr.. 2000;159:237-8

¹² Altar Z, Muraji T, Matsumoto Y, et al. Malignant mesenchymoma of the mediastinum presented as benign hyperplasia. Pediatr. Surgical. Int., 1988;4:56-8

¹³ Lee TM, Kohl MT, Omar A. Hyperplasia of thymic gland. Singapore Med, J., 1996;37:288-90; Henry E. Rice A. Alan W, Flake W. Hon T, et al. Massive thymic hyperplasia: characterization of a rare unediastinal mass. J. Pediatr. Surg.. 1994;29:1561-4

¹⁴ Parker LA, Gaisie O, Scatliff JH Computerized and ultrasonographic findings in massive thymic hyperplasia. Clin. Pediatr.. 1985;24: 90-4

maturation of thymocytes¹⁵. T-cell antigen receptors of thymocytes interact with epithelial major histocompatibility complex antigens in the process of thymocyte maturation¹⁶.

Material and method - prospective study on 2 pairs of univiteline twins for 14 days, respectively 23 days admitted in the Pediatric Clinic Philanthropy of different sexes and natural nutrition.

The pairs were single-sex twins, all of them rural children. The first pair - boys (AF and AE) with birth weight = 1450 g and 1870 g, admission weight= 2380 g and 2880 g second pair - girls (CD and CA). birth weight= 1300 g and 1700 g and admission weight= 2400 and 2750 g.

All four children were hospitalized for severe respiratory insufficiency, ineffective cough, periorrhasal and extremities cyanosis.

One of the twins showed worsening of respiratory failure, with respiratory acidosis, cyanosis, severe hypoxia, being transferred and followed through the PICU section.

Several parameters were introduced into the study:

- Age, gender,
- rural/urban origin,
- clinical examination,
- imaging tests (radiography)
- inflammatory tests,
- urea, creatinine, bilirubin, transaminases,
- calcium, magnesium, ionogram,
- pharyngeal exudate

A. F. Hb = 11.4, L = 12,000 / mm³, platelets = 306,000 / mm³, Gr = 39%, M = 8%, Lf = 43% ESR = 50 / 90mm, Urinalysis = 6.64 mg%, TBIL = 6.64 mg%, BC-1.57mg% pulmonary radiography = thymus hypertrophy, multiple micronodules disseminated diffuse, bilateral lung dermatological examination = omphalitis

AE: Hb = 15.5 g%, L = 10,100 / mm³, platelets = 345,000 / mm³, Gr = 35% M = 28.9% Ly = 42.9% ESR = 23/50 mm TBIL=10.5 mg% BC= 2.12 mg%, Urinalysis = normal, pharyngeal exudate = absent, pulmonary radiography = lung stg - hyaline parahillary interstitial drawing, dr. Opacity 3/3 cm with inferior net shape, diffuse contour upper 1/3 superior paratraheal dermatological examination = omphalitis

CA = 11.4, L = 12000 / mm³, platelets = 523,000 / mm³, Gr = 45.9%, M = 7.7%, Ly = 46.4% VSH = 25/40mm, pharyngeal exudate = absent,

Rx = thymus hypertrophy,

CD: Hb = 10.5, L = 19,600 / mm³, platelets = 452,000 / mm³, Gr = 52.2%, M = 8.1%, Ly = 39.72% ESR = 30 / 55mm, pulmonary radiograph = thymus hypertrophy

¹⁵ Shimosato Y, Mukai K. Tumors of the thymus and related lesions. In: Shimosato Y, Mukai K, eds. Atlas of tumor pathology: tumors of the mediastinum, fasc 21, ser 3. Washington, DC: Armed Forces Institute of Pathology, 1997; 158-168

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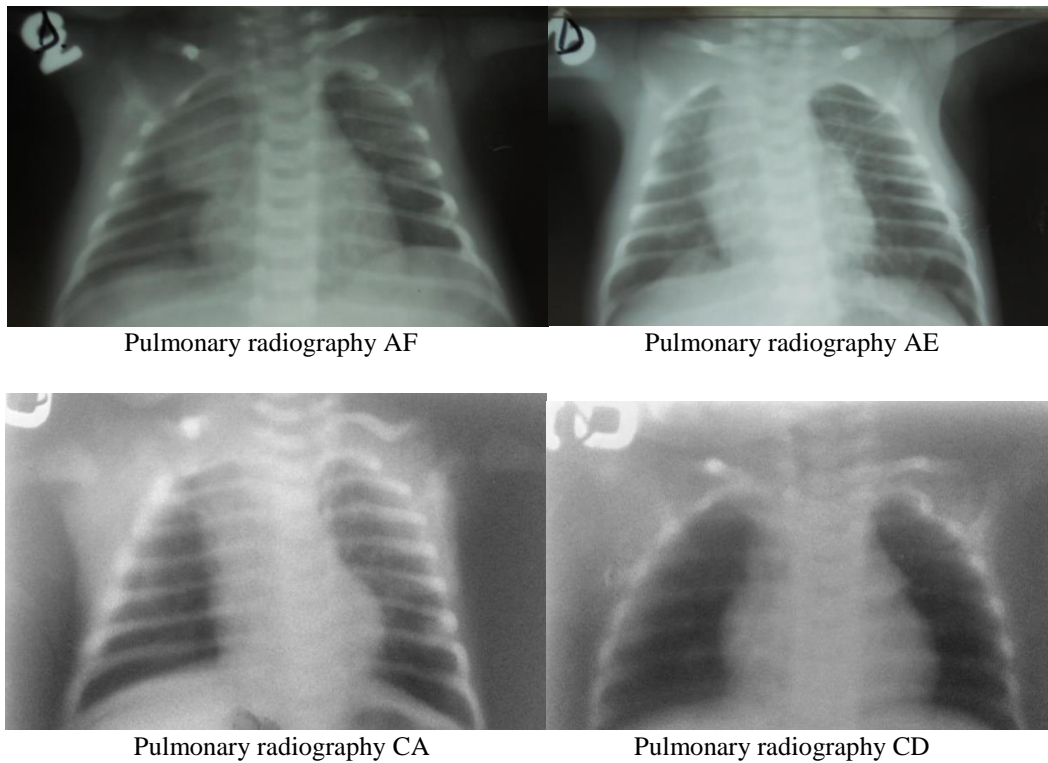


Figure 1 Thymus hypertrophy on all 4 radiographs

The duration of hospitalization was 11 and 15 days respectively, the treatment being complex with cephalosporins, systemic corticotherapy, oxygen therapy, acidosis treatment, furosemide depletion, secretion aspiration, nasal disobstruction, probiotics, hepatoprotective drugs.

RESULTS AND DISCUSSIONS:

1. Both pairs of twins have reached a serious overall condition, marked respiratory failure and required respiratory support and oxygen therapy.
2. Coexisting conditions of pneumonia (omphalitis, jaundice, ITU, folliculitis) prolonged the duration of hospitalization and, implicitly, antibiotic treatment.
3. Thymus hypertrophy acts complementarily by secondary immune deficiency with increased severity and duration of hospitalization. This association can be interpreted as potentially aggravated by mechanical factors (extrinsic compression), immune deficiency.
4. Radiological assessment is necessary both for confirmation of the diagnosis and for the correct diagnosis of the differential diagnosis.
5. Antibiotic therapy is indicated from the first moment of hospitalization, before the result of the laboratory tests, in accordance with the patient's serious condition.
6. Twinning with its consequences: premature birth, low weight, pulmonary immaturity, is a risk factor in potentiating the severity of respiratory diseases.
7. Up to 4 months, both pairs of twins also had 2-3 episodes of respiratory disease, but not the magnitude of the initial episode.
8. The somatic and neuropsychic development of all children up to the age of 1 was normal, the height and weight being included in the growth percentiles for that age.

ACKNOWLEDGEMENTS

All authors equally contributed in the research and drafting of this paper.

All authors report no potential conflict of interest.

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