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# NATO Security Policy – Georgian National Values

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**ABSTRACT:** After gaining the independence Georgia has made a choice in favor of democracy, which implies a great difficulty, risks, challenges and threats to a small state and demands adequate responses. The internal political processes of the country depend on changing situation of the international arena. The existing threats and challenges made it necessary to establish a fundamental document - National Security Concept, which would be based on the democratic course of Georgia, national values and the elaboration of effective security mechanisms for its own people. The important vector of security policy of Georgia is directed towards the integration of the North Atlantic Alliance and the EU integration and strengthening of foreign relations, for which various strategic actions are undertaken such as participation in security operations and bilateral or multilateral cooperation that reduces political and military risks and correlates with the sovereignty and territorial integrity of the country. Striving to NATO and finally, its membership ensures the spread of democratic values and Establishment of the supremacy of law. On the way to the integration of the Alliance - the form of democratic arrangement of the state is one of the main prerequisites. Georgia is gradually improving the country's political environment in order to achieve this goal to maintain stability and to support the supremacy of law, which is the cornerstone of democracy.

**KEYWORDS:** North Atlantic Alliance, Security Concept, National Values, Security System, Spread of Democracy

Georgia locates in an important geographical area, which strategically has been principal for centuries in military, economic and political terms, which increases the issue of strengthening the security of the country.

After gaining independence from the collapse of the Soviet Union in 1991, Georgia continued to move towards democracy, which led to the annexation of the neighboring state and made it necessary for the country to develop the national security concept. The first steps towards the development of this concept were taken in 2004, G. Bezhuashvili was instructed to create a document based on Georgia's democratic course, national values and the development of effective mechanisms to protect the security of its people (Georgian Parliament's Resolution on the Development of the National Security Concept, №484-II, October 12, 2004). It was done through the Office of the Security Council in cooperation with the Ministries.

This fundamental document reflects the changes and impacts that have taken place in the field of security on the country, the threats, the risks, the challenges, and the adequate response.

It has great importance to changing the situation in the international arena for the security of Georgia and effects on the internal political processes of the state. The achievement of a democratic state, which needs to be strengthened through reforms.

Georgia needs to establish partnerships with each state and the Union of States, especially with the European Union and the United States, which has supported the country's regional stability since the day democracy was achieved. The great attention is

paid to national values, the country's sovereignty and territorial integrity, freedom, democracy and the rule of law, security, prosperity, and peace.

Ensuring the security of the country is a unified national responsibility, that is why the country's national values need to be in line with the country's foreign policy and military strategies. It is important to consider Georgia's national values in terms of compatibility with NATO. As you know, security challenges are the priority for the Alliance, that is why the appropriate programs are being developed which is tailored to the country's national security challenges.

**Sovereignty and territorial integrity** – It ranks first in the Georgian national values. After gaining independence in 1991, Georgia has chosen in favour of democracy. From the marked period made a start Georgia's entry in the international arena, where the country sought guarantees of sovereignty. At the Prague Summit in 1992, the President of Georgia Eduard Shevardnadze announced for the first time the integration into NATO. Since that time, Georgia has been working closely with NATO, which is funded by the Alliance's proposed programs.

Georgia's aspiration to become a member of the North Atlantic Treaty Organization stems from security policy. Due to Georgia's geopolitical location, maintaining the country's sovereignty and territorial integrity faces constant challenges that are threatened by Russia's expansionist policies. The pursuit of NATO and the special programs proposed by the Alliance reduce the political and military risks associated with the country's sovereignty and territorial integrity.

**Freedom** – The second national value occupies a special place in the history of Georgia and is characterized by complex dynamics. The history of Georgia's freedom does not begin in 1991, and it has deeper historical roots. Ensuring freedom was a precondition for the formation of NATO in 1949, which was directed against the expansionist policies of the Soviet Union. NATO's enlargement policy has been to ensure and maintain the security of the territories liberated from Soviet clutches. NATO was the guarantee of the independence of the liberated countries, which is ensured by Article 5 of the North Atlantic Treaty. As for political freedom, the fundamental value for NATO is democracy and freedom, which is reflected in the rule of law. The freedom of each individual is a constitutional guarantee in NATO member states.

**Democracy and rule of law** – The pursuit of NATO and, ultimately, its membership ensures the spread of democratic values and the establishment of the rule of law. One of the main prerequisites for the formation of a democratic organization on the path is the integration into the Alliance. To achieve this goal, Georgia is gradually improving the country's political environment to maintain stability and support the rule of law, which is the cornerstone of democracy. In the Threat Assessment Document of Georgia, we read that ensuring Georgia's security means creating and maintaining a favorable environment for the peaceful, democratic development of the country and the maximum realization of the national interests, as well as ensuring the physical security of each citizen, their rights and freedoms and equal opportunities. Alliance initiatives related to greater strategic security are saturated with the theory of democratic peace, according to which Democrats do not fight each other, and universal goodness is achieved based on three basic principles: dominance, reciprocity, and identity.

**Security** – To ensure long-term strategic security, the Alliance is implementing programs in Georgia that are tailored to the country's situation. Martin Edmond's definition of the national security system is the most indicative of the scale of NATO's programs. According to him, the operative functions of the national security system are performed by the armed forces, the police, a few public institutions in functional

relation with them (fire protection, border protection, customs). Besides, the security system includes decision-making and administrative institutions: the government or its special committees. (Edmonds 2004). NATO is conducting educational training in Georgia, which also aims to develop employees in the field of defence and other security. Also noteworthy are the programs implemented to increase the country's defence capabilities and their relation to national security. In addition to security guarantees, the process of rapprochement with NATO and ultimately its accession contributes to the establishment of the rule of law, the reduction of risks and external effects, economic development, which in turn ensures stability.

**Prosperity** – Economic Policy Research Center (EPRC) has prepared a report about „The Effect of NATO”. The report analyzes foreign experience and the potential effect of NATO.

- ✓ GDP - increased by about 1.5 times immediately.
- ✓ Foreign direct investment – increased approximately 3 times.
- ✓ Unemployment – reduced by about 3 times.
- ✓ Life expectancy – increased by an average of 5 years.
- ✓ Regional integration – exports and imports have doubled.

The economic efficiency of a nation depends on ensuring long-term security and stability. NATO membership provides security, which is a source of financial stability and promotes economic growth.

**Peace** – Reducing political risk and ultimately eliminating it, which accompanies NATO and ensures peace. In the Article 2 of the Washington Treaty states, “The Parties shall promote the development of friendly and peaceful international relations by strengthening independent institutions, raising awareness of the basic principles of these institutions and promoting stability and prosperity. The parties seek to remove obstacles to their international economic policies and to promote economic cooperation. ”

NATO-Georgia relations and the country's national security are characterized by challenges in Georgia. As a result of the 2008 Russia-Georgia war, the country experienced a crisis which was characterized by exceptional severity. As you know, after 2008 a secret embargo was imposed on Georgia and we became victims of the information war in the international arena. Russia is constantly trying to accuse Georgia of starting a war and genocide, as well as trying to portray Georgia as - an undemocratic state. However, as a result of the 2014 Russia-Ukraine war, NATO's focus has changed significantly.

Both NATO and the European Union are reviewing their policies and maintaining/strengthening their collective defence capabilities to curb aggression. The Western state understands the risks that Russia's aggressive policy poses to democratic ideologies. Besides, NATO is expanding its cooperation with partner countries to deter Russia from facilitating the process of their integration into the Alliance. This process may be called the New Truman Doctrine, which still serves the purpose of restraining Russia's expansive goals and is aimed at strengthening NATO allies.

### Conclusions

Georgia's national security depends largely on NATO's security policy. As a result of cooperation with NATO, the security environment in Georgia has been improved, which is provided by special programs of the Alliance. Also, the aspiration for NATO for Georgia is a policy of restraint, which is determined by the absence of possible potential military aggression by Russia. Under such conditions, Georgia is given the opportunity to maintain the values enshrined in the National Security Concept and

increase its defence capabilities. As we have already mentioned, security is a common national responsibility and NATO is a reliable partner of Georgia in the process of building a country and maintaining its sovereignty.

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## **Forest of Arden Revisited: Re-assessing the Role of Jaques in Shakespeare's *As You Like It* from an Ecocritical Perspective**

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**ABSTRACT:** As Thomas McFarland, the author of *Shakespeare's Pastoral Comedy* cogitates, the landscape of the Forest of Arden plays a greater significant role than being a mere idyllic background to the action of the play. It actually occupies the center stage and becomes the fulcrum in the development of the plot. It's a natural space where the characters are allowed to be themselves, being free from the socio-political burdens of the court. Here they are free to create alternate identities. As Garrard opines, "Pastoral often used nature as a location or as a reflection of human predicaments, rather than sustaining an interest in and for itself." (38) Arden is capable of providing everybody, the Duke, Orlando, Rosalind, Audrey, Oliver, Duke Frederick, what he/she desires. But one of the most interesting aspects of the play is the insertion of the character of Jaques. This is an instance of the variations from the source, Thomas Lodge's *Rosalynde: Euphues' Golden Legacy*. This character is purely an original creation of Shakespeare. Then the question that haunts our mind is why is Jaques there in the play at all? What is the purpose of the playwright behind incorporating such a character within the play who is hardly necessary for the development of the plot? A close study of the play demonstrates that Jaques introduces an ecocentric point of view into the text. He is a true lover of nature in its original essence. That's why when everything is happily settled down at the end of the play, and all other characters are returning to the court, he is the only one who refuses to leave the place. A.W. Verity assumes that Jaques is the voice of Shakespeare himself. In this paper, we would partly accept Verity's opinion and try to find out Jaques' role in the play from the perspective of ecocriticism. A careful study divulge one into considering that though Shakespeare was writing a pastoral comedy, his eco-conscious mind could not accept some of the activities of the characters resulting in disturbing the ecological balance of the forest. He might have needed a mouthpiece to express his own ecocentric views. This paper would endeavour to uncover how much the character of Jaques ascertains before the readers the playwright's consciousness for the balance in ecology.

**KEYWORDS:** Idyll, Pastoral, Ecocentrism, Forest of Arden, Balance in Ecology

The fact that even after the passage of more than four hundred years of the demise of the great playwright Shakespeare, his plays continue to speak to the readers is incredibly interesting. His plays, after hundreds and thousands of interpretations

through centuries, still provide the scope for new researchers. One of the newest addition to them is the recently emerging school of literary criticism, Ecocriticism. In this paper, I will try to re-search the playwright's connection to nature within the play *As You Like It*. In this respect, I can never claim that I am the first one to do that. There are excellent works already done on this particular issue by a number of eminent critics. They have explored the way the characters within the plays "speak of the world around them as though it is alive" (Egan 22). Joanne Rebecah Grossman in her dissertation *Shakespeare Grounded: Ecocritical Approaches to Shakespeare's Drama* has investigated into the inversion of the all-inclusive hierarchy of the 'Great Chain of Being' within the plays. Simon C. Estok has further validated this robust presence of natural elements in Shakespearean plays. William Kroeger in his dissertation *The Dramatic Ecologies of As You Like It* has attempted to exhibit the balance between worlds that has been sought for throughout the play. Paul Joseph Zajac in his article "The Politics of Contentment: Passions, Pastoral, and Community in Shakespeare's *As You Like It*" has concentrated the discussion regarding the concept of contentment within the background of the pastoral. Along with considering all these aspects of the portrayal of the natural world within the play under discussion, in this paper I would especially endeavour to pay special attention to the character of Jaques and his valuable comments regarding the rights of the non-human world. This paper would further strive to uncover how much the character of Jaques ascertains before the readers the playwright's consciousness for the balance in ecology.

Act I chiefly serves the purpose of introducing the major characters of the play, as is conventional with Shakespearean drama. At the very opening scene the readers are introduced to the hero of the play, Orlando, along with his friend-like servant Adam. We find them talking in the orchard. Orlando narrates his sub-human condition into which he is forced to live by his brother Oliver. The readers come across a number of animals being compared to his state of being. The next scene shows the two sisters, Rosalind and Celia loitering in the garden of the Duke's palace. Duke senior along with his retinue of Lords and Amiens meet the audience in the Forest of Arden dressed as the inhabitants of the forest. The other major character, Jaques, is also introduced within the natural setting of the Forest of Arden. The minor characters, such as Corin, Silvius, Phoebe, Audrey and others are the original inhabitants of Arden. It could be easily noticed that all the significant characters of the play are introduced to the audience within nature, either uncontaminated or artificial. In Act II Scene (iii) the wrestling between Orlando and Charles demonstrates the signs of primitive animal instinct. The scene also presents the jealous Duke Frederick, being threatened by the good reputation of Rosalind among people, ostracizes her from the court. Celia deliberately takes the banishment upon herself, out of her true love for her sister. They determine to leave the court in disguise. On the other hand Orlando's brother plots to murder him. To escape his own death, Orlando takes refuge into the forest, with Adam voluntarily accompanying him. So now we can see that the playwright has assembled almost all the important characters of the play into the Forest of Arden.

*As You Like It* is primarily considered as a pastoral romance. Now Pastoral is, as M. H. Abrams defines, 'a deliberately conventional poem expressing an urban poet's nostalgic image of the peace and simplicity of the life of shepherds and other rural folk in an idealized natural setting' (Abrahms 1993, 141). Greg Garrard, the renowned ecocritic, thinks of pastoral as taking decisive role in shaping our constructions of nature. In attempt to answer what 'pastoral' is, and find out its significance for environmentalism, Terry Gifford distinguishes three kinds of pastoral: i) the particularly literary tradition depicting return to the country side from the city, ii) 'any literature that describes a country with an implicit or explicit contrast to the urban' (Gifford 1999, 2),

and iii) the pejorative sense implying an idealization of country life overlooking the realities of labour and hardship. The first kind among these are depicted in ‘classical pastoral’, the second kind comes to the fore in Romantic pastoral and the third sense comes into existence especially in Marxist critique of Romanticism, providing a ground for contrast of this tradition in cultural criticism with ecocriticism.

Following the criteria set for pastoral by Terry Gifford, we will henceforth look for the glimpses of i) love for nature, and ii) an explicit comparison between the rural and the urban. For the first criteria of the pastoral romance, an appreciation of the natural beauty of the forest is portrayed within the song of Amiens in Act II Scene (v). The song is actually an invitation to a bona fide admirer of nature to lie down ‘under the greenwood tree’ and enjoy the sweet, joyful song of the birds. Here the only enemy is the adversities of the rough, wintry season. According to the song, this is an idyllic place for a person without any worldly ambition, to live in the open air, welcoming the wind and rough weather. Duke Senior too concedes the beneficial effects of the forest—“Find tongues in trees, books in the murmuring brooks,/ Sermons in stones, and good in everything” (Act II Scene i L. 16-17). Again, Act IV Scene (iii) provides a picturesque description of the nature surrounding the sheep-cote owned by Rosalind and Celia. The location of the cottage is in the valley, at the outskirts of the forest. Beside it there is a stream that produces murmuring sound while flowing. A row of willow trees, close to the stream leads the way towards the cottage. The olive trees surrounding the cottage serve the purpose of the fence. The pages sing a song in the last scene, in appreciation of spring, portraying an exquisite depiction of this lovely season. As this is the season of lovers, they too sing in an ecstatic state of mind along with the sweet, tinkling song of the birds.

Greg Garrard sets out three orientations of pastoral in terms of time: “...the ‘elegy’ looks back to a vanished past with a sense of nostalgia, the ‘idyll’ celebrates the bountiful present, and ‘utopia’ looks forward to a redeemed future” (Garrard 2004, 37). In this respect, the present text under discussion is an ‘idyll’. As J.F. Cuddon (1998) explains, the word ‘idyllic’ commonly refers to a serene or euphoric state or environment which is ‘remotely attainable and idealized’. The author of *Shakespeare’s Pastoral Comedy*, Thomas McFarland, claims that the landscape of the Forest of Arden plays a more considerable role than being a mere idyllic background to the action of the play. It actually monopolizes the center stage and becomes the fulcrum in the development of the plot. It’s not simply a neutral site to escape to. It’s a natural space where the characters are allocated to be themselves, being free from the socio-political burdens of the court. Here they are emancipated to fashion alternate identities, and perhaps the title of the play is originated from this aspect of Arden. Garrard opines, “Pastoral often used nature as a location or as a reflection of human predicaments, rather than sustaining an interest in and for itself” (Garrard 2004, 38). Arden is accomplished with providing everybody what he/she aspires for. In this way we see the duke with his retinue has to hunt to get their food, while Audrey could manage all her needs by keeping goats. For Orlando’s poems, there is abundance of receptive tree barks. The snake and the lioness that welcome Oliver into the forest help him in his reformation. And Duke Frederick meets an old religious man, sent by the forest, to bring the change into him.

Act I portrays Orlando as a discontented young man, melancholic, compelled by his fate to bear with the tyranny of his brother. He has lost all his hope within this miserable life. But the Forest of Arden, a space free from the norms of hierarchy, brings out of him a loyal courtier and a fervent lover. The ambience encourages him to express his passion through verses, however bad they are, engraved on the barks of the trees. Forest of Arden presents before us a refurbished Orlando—joyful, bubbling with

vivacity and energy, just like his poems which are the expressions of intimate ecstasy. The transformation that Oliver and Duke Frederick undergo too is very unambiguous. They had to suppress their better selves, the feelings of kinship and other virtues as they became the victims of the socio-political structure of the court. But the moment they enter Arden, it persuades them to nurture those qualities. Again, Celia is swayed to explore her potential as a successful homemaker which she had to suppress in the court. Here she builds a family based on mutual love and empathy. Here, their love is never disrupted by sibling rivalry, greed or power-lust. However, the most significant transformation that is visible is within Rosalind. The moment she slips into men's apparel, her latent courage and potential comes out. As soon as she becomes free from the bounds of the court, she turns out to be the regulator of the actions and emotions of almost all the other characters in the play. This is most imperative in the climax when she controls and directs, and even prompts the other characters their dialogues. This is the most precious gift that the Forest of Arden allots for her.

Usually, the Forest of Arden is regarded as an enchanted forest. A wicked fellow like Oliver, who even plots to kill his own brother Orlando by burning him alive, encounters a magical transformation after Orlando rescues him from the attacks of the snake and the lioness. Duke Frederick too, an usurper who banishes his brother after snatching his dukedom, retires from the worldly life after restoring all his wealth and power upon his brother at the end of the play. And as for the reason behind these conversions, commonly the magical power possessed by the Forest of Arden is foregrounded. But if we look into it from the perspective of nature study, a more rational interpretation could be offered for this particular phenomenon. As we know, nature itself has a benevolent influence upon all the creatures. Once one comes under its comforting effects, one finds calm and peace of mind within oneself. This is what may have happened with Oliver and Duke Frederick too. After the perilous ways of life in the court, when they enter into the peaceful and serene atmosphere of the forest, they realize the absurdities of wealth, power and lust leading nowhere but to damnation. So, they overthrew all their evil designs in order to live a new life in the lap of nature.

Now I would like to discuss about the concept of wilderness very briefly. Wilderness is an idea emerging out from the urge to protect particular habitats and species within their original abode. The concept of wilderness, as Greg Garrard thinks, signifies nature 'in a state uncontaminated by civilization' (Garrard 2004, 59). This idea of wilderness emerged in the eighteenth century. The 'wilderness advocates' see the transition from the hunter-gatherers to the farmers in Neolithic age as a "crucial turning point, marking a 'fall' from the primal ecological grace" (Garrard 2004, 60). Wilderness has been presented as a threat in *The Epic of Gilgamesh*. In Judaic scriptures, wilderness is depicted as 'the place of exile' (Garrard 2004, 61) after being driven away from Eden. With the flourishing of romanticism in the eighteenth and early nineteenth centuries wilderness began to lose its repulsiveness. European romantics as well as some Americans from the urban regions started responding to the wild nature with favourable attitudes along with literary interests within it. Edmund Burke in his *A Philosophical Enquiry into the Origin of Our Ideas of Sublime and the Beautiful* (1757) forwarded the concept that terror and horror in regard to nature originated from exultation, awe and delight and not from dread and loathing. In his *Emile* (1762) Jean-Jaques Rousseau argued in favour of incorporating primitive qualities within modern man for the betterment of their distorted civilized life.

Now if we think about the basic features of the Forest of Arden, we can see that this concept of wilderness fits too well within it. Arden is actually a place that is free from being contaminated by the agents of civilization. All its inhabitants, along with the shepherds and shepherdesses live a free and happy life here, without being corrupted by



any kind of instrument of the sophisticated society of the court. They never want to be. The conversation between Touchstone and Corin is the most explicit instance behind such claim. Again, the idea of wilderness as ‘the place of exile’, as has been expressed by Judaic scriptures, also is very aptly applicable to this forest. It literally serves as the ‘place of exile’ for Duke Senior after his banishment from the court. So is for Rosalind too. For Orlando and Celia, the forest offers physical, as well as emotional shelter, thus becoming the place of psychological exile for them.

As for the second criteria for the pastoral comedy, ample evidences of comparison between the forest and the court are scattered throughout the text. The second act of the play, that introduces Duke Senior to the audience, opens with a speech by him relating the advantages of life within forest. Addressing the Amiens and other Lords, his companions in exile, he advocates the superiority of the benevolent nature of the forest over the artificial glamour of the court. Through a series of rhetorical questions he avows his preference of the banished state within the heart of nature. The woods here are much more free from the jealousies and rivalries of the artificially glittering, perilous court. The only hardship they have to endure here is that of the ‘penalty of Adam’, the biting cold of the winter wind. But he smilingly accepts even the sting of the wind as “Counsellors/ That feelingly persuade me what I am” (Act II. Scene I, 10-11). With beautiful metaphor he compares it with the venom and the lack of beauty within the frog that bears a ‘precious jewel in his head’ (Act II. Scene i, 14). On the contrary, Touchstone’s first impression of the Forest of Arden is not at all romantic. Entering the forest, he sarcastically remarks: “Ay, now am I in Arden; the more fool I; when I was at home, I was in a better place” (Act II. Scene iv, 13-14). The Forest of Arden, without any amenities of the ‘civilized’ life to offer within its premises, hardly has any special charm for him.

Paul Joseph Zajac identifies the revival of pastoral as the chief mode of English Literature coinciding with the attempt to ‘represent and reform’ (Zajac 2016, 318) contentment in his article “The Politics of Contentment: Passions, Pastoral, and Community in Shakespeare’s *As You Like It*”. In *As You Like It*, the playwright accentuates the pivotality of contentment to this pastoral comedy by focusing on the term within the argument between Corin and Touchstone regarding the merits and demerits of country and court. Corin the ‘most conventional pastoral figure’ of the play, moralizes contentment. Augmented by Touchstone to defend the life of the shepherd, he replies, “No more but that I know the more one sickens, the worse at ease he is, and that he that wants money, means, and content is without three good friends” (Act III Scene iii, 20-22). But at the same time, Corin is not oblivious of the concerns of material existence. He affirms, “Sir, I am a true labourer. I earn that I eat, get that I wear; owe no man hate, envy no man’s happiness; glad of other men’s good, content with my harm; and the greatest of my pride is to see my ewes graze and my lambs suck” (Act III Scene iii, 63-66). He recognizes contentment as the idyllic reaction to adversity, the one that alleviates the emotional being without marring the possibilities of delight and satisfaction.

The specific goal of each pair setting out for exile in Arden is that of attaining contentment. When Celia, Duke Frederick’s daughter escapes from the suffocating environment of the court along with her cousin Rosalind and the clown Touchstone whom she mentions as ‘a comfort to our travel’ (Act I Scene iii, 125), professes, “Now go we in content,/ To liberty, and not to banishment” (Act I Scene iii, 131-132). By defying her tyrannical father, she actually perseveres upon the unification between herself and Rosalind. Similarly we find Orlando using the same tongue of contentment while preparing to escape from the evil designs of his ‘tyrant brother’. He confides with Adam, “We’ll go together,/ And ere we have thy youthful wages spent,/ We’ll light

upon some settled low content” (Act II Scene iii, 67-69). Zajac observes: “Orlando’s prediction that they will ‘light upon’ contentment reflects an openness to the workings of fortune....Orlando associates his imagined contentment with lowness and poverty” (Zajac 2016, 321). This line by Orlando evokes within our mind Celia’s recognition of contentment within companionship. Again, the ‘three or four loving lords’ who voluntarily accompanied the Duke Senior in his exile at the personal cost of ‘lands and revenues’ (Act I Scene i, 88-89) did so entirely for the sake of being with one another, just like Celia and Rosalind or Adam and Orlando.

Now, as I have proposed in the introduction to this paper, I would be trying to critically view the characteristics of Jaques from the perspective our present context. There is a lot of controversy among the critics regarding the melancholic nature of this character. A group of them believe that Jaques actually suffers from a kind of melancholy. Agnes Latham suggests that one should rather try to trace the general traits of the melancholy man within Jaques than to assume him a caricature of some real character. For Carlo Falvo Heffernan, Jaques should be seen as a ‘comic prefiguring’ of Hamlet. He supports the nineteenth-century critics who considered Jaques through positive gaze and found within him a melancholic philosopher. Bridget Lyons explains the perceptions of melancholy in the sixteenth century, “(It) was clarified as a disease, condemned as a vice or exalted as the condition and symptom of genius... But all these diverse traditions about melancholy expressed implicitly, the idea of its social importance—it was a physical and psychological condition that expressed an orientation towards the world and society...” (Lyons 1975, 1). And Jaques’ criticism on the strange behavior of the other characters in the play leads some of the critics to pigeonhole him as a melancholic character. For Gene Fendt, argues that Jaques represents that type of comic catharsis which even after recognizing the charm and virtue of the comic ending chooses to leave it, only for the sake of his genuine melancholy.

There is another group of critics, as I have mentioned earlier, who tend to be critical regarding the genuineness of the melancholic attributes displayed by Jaques. Furness is of the opinion that this character has incited a good deal of controversy of which some judgments seem to be contradictory, mutually exclusive. Robert Bennett interprets Jaques as a malcontent affecting melancholy as a “fashionable pose” (Bennett 1976, 192). He further argues that “for understanding Jaques...fashion must not be confused with reality” (Bennett 1976, 192). One such opinion presents Jaques as a misanthrope whose chief pleasure is to deride humanity and all its affairs. Within the play we see Orlando implying that Jaques’ wit is merely something congregated from incorporating the popular saying rather than real humoral condition. Even when Jaques is thrilled about the fool Touchstone, his melancholic nature leads him to indicate the corruption within the human world. But A. W. Verity disposes of the idea of labeling Jaques as a misanthrope. For him, he is a man of ‘great intellectual and imaginative power and even great sensibilities’ (Verity 1967, xxxi). In this paper, we would partly accept Verity’s opinion and try to find out Jaques’ role in the play from the perspective of ecocriticism.

Keeping in accordance with the note of Verity, it can be taken into account that in his melancholic state Jaques rumbles upon the images he bumps into the natural world surrounding him within the Forest of Arden. Not only that, he makes use of them for the purpose of remarking on the nature of humans around him. This aspect of his character incites an ecocritical intervention within the portrayal of Jaques in the play. G. Aparna observes, “The early positioning of Jaques as an observer and critic of life around him anticipates his role in the play” (Aparna 2000, 134). We find the first glimpses of Jaques in Act II Scene (i) through Duke Senior’s proposition of going for hunting deer. From the speech of the First Lord, we come to know about Jaques’ reaction at seeing a stag

wounded by the arrow of a hunter. Being separated from the main herd, it came to the riverside to die a slow death. In addition to moralizing over the matter, Jaques calls the Duke and his peer intruders, unjustly taking possession of the woods and scaring away the animals from the forest which has been allotted to them by nature herself. In his opinion, "... you do more usurp/ Than doth your brother that hath banished you". In this particular matter, the Duke fails to penetrate into the effect of their activities upon the natural inhabitants of the forest.

Not only sympathizing with the injured deer, Jaques is equally fascinated with the other elements of nature too, like the flora and fauna of the forest. The lords continue to illustrate his condition in the same scene:

...under the oak whose antic root peeps out  
Upon the brook that brawls along this wood  
To which place a poor sequestered stag  
That from the hunter's aim had taken hurt  
Did come to languish. (Act II, Scene i, 31-35)

So, it seems to be very clear that right from the beginning the playwright has fashioned the character of Jaques with a close affinity with the nature and the natural world around him. In this context the observations of Duke Senior in the seventh scene of the same act is very significant. There he exclaims, "I think he be transformed into a beast,/ For I can nowhere find him like a man" (Act II, Scene vii, 1-2). He conceives Jaques along with his involvement with the natural world (and the elements of it such as the deer, water, trees) as being engrossed into the physical environment. Moreover, Jaques is portrayed as a kind of 'dramatic host' (Kroeger 2019, 42) of the forest. In contrast, we see Corin playing the role of the 'domestic host' (Kroeger 2019, 42) within the natural setting of the agricultural community of the forest. We can see him comfortably roaming through the forest on different occasions. Cynthia Marshall gestates the existence of Jaques as a 'split within the subject' (Marshall 1998, 379) for his subsistence in 'an interstitial buffer zone' ((Kroeger 2019, 43) between the actors and the audience. She advocates that Jaques serves as the 'linguistic and psychological placeholder' (Marshall 1998, 379) in the forest. For her, his melancholy is a kind of psychological negation that drags towards him the venom of hindered emotion.

Now before we enter into the discussion regarding the ecocentrism, let us have a glimpse of the concept of Ecocentrism first. In contrast to environmentalism, Arne Naess places the idea of Deep Ecology movement in which "Pollution is evaluated from a biospheric point of view, not focusing exclusively on its effects on human health, but rather on life as a whole, including the life conditions of every species and system" (Naess 1995, 71). As a movement deep ecology began with the publication of Aldo Leopold's essay "Land Ethic" in *A Sand County Almanac* (1948) in which Leopold argued in favour of protecting *all* the elements in the ecosphere (emphasis mine). This perspective, which sees all the elements of nature in equal terms, is called 'ecocentrism'.

It is Jaques who brings in an ecocentric point of view into the present text under discussion. The first scene of the second act of the play shows Jaques feeling sympathy for the wounded deer. He concedes the unassailable right of the deer to live in their original habitation without any kind of infringement as well as hostility on the part of the human. In his response to the deer's troubles he expresses his opinion that each and every creature of God has an equal right to survival within this world. The attack upon the deer only for the sake of sport enrages him to the extent that he bursts out against the injustices meted out to the natural world by human. Though Robert Bennett interprets this reaction of Jaques as 'absurdity' (Bennett 1976, 196), from an ecological point of view his actions are anything other than absurdity. Rather it is the

anthropocentric view that leads one to decipher his actions as the signs of absurdity. Later in some other occasion we find him scolding Orlando for marring the barks of the trees by writing love-poems on them. He suffers the pain of the trees while inscribing the letters on them. Even the earliest human inhabitants of the forest, the shepherds and shepherdesses, share some of his compassionate feelings. This becomes more evident through the role he plays in the Touchstone-Audrey story. Touchstone's designs towards Audrey are not at all honorable. Though he weds her at the end of the play, Jaques is suspicious that Touchstone is not so much keen on a long-term allegiance to the excessively moral Audrey. Driven by his doubt about the matter, initially he tries to make their nuptial bond stronger by formalizing the marriage not in secret, rather in the presence of almost all the other characters of the play. Thus, he endeavours to save Audrey, from being ill-used by the so-called 'civilized' people in his own way. Moreover, his exile into the forest seems to be deliberately undertaken, unlike the other characters, free from any kind of compulsion,. He is a true lover of nature in its quintessence. That's why when everything is happily settled down at the end of the play, and all the other characters are returning to the court, he is the only one who refuses to leave the place.

Now, as we know, this specific play by Shakespeare is derived from *Rosalynde: Euphues' Golden Legacy* by Thomas Lodge. Evidently, we can detect some derivations from the source in the play. One such deviation is the incorporation of the character of Jaques who is not present in the original play. Then, the question that perturbs our mind is why is Jaques there in the play at all? What is the purpose of the playwright behind incorporating such a character within the play who is hardly necessary for the development of the plot? This character is essentially an instance of Shakespeare's fabrication of characters. In this respect A.W. Verity observes, "In his utterance, some people hear the voice of Shakespeare himself." (Verity 1967, xxix). Perhaps, in spite of the fact that here Shakespeare was composing a pastoral comedy, his eco-conscious self could not admit some of the activities of the characters that created disturbance in the ecological balance of the forest. Therefore the playwright needed a spokesperson to articulate the ecocentric views realized by his own self. And the introduction of a character like Jaques very subtly brings into the forefront an all-new facet of the dramatist. It betrays the ecocentric attitude of him along with his deep concern for the ecological balance.

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# **Criminological Analysis of the Criminal's Personality and Internationalization of Punishment**

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**ABSTRACT:** This article describes the personality of the criminal and his relationship with society, the criminogenic process and the absence of inhibition during the perpetration of the criminal act. Crime is perceived as a particularly serious act, which must be sanctioned by society. From a moral and social point of view, the danger of criminal acts is general, but crimes are punished differently by the states of the world; that is why there are certain proposals and conditions regarding the internationalization of the punishment, when the crime was committed. The set of rules, prescriptions and prohibitions that make up the punishment uniform the detention behavior. The absence of inhibition, loss of moral consciousness, detachment from positive social events explain the antisocial behavior of the criminal. In detention, social reform can be achieved by rediscovering the moral function of the convict.

**KEYWORDS:** murderer, moral conscience, inhibition, internationalization of the punishment

## **Introduction**

Murder is the act by which one person kills another person, being punished with the heaviest punishments. The history of the world has been accompanied since the Bible by fratricide (Cain and Abel) and paricide, such crimes draining humanity of branches destined for human evolution, which could have offered other spirits and other orientations, and man would have managed to identify the complete cycle of the rules of well-being, the process of refinement that accompanied it would have been clearer and more appropriate for the purpose of survival. The whole human thought, being mastered by the considerations of objectification and empowerment of individuals, had close ties with the great personalities, who exceeded the limits of the era and influenced by the ideals pursued the history of social facts. All the circumstances that negatively marked history (wars, epoch-making diseases) never had that dimension that would bring good to the knees, the importance of the new ideals of the crowd showing that they resembled the impulses of divinity. A remarkable factor that sustained human good and survival, as a sine qua non condition was the preservation of the balance between crime and punishment, each nation reaching recommendations as appropriate to its own system of social life. However, after millennia of use of brute force, anger, vehemence, coercion, violation of social norms by the aggressor, only his will was identified, as a conscious orientation to achieve the criminal purpose, as a firm decision to execute the act concrete. In direct contact with the victim, most criminals felt omnipotent, another type of God, since they ignored the rules of real coexistence and the relevance of the fact that life is unique, which is why the controllable or uncontrollable reaction of the criminal. There have always been ideas in the history of crime that criminals claimed to have

acquired the divine right to kill, the right to act of their own free will, and to know the mysteries of divinity found in their spiritual, objective experience in canons in conceiving in a dramatic dimension, violating any kind of inhibition. That is why crime does not impose itself directly as an object of interrogation (how it was possible!), of investigation, of perplexity, because human nature always tends towards palpable things, aimed at saving from a dull existence.

### **Criminal Will**

The perpetrator forms the belief that everything he conceived will be realized and is in favor of his personality, considering as the main part of the criminogenic act the lack of inhibition or the divine sense of interdiction, the wicked act being accompanied by the belief that it is part of human nature, without accepting that it is not part of the cult of divinity. The murderer considers himself skilled and acquires his amazing vitality through the belief that “abstain” and “endures” are permanently found in the mind of the individual, but to prove a certain state of will, which subjugates him, chooses to practice the rule affirmation, coming through the revelation of destroying the opponent. Without acknowledging the imperfections of the will and ignoring human dignity, the murderer adopts the intentional expression of his interests and the autonomy of choice of emotional and execution procedures, to demonstrate the ability to act nonchalantly and dynamically against divine promises, the injustice of his actions indicating indifference to the existence of the victim and the truth. The criminal acts with indifference to the socio-familial significance of the victim, being convinced that his ideal of asserting himself through murder could not be avoided, so that indifference to what will follow will be his preference by inclination, but also a reason for pride. Criminal impulses come from a predisposition opposed to morality; Kant’s phrase that “where the law of morality speaks, there is no longer objectively free choice as to what to do” is mandatory for ordinary behavior (Kant 1999).

### **The concupiscence and inner independence of the murderer**

The predisposition that dominates the murderer during the formation of the homicidal ideation (acting-out), as well as in the moments after the criminal act is the result of a reflection opposite to the behavioral harmony (Costello 2017). The will is subject to the satisfaction of the vocation to predict with veracity the amplitude of the result, which would free the perpetrator from the terrible tension of the destructive drive and the death drive. External acts, objectified in the reactions of the senses, present in their essence the expression of the criminal's freedom, of inner independence, without freeing him from the influence of thought, because instincts (to act, to abstain) are dependent and valued by the laws of reason. When he kills, the individual seems to act as if he had mastered his own laws, accepting himself as the only being who has the criteria that could disrupt the organization of the social world, on the grounds that behavioral norms are not necessary for the state in which they are he finds out, the only principle of coordination of his acts being the removal of any forms of coercion, in order to remain free with his thoughts. The perpetrator becomes obsessed with the idea that remains to be done, which he repeats in order to be integrated into his norm of existence, considering himself above any forces, without knowing that intellectual function and instincts never remain in harmony. The criminal, especially in extreme cases, sometimes gives up attempts to control and torture the victim, moving directly to the commission of the criminal act, to solve certain interests or simply for free, to have fun, without betraying the depth inaccessible of his personality, which may derive from

some genetic predispositions. Original or non-original in *modus operandi*, the murderer became aware of the crossroads of life, suffering a change in terms of acquiring cruel and ruthless traits in the execution of the criminal act, even if he has certain affections towards some people. Appreciating more than would be appropriate (the egocentric side), the murderer accepts the radical change of behavior as a result of the existential crisis he is going through; he considers himself wronged by the socio-familial environment and seems indifferent to punishment. When he does not relate to the world, his active self seems inarticulate, because he tries to maintain himself through a special effort, being convinced that “his affective life even if it is socially unusable” is always individual.

The perpetration of criminal acts indicates, by fulfilling certain conditions, the degree of load of consciousness with an assassination (Kierkegaard 2000, 93), the psychic attributes of the individual describe the individual force, through thought and action processes, and reveal their deficiencies, existential imperfections or need to compensate. The criminal considers himself condemned to bear his psycho-biological features, and to ignore the socio-familial context, which is the evidence of the suppression of social values, without feeling obliged to admit his guilt. The origin of the crime is caused by the social event that influences the reaction and psycho-biological behavior of the perpetrator. Education and culture betray the way of accomplishing the deed and the experience of the criminal personality. The premeditation of the crime shows that the forms of thinking reflect the relationships and interdependence with the state of the senses, modeled in its dual purpose: to support the acts expressed and to bear the consequences of the impulse, as an effect of the ability to clearly express the criminal act by relating to the process of consciousness.

### **Criminal maturity crisis**

Murder is a release for the mature person, who considers himself free from any prohibition, in any circumstance of life. For such an individual, the crime does not become a suffering, but a detachment, an exaltation, in the conditions in which, premeditatedly or spontaneously, based on the absence of the Supae, he renounces the moral life. The way of thinking about the crime, or of being subjected to the spontaneous urge to kill, is not based on a superior reflection, but on the ability to save oneself, to respond to an aggression; the perpetrator considers that he has absolute immunity to defend himself, based on false perceptions and privileges; the inner language of thought is sometimes unable to appreciate the correctness of social situations. Overwhelmed with anguish and a sense of loneliness, the murderer chooses to escape the guilt complex by committing the crime and freeing himself completely from the constraints of the moral court (De Greeff 1946).

### **Inhibition**

We wonder why sometimes individuals who reach the brink of despair, without any prior reflection or after provoking some conscience processes, end up committing suicide, and not to kill, considering the crime as sterile, a way of social suicide that only partially solves relations with the world. The abandonment of the act represents the result of inhibition (Freud, 2014), as a state of restraint of the effects of arousals, ability to abstain and control reactions to external stimuli. The criterion for differentiating correct thinking from incorrect thinking is the one related to the practice of human acts, in the sense that a normal thinking possesses the quality of keeping under the influence of truth, being directed in certain forms (same everywhere) and having a constant



applicability. From a psychoanalytic point of view, the inhibition is the censorship and interdiction of the desires of the criminal unconscious (Freud 2010) and is expressed through very varied actions, especially wherever the aggressive conflict occurs, as a prelude to crime or murder. Inhibition is receptive to the social actions of the individual, being influenced by socio-familial stimuli, the distinction between killing and abstaining being the result of the decision of the Ego (Freud 2017), as a result of reflection on the severity of consequences or strategy to adopt caution, and not the destructive drive with tragic consequences.

“An increase in income from legal activities or an increase in law enforcement due to education” will lead to reduced incentives to engage in illegal activities and thus reduce the number of crimes (Becker 1994, 52) crimes against individuals being influenced the instinctual and moral crises, the reduction of punishments or the regime of their execution. “Broadly speaking, crime is an important economic activity or an ‘industry’, although it is almost completely neglected by economists” (Becker 1994, 52). According to official estimates, the direct costs of various crimes consist of expenses incurred by the state with the police, prosecutor’s offices and courts, as well as expenses on measures and projects to combat crime, compensate victims (cover for damages), recover and reintegrate the defendant. In the area of crimes against individuals, there have been concerns about the development of criteria for defining criminal principles, rules and notions and even the adoption of a Criminal Code, applicable in all states that adhere to its rules, but each state has based its rules on its own essential principles, without reaching a common Code. The need to adopt such a Code is justified by the international character that crimes have acquired, in the sense that perceptions, representations, processes of sensory reflection are common to individuals, who have the same criminal concerns in all states. The mentality of criminals is identical, both in the case of the isolated criminal and in the case of criminal groups, interested in live meat, drug trafficking, religious contradictions that are involved, with precise intention, in killing opponents, generalizing criminal acts in several territories states. Instruments for measuring the degree of organization of international criminal activity indicate the size of the solidarity criminal, middle-level groups and elite criminal groups (Becker 1994, 52).

### **Internationalization of punishment**

Punishment is the concrete form of subjective reporting of the gravity of the objective act to the state of danger generated, as an essential value of social conventions. In this sense, the idea of identifying the essential and general features of the crime of murder in almost all states appears to be non-compliant, but the punishment related to such deeds is fundamentally differentiated. Also, the methods of execution of sentences seem radically different, a situation that determines that after committing the crime in one state, the criminal prefers the execution of the sentence in another state. Compared to the essential features of the crime penalty, there is an international orientation to substantiate the content of punishments, which justifies the theoretical and practical uniformity of doctrine, avoiding moral confusion, eliminating considerations of simple opportunity and implicitly standardizing human discipline. This mentality that would determine “*ad captandum*” a judicial egalitarianism “made plain” - on everyone’s understanding, without points of difference, indicates the tendency to globalize crime and implies the need to internationalize punishment. The procedure for establishing criminal acts sanctioned by punishment has a general character, while the punishment has a supra-individual character. Crimes against individuals must have as their equivalent punishments, as a full identity of gravity, separated from the influence of civilization, pragmatism and zonal utilitarianism. Even if the punishments are not

immutable, but are the result of historical characteristics, because they relate to the ideas of a period, the constancy and essence of the structural elements should be identical, clear, to be found by having the same general characteristics and characteristics. By applying the punishment, the criminal must be convinced of the harm done, so that he is forced to justify consciously and subconsciously, that he must pay for what he committed, in order not to want to do such a harm. The execution of the sentence is a specialized activity to determine the reformation of the criminal, as to be convicted means to be alive, but carefully supervised, what matters is to determine, as a particular interest, the state of commitment to exclude the correlation of antisocial acts; through the proposed educational actions, the social skills regarding the conformity of attitudes with the norms of coexistence will be regained. Punishment makes possible the connection between the crime and the trust that society adopts towards the convicted person; having a behavior compatible with the social exigencies, the convict will be considered socially reintegrated, after having paid the victim's death with his own imprisonment. Most contradictions may arise in the procedure and manner of execution of the sentence which relates to the specific organizational difference between the States, as the conditions under which the sentence will be executed must be based on principles and rules which must convince the convicted person, but and the foreign state of which he is a national, within the limits set by EU rules.

### **The dynamics of punishments**

The latest statistics have shown an increase in juvenile delinquency in the last 10-20 years. Not only the number of crimes has increased, but also the nature of crimes has become more complex (Hegheş and Şchiopu 2020). The circular process of crimes (the circle that opens with each crime discovered and each punishment applied) indicates that the criminal act is spreading as social ties of an economic, political, religious nature develop. However, the method of applying punishments must be permanently supplemented, by relating to the traditions of each people, to the differences of culture, to the general human experience and to the historical period.

### **Application of punishment**

The criminal during the investigation learns and seeks to understand the new reality in which he finds himself, as it presents itself, phase by phase, taking into account at all costs the opinion initially formulated; depending on the potential of the will he holds, the perpetrator does not acknowledge his deeds, the negative emotional state challenges the reality of the social situation and the consequences of the dramatic event. Even if the criminal did not have a good opinion of himself before committing the crime, motivating that the family neglected him, that he did not have the opportunity to feel important, that in society he was always wronged, he will claim during the trial the respect indicated by law, so that after the conviction he could be considered a valuable person, because he was feared by the other convicts for the aggressiveness and negative manner adopted. The first three minutes after the final sentence is handed down means confronting the traumatic situation, considered to have the same value as the intervention of a serious illness or mourning. The set of rules, prescriptions and prohibitions that make up the punishment uniform the detention behavior; the permanent process of conscience observes the acts and words expressed, which must not contain serious mistakes, because the convict is indoctrinated with the idea that the fundamental purpose of imprisonment is to not repeat mistakes. In detention, mutual respect and friendship between detainees are not of major significance, the main stake

being the clear proof of regret for the act committed and the reform of thinking and attitudinal progress. This constant is fundamental for the effectiveness of behavioral change, in the sense that the convict's concerns must be positive in order to regain confidence and self-esteem, with the change of social condition. In this sense, the convict will submit to the prison environment, his attitude proving docility, the desire to remove distorted, oppressive influences; now a substantial change of personality can be achieved, which depends on the level of awareness of the criminal act.

## Conclusions

Examining the evolution of the judiciary identifies its temporary dependence on political authority, which is why it was found, in some situations, violation of the right to a fair trial, awareness of such a crisis being identified in trials in which European states were tried by the CEDO.

As individual rights are irreplaceable, justice is involved in *ad literam* research, but also in identifying the real meaning of reason, principles and national rules, sometimes removing or adopting an ambivalent solution, which is claimed to ensure firm compliance with the law.

Jung argues that the Ego and its contents are not identical with the "whole", with individuation in the sense of that process that produces an "individual" (Jung 2014). From the totality of the individual, from the presence of his being (the essential presence as revelation and opening of being - Heidegger 2003) must be part of the unconscious psychic processes. The unconscious criminal reveals to us the psychic process of the Ego when the homicidal ideation transposes the symbolic (acting-out; the symptom, the beginning of the transfer - see Costello, the Pale Murderer) into the will to kill (passage to the act). The criminogenic process must be explained analytically (by analytical Jung means any procedure that faces the existence of the unconscious).

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# The Impact of Habit Trackers, Healthy Lifestyles and Exercise Motives of University Students in Toronto

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**ABSTRACT:** Encouraging a healthy and active lifestyle is an important aspect of societal institutions. In spite of these efforts, young adults are still not meeting physical activity guidelines, leading to serious health problems. This study looked to determine the exercise motivations of university students and worked to help academics understand and determine whether a self-reported, healthy-lifestyle habit tracker can improve an individual's health, generate greater awareness of the benefits of being physically active—including academic benefits of living a healthy lifestyle; and change their behaviors. With this in mind, students from a large downtown Toronto-based university were recruited for this study and were required to answer two surveys, six weeks apart after receiving a healthy lifestyle tracking tool. The questionnaires measured individuals' healthy lifestyle behaviors by using a modified Healthy Lifestyle Scale for University Students (HLSUS) and exercise motivations by using the Exercise Motivations Index-2 (EMI-2). Our research suggests that exercise motivations of university-aged students are similar, but that there are significant differences between gender, race, and age group. The study results also indicated that using the physical habit tracker was not correlated with increased healthy lifestyle behaviors but did increase awareness of the academic benefits of living a healthy lifestyle.

**KEYWORDS:** motivations, behaviors, healthy lifestyle, exercise

## Introduction

An important aspect of societal institutions today is encouraging a healthy and active lifestyle. Despite their efforts, adults around the world are still not meeting physical activity guidelines, leading to serious health problems (Paez, Zhao, and Hwang 2009; Ng et al. 2012). Specifically, only 16% of Canadian adults aged 18 to 79 years meet the recommended targets according to the 2019 Canadian Health Measures Survey (CHMS). This group includes individuals who are entering university and have the ability to lead active lifestyles (Skår, Sniehotta, Molloy, Prestwich, and Araújo-Soares 2011; Roberts, Reeves, and Rylie 2015). Research has linked physical activity to academic success, and weight gained from poor physical activity habits during these formative years can lead to adverse health consequences (Danbert, Pivarnik, and Mudd 2014; Kari, Pehkonen, Hutri-Kähönen, Raitakari, and Tammelin 2017; Egli, Bland, Melton, Czech 2011; Racette, Deusinger, Strube, Highstein, and Deusinger, 2005).

The purpose of this study is to assist university athletic programs in creating physical activity programs that meet the needs of their students by examining the motivations of university students. In addition, this research will also look to better understand and determine whether a self-reported, healthy-lifestyle habit tracker (HLHT) can improve an

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individual's health, make respondents more aware of the benefits of being physically active, and change their behaviors.

### *Literature Review*

The Self-Determination Theory (SDT), developed by Deci and Ryan, works to explain why people take certain actions and has been applied to many topics (Deci and Ryan 2000; Ng et al. 2012). SDT has explained people's motivations for living an active lifestyle by dividing motivations into two categories: intrinsic motivation—individuals partake in certain activities for their own personal reasons, and extrinsic motivations (Fortier, Duda, Guerin, and Teixeira 2012).

In 2011, Egli, Bland, Melton, and Czech surveyed a total of 2214 university students from 156 phys ed classes in the US to determine how exercise motivations differ across demographics. The study found that positive health and ill-health avoidance were the two most important motivating factors among the entire group, followed by appearance, strength and conditioning, and weight management. Affiliation, social recognition, and health pressures were the lowest (Egli, Bland, Melton, and Czech 2011, 401). Results showed that men were more likely to be motivated by intrinsic factors and females by extrinsic factors. The study determined that those younger than twenty were motivated by health pressures and avoidance of medical issues in the future, while those older than 20 were more likely to be motivated to exercise because of affiliation (Egli, Bland, Melton, and Czech 2011, 401). The study also concluded that Caucasians were motivated by stress, revitalization, enjoyment, and weight management. African American participants appear to participate in physical activity to stay physically fit (Egli, Bland, Melton, and Czech 2011, 401).

Similarly, a study out of the UK looked at differences in motivations across demographics. This study found that older students were more likely to be motivated to avoid health issues, and appearance motives were less important than previously thought (Roberts, Reeves, and Ryrie, 2015). The study also found differences between the motivations of male and females (Egli, Bland, Melton, and Czech 2011; Roberts, Reeves, and Ryrie, 2015; Wechsler et al. 2002).

Another study looked the impact on students' motivations before and after the mid-semester study week (spring break). It was found that just over a third of students were exercising in order to look good on spring break, and that weight management, performance, psychological motivations, and general health motives were the most common reasons for living an active lifestyle (Kimbrough, Rose, Vallee, and Nelan 2005).

### *Self-tracking technologies and physical well-being*

Many researchers have looked at the impact of activity trackers, self-tracking tools, and fitness apps. Current literature has presented mixed results. Some scholars have completed extensive reviews on the topic and have claimed that while the results are promising, they can't be taken at face value and more research on the topic is needed (Hermsen, Frost, Renes, Kerkhof 2016; Kersten-van Dijk et al. 2017; Piwek, Ellis, Andrews, and Joinson 2016). Other case studies and surveys suggest that tracking technologies do have beneficial effects on consumers' health and well-being (Hermsen, Frost, Renes, Kerkhof 2016; Kersten-van Dijk et al., 2017). While most current literature has focused on digital tracking technologies, past research has looked at more traditional methods. The studies found that overall, interventions aiming to increase physical activity in healthy but not active adults are effective in promotion behaviour change (Howlett, Trivedi, Troop, and Chater 2019).

### *Leaflet, healthy habits, and self-tracking*

Our goal was to look at basic mediums used to influence behaviour change regarding physical activity. In a study by Lally, Chipperfield, and Wardlow (2008), individuals were given a leaflet with tips to help them lose weight and a place to record their progress. The simple educational leaflet improved people's behaviour leading to weight loss (Lally, Chipperfield, and Wardlow 2008).

### *Healthy lifestyle of university students*

To better understand university students' healthy lifestyle, Wang developed the Healthy Lifestyle Scale for University Students (HLSUS) based on Pender's Health Promotion Model. The survey included 38 questions that are divided into eight divisions covering such topics as exercise, nutrition, and stress management (Wang, Xing, and Wu 2013). Each is ranked out of 1 to 5, with the highest possible score of 190 and the lowest 38. The higher the score means the more the subject actively engages in the behaviors listed. Currently, most applications of this scale are used in studies to differentiate students' behaviors based on demographics (Wang, Xing, and Wu 2013).

### *Benefits associated with physical Activity*

Physical activity has also been shown to improve other areas. There is a correlation between physical activity levels and academic success/education level attained (Donnelly et al. 2016; 2017; Kari, Pehkonen, Hutri-Kähönen, Raitakari, and Tammelin 2017; Singh, Uijtdewilligen, Twisk, van Mechelen, Chin A Paw 2012). In addition, physical activity has been linked to improved creativity and memory; lower stress; and increased energy, mental health, and focus (Oppezzo, and Schwartz, 2014; Ruscheweyh, et al. 2009; 2011; Ahn, and Fedewa, 2011; Budde, Voelcker-Rehage, Pietraßyk- Kendziorra, Ribeiro, and Tidow 2008).

## **Methods**

### *Participants*

We initially surveyed forty-five students enrolled in a large Toronto-based university. Nine respondents were excluded because of missing data. After a second survey, seven participants' responses were excluded from the results as they did not complete the first baseline survey. So overall with these exclusions in mind a total of nineteen individuals completed both surveys.

A random sampling method was used to recruit the students through in-person and social media recruitment strategies. Students were offered a \$25 gift card if they completed both surveys. Students were required to sign up for the survey online, and were later emailed an online questionnaire to fill out. Participants were then asked to pick up an HLHT (available for one week) from the university's athletic facility. Participants were to use the habit tracker for six weeks, then to fill out the second and final survey. It should be noted that during this six-week period, the province was put under quarantine, potentially limiting participants' access to things such as workout equipment and healthy food options.

### *Surveys*

The first survey administered began by asking demographic questions and about the participants living arrangements and whether or not the respondent was an international student. The survey also included a modified HLSUS (Wang, Xing, and Wu 2013). The scale was modified to better represent students in North America and shortened from 38 questions to 31. Response items

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ranged from 1 to 5, with 1 depicting “never” and 5 as “always.” The first questionnaire also included seven questions specifically relating to the academic benefits that have been linked to physical activity (Donnelly et al. 2016; 2017; Kari, Pehkonen, Hutri-Kähönen, Raitakari, and Tammelin 2017; Singh, Uijtewilligen, Twisk, van Mechelen, Chin A Paw 2012; Oppezzo, and Schwartz, 2014; Ruscheweyh, et al. 2009; 2011; Ahn, and Fedewa, 2011; Budde, Voelcker-Rehage, Pietraszyk-Kendziorra, Ribeiro, and Tidow 2008). For these set of questions respondents used a seven-point Likert-scale with 1 representing “Very Strongly Disagree” and 7 indicating “Very Strongly Agree.” The second survey also included a set of twelve questions as per the Self-Reporting Habit Index to determine the strength of participants’ habit of using the HLHT (Verplanken and Orbell 2003). The second survey also features the EMI-2, a scale made up of fifty-one questions and fourteen subscales. The fourteen subscales are affiliation, appearance, ill-health avoidance, nimbleness, positive health, revitalization, social recognition, strength and endurance, stress management, and weight management. Study participants must select a number between 0 to 5, where 0 indicates “not at all true for me” and 5 “very true for me” (Egli, Bland, Melton, and Czech 2011).

### *Healthy lifestyle habit tracker*

The HLHT was created by the Toronto-based university’s athletic department. The tool included healthy lifestyle tips and a calendar for students to record their behaviors.

## **Hypotheses**

Before administering these surveys, a number of hypotheses were made by the researchers.

Hypothesis 1: We believe the exercise motivations findings will be similar to that of past studies.

Hypothesis 2: Participants who have a strong Self-Reporting Index score (Habit Score) after six weeks will see the greatest improvement in their (HLUS) questionnaire scores, and they will be more actively involved in physical activity.

Hypothesis 3. Participants will be more aware of the academic benefits of being physically active after using the HLHT for six weeks.

Hypothesis 4: Gender, age, ethnicity, living arrangements, and whether or not a participant is an international student will have an impact on one’s healthy behaviors and physical activity.

## **Data analysis**

For hypothesis one, mean and standard deviation scores were calculated with gender, age, and ethnicity serving as the independent variable. The dependent variables were the fourteen subscales. Regression analyses, t-tests, and ANOVAs were conducted to determine significance.

Mean scores for the total HLSUS scores were also calculated with age, gender, ethnicity, living arrangements, and international or non-international student status serving as the independent variables. Regression analyses and t-tests were conducted to determine whether the independent demographic variables played a significant role in a person’s overall healthy-lifestyle score.

To determine the impact of the HLHT, the difference between two total HLSUS scores was calculated, then the total habit score was calculated by adding the scores of their individual questions together before a scatter plot was generated. A regression analysis was then administered to determine whether there was any significance between habit score

HLSUS. This process was repeated but instead, the difference in how many days a person worked out a week was calculated and used in replacement of the individual's HLSUS score.

To determine whether certain characteristics impacted a participant's understanding of the benefits of living a healthy lifestyle on academics, a scatter plot was created. A participant's total academic score from survey one was graphed with their second score from survey two. An ANOVA and regression test were also conducted to see whether there was any significance.

Means scores and standard deviations were calculated, and regression analysis was used to determine the impact of an individual's gender, age, ethnicity, student status, and living status on the number of days they work out a week and their overall HLSUS score. This analysis was conducted separately for participants who completed survey one and survey two. Survey one had 36 total respondents, 75% of which were female, 41% were 20 years old and younger, and 88% were not international students; 19.4% of respondents were Caucasian, 44% were Asian, 25% were South Asian, African Canadians/Blacks were 6%, and the rest were Arabs and Filipino Canadians. Survey two consisted of 26 respondents, 69% of whom were female, 65% were 20 years old or younger, and 96% were non-international students; 11.5% of respondents were Caucasian, 7% were Black, 3.8% were Hispanic or Latino, 46% Asian, 27% South Asian and 3.8% Eastern European.

## Results

Given the small number of respondents and a sample that doesn't accurately represent the entire student population of the university, it is difficult to confidently state that the results of the survey are significant and accurate.

### *Hypothesis 1*

The findings are somewhat similar to the study by Egli, Bland, Melton, and Czech (2011). In the current study, Positive Health ranked as the top motivation with Endurance and Ill-Health Avoidance in second and third place. The next three motivations were Nimbleness, Enjoyment, and Appearance. The bottom three motivations of our study population were Competition, Social Recognition, and Health Pressures. For means and standard deviations on these results, see Table 1.

Table 1. Descriptive Statistics Reported by Means and Standard Deviations for Exercise Motivation Subscales (EMI-2)

	Scales	Mean	SD
1	Positive Health	4.551	0.853
2	Strength and Endurance	4.452	0.927
3	Ill-Health Avoidance	4.026	1.006
4	Nimbleness	3.872	1.163
5	Enjoyment	3.788	1.166
6	Appearance	3.788	0.997
7	Revitalization	3.769	0.983



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8	Weight Management	3.750	1.897
9	Stress Management	3.740	1.201
10	Challenge	3.577	1.255
11	Affiliation	2.654	1.461
12	Competition	2.577	1.374
13	Social Recognition	2.356	0.965
14	Health Pressures	1.897	0.951

Table 2. Ranking of Exercise Motivation Subscales Reported by College Subjects Given by Frequency and Percentile

Subscale	Female	Male	</= 20	>20	White/ Caucasian	Hispanic Latino	Black/ African Canadian	Asian	South Asian	Eastern European
Affiliation	11	12	12	11	12	4	11	11	12	10.0
Appearance	5	10	5	7	6	2	5	9	4	6.0
Challenge	10	6	9	10	9	1	3	8	10	5.0
Competition	13	8	11	13	11	6	11	12	11	9.0
Enjoyment	9	3	3	9	4	2	6	5	9	7.0
Health Pressures	14	14	14	14	13	6	10	14	14	9.0
Ill-Health Avoidance	3	4	4	2	3	3	4	6	3	1.0
Nimbleness	4	7	7	4	5	1	6	7	5	1.0
Positive Health	1	2	1	1	1	1	2	1	1	1.0
Revitalization	8	5	6	8	7	3	7	4	8	3.0
Social Recognition	12	13	13	12	14	5	9	13	13	8.0
Strength and Endurance	2	1	2	3	2	1	1	2	2	1.0
Stress Management	7	9	8	6	10	1	8	3	7	4.0
Weight Management	6	11	10	5	8	1	3	10	6	2.0

Table 2 shows the top motivators by age, sex, and race. Each subscale is given a number from one through fourteen, where the lower numbers represent a more important motivation. Both sexes are motivated to exercise for Positive Health and Strength and Endurance. However, women are also motivated by extrinsic factors such as appearance and weight management. Men appear to be more likely motivated by intrinsic factors such as strength, positive health, and enjoyment. These findings are consistent with past research (Egli, Bland, Melton, and Czech

2011). Table 2 also indicates a difference in motivations for those under (enjoyment) and over 20 years old (weight management).

Table 3. Report of Significant Differences by Demographic Variables (Age and Sex) and Exercise Motivation as Determined by Independent t-Tests with Mean Scores Reported

Source of Variation			M	SD	T value	P value
Sex	Competition	Female	2.07	1.37	-3.3745	0.00251
		Male	3.72	1.42		

Table 3 highlights the differences in motivation by age and sex. There was only one significant difference between the two sex categories for Competition: males were significantly more motivated to exercise for competition than women.

Table 4. Report of Significant Differences by Race and Exercise Motivation as Determined by ANOVAs with Mean Scores Reported

Subscale	Mean Scores						F Value	Significance
	White/ Caucasian	Hispanic/ Latin American	Black/ African Canadian	Asian	South Asian	Eastern Europe		
Social Recognition	1.33	3.00	2.13	2.50	2.75	3.25	4.905702935	0.004320268

Like table 3, table 4 highlights differences of exercise by race. However, there is one of the differences is significant: social recognition. Asians were significantly more motivated by Social Recognition than Caucasians and Hispanics/Latin Americans.

### *Hypothesis 2*

The difference in HLSUS score represents the difference between a study participant's score from when they first completed the scale to when they did it after using a HLHT for six weeks. If our hypothesis was accurate, the scatter plot would have shown a positive trend with the difference in HLSUS score becoming greater as the habit score increased. However, this is not the case, indicating that use of the HLHT had little impact on a healthy lifestyle. In order to confirm this, a regression analysis was conducted, which resulted in a significant F value of 0.374 and a P value of 0.374.

Results indicated that there is no relationship between habit strength and frequency of being physically active (Significant F = 0.505, P = value 0.505). Clearly then, our second hypothesis was incorrect as participants who have a strong Self-Reporting Index score (Habit Score) after six weeks did not see greatest improvement in their HLSUS scores, and they were not more actively involved in physical activity.

### *Hypothesis 3*

This hypothesis was correct as participants were more likely to agree with the academic benefits of working out after using the HLHT. There was a moderate positive relationship (Pearson r =

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0.661462576); however, the correlation is not significant as the P value is 0.926607. This is probably due in part to our limited sample size.

### *Hypothesis 4*

The differences were not significant in the mean and standard deviation of the HLSUS score for those who completed the first survey. However, our analysis suggested that individuals who worked out four or more times were more likely to have a higher HLSUS score than those who didn't.

Although a number of differences can be seen, they were not significant. Once again, however, it suggests that individuals who worked out four or more times were more likely to have a higher HLSUS score than those who didn't.

Table 5. Survey One Mean and Standard Deviation for  
Number of Days Being Physically Active

		Mean	Standard Deviation	P - Value
Gender	Female	1.78	1.4799	0.046962
	Male	3.00		

Due to our limited sample size, the only significant result found was that males were physically active more days a week than females. While our results did indicate that gender, age, ethnicity, living location, and whether or not the respondent was an intentional student impacted one's physical activity, the differences were not significant.

### **Limitations**

There are two major limitations that need to be addressed when examining and analyzing the results. The first is the small sample size. In addition, the age, gender and ethnicity of the study participants did not accurately reflect the entire student body. Ultimately, it was challenging to find significant results and thus suggests that one should be cautious when trying to generalize and apply the study's findings to the general population.

Another limitation is that this study took place during the Covid-19 quarantine. It is possible that individuals were unable to be physically active during the mandatory lockdown.

### **Conclusion**

There were differences in exercise motivations between genders, ethnicities, and ages. Some evidence suggests that using the HLHT would make students more aware of the academic benefits of leading a healthy lifestyle. The study did highlight that gender, age, race, living location, and students' status does impact one's healthy lifestyle score, as calculated by the HLSUS and, and how often an individual is physically active a week. There was no evidence to suggest that the strength of the habit of using the HLHT had an impact on an individual healthy lifestyle score or days spent being physically active. Future researchers should try to replicate this study with a larger sample size.

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# **Juvenile Delinquency**

## **Bio-Psycho-Social Bases of Deviance**

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**ABSTRACT:** Although juvenile delinquency is a social and legal phenomenon, it is an individual act with individual characteristics in a concrete situation. Behavioral alterations are the basic elements of deviance and delinquent activity, and, in young people, these alterations are intense even in persons with balanced social, emotional, familial and material status. Important alterations are usually caused by defect internal and external stimulation leading to behavior disorders. In adolescents, behavioral disorders are usually persistent and repetitive actions as a response to a disrupted interaction between the child and his environment but cause damages to social and moral values. Therefore, juvenile delinquency is a multidisciplinary, complex phenomenon with disproportional relation between the biological elements, external stimuli, and internal emotional and psychological management of these elements.

**KEYWORDS:** behavior, disorder, deviance, adolescents, socio-psychology, delinquency

### **Introduction**

To fully understand what juvenile delinquency means and before thinking about prevention and corrective actions, the phenomenon must be extracted from the conceptual definition and viewed as an assemble of individual characteristics that define the active subject of the term: a young growing person in the middle of extreme responses to extreme changes. Adolescence is a period of biological, psychological, emotional, and especially neurological transformation with important impregnations from the external environment. Family, society, material and educational status act as stimuli that trigger responses with major roles in building the future adult. Sometimes, their reactions can be disrupted or extreme, leading to altered behavior and deviance.

### **General aspects of deviance**

As delinquency, deviance is a complex concept rather than a well-defined term. That is because the definition of deviance has multiple explanations depending on the domain that defines it. Sociologically, deviance is considered to be a violation of written and moral norms of a collectivity – from a simple denial of the rule to offenses and actions to defy that rule, actions which endanger social structure, its people, and its balance. Legally, deviance equals law-breaking behavior and in this domain, it can be a synonym with delinquency. Psychiatry and forensic medicine describe deviance as a subsequent concept of behavioral and personality disorders or as a symptom of other psychiatric pathologies. This domain offers a more intricate description of what deviance is, depending on the situational and pathological individual context. Psychology opines that deviance is as much as an individual as a collective aspect defining it as divergences inside social groups which lead to opposition between minorities and the majority. Individually, it is a variable deviation of behavior, thinking or identity of individuals from the normal values of society and morality. Inside the religious and specific cultural group, deviance can

have more specific moral and ethical definitions and it can be more drastically sanctioned inside the group (Aizer and Currie 2019, 75-587).

Deviance is a general and universal existing element of every society and community. Wherever there are laws and rules there will be disrupting factors. Another characteristic of deviance is variability as rules cover every aspect of society and every breakage will be analyzed and sanctioned differently. But the most important aspect of deviance is relativity. Relativity resides in some variable characteristics: for deviance to be recognized and sanctioned as such, that act has to be visible; in some normative system an act can be considered as deviant but in other systems, it may be permitted; on the other hand, the context of the deviant behavior is very important as it will variate the specific of the action; there are also subjective aspects on the way deviance is defined; social and collective response and reaction will depend on the economic, social status, sex, culture and other aspects of the individual; the community has a very important role in recognizing deviance as it can isolate a behavior and respond to it as it's incidence and area grows and the affected group's tolerance diminishes (Blîndul 2013).

There are multiple ways of classifying deviant behavior. While this paper states the type of behavioral problems that have negative impact on the environment, there are classifications that state about a positive deviance. Positive deviances are deviations from stereotypes and regulations with the goal of innovation and evolution. Of course, cultural extremism and nonconformity can be defined as a neutral deviance as it does not affect any internal or external element of the environment. There are some authors that state the existence of serious and easy deviant behavior such as violence and murder versus alcohol addiction. It is important to underline the fact that any behavior that endangers the self of the active subject or the people around is equally important because in both situations, an element of a socio-familial system is disrupted. Visibility is another characterizing element as some behaviors can be easily recognized but others are hidden (sexual deviance, some incipient alcohol or drug addictions). As stated above, deviance is variable and relative depending on the domain and set of rules it breaks. There are legal deviance such as felonies, socio-political deviance such as terrorism, familial disruptions such as domestic violence and abuse, moral deviance such as dissimulation and personality disorders, religious deviance such as fanaticism, self-destructive behaviors. There are some publications that still discuss the problem of sexual deviance but as society evolves, sexual freedom and rights tend to eliminate some of them from this concept. There are elements that remain in this section but enter also under the legal aspect such as sexual behaviors regarding children. An important aspect of these describing factors is whether the discordant behavior is individual or it defines a group belief and activity. Of course all of these definitions enter under a medico-legal matrix where all of them can be analyzed in specific situations and may embrace a pathological or non-pathological classification. There are aberrant behaviors which include psychiatric disorders that manifest with behavioral discordance and lack of discernment, so as long as the voluntary aspect of the action is missing, the course of action is not a sanction but will be a protective, rehabilitative measure. Deviant activities are defiant and nonconformist behaviors that could easily damage social balance and could become, in time, antisocial behaviors that define illicit activities and aspects that are penalized by the law (Cheianu 2016, 72-76).

### **The causes of deviant behavior and juvenile delinquency in adolescence**

Risk behavior in teenagers is a multiple cause concept. There are biological, social, familial and psychological factors that are permanently interconnected in directly and indirectly

proportions. In order to simplify the description, there is a way of organizing triggering elements of behavior disorders as internal and external factors. To correctly analyze behavioral changes in adolescence, these elements must be considered as individual influence and also as a sum of influences.

#### *Internal factors*

An important aspect of adolescence is the severe and abrupt anatomical and physiological changes that transform and prepare the body into the future adult. The period is full of challenges for the child but also for the social, familial, and educational system as the stimuli they receive and the way they respond in this period will define a major part of their personality. The first aspects that trigger those changes are the neurobiological reactions that change the internal balance. These reactions are a mixture of regression and evolution that translates into behavioral, emotional, physical and character developments. Two important cerebral activities that subside the neuro-psychologic transformation: loss or increase of neuronal connections in different parts of the brain and elevated myelin formation which will reconfigure the brain in the adult form. There is also a thinning of grey matter and a growth of white matter and also a major hormonal release that impregnates especially reproduction, emotions and impulses beyond cerebral and volitional control. The effects of these reactions are increased responses to educational and external stimuli but also loss of control over emotional and impulse responses as the specific areas of brain are hyper-activated in this period, affective and sexual behavior will be stimulated and strategic thinking, adaptation and other cognitive functions are heightened and interfering with the other factors that will define outer responses. An interesting phenomenon is the increased dopaminergic activity that will trigger satisfaction and rewarding systems and it is a major vulnerability to addictions and other behaviors that seek short or long term needs and gratifications. In terms of personality and behavior, biology is reflected into increased emotional sensations and reaction, frustration, psycho-emotional lability or emotional indifference, low self-control, impulsivity, aggression, indifference for rules, despising and defying attitude, opposition and rejection for law and social law, questioning morality and ethics, underestimating antisocial activity and tendency to egocentrism. All of these changes can be considered normal until some point but the external stimuli will decide the consequences these changes will have on the child's personality (Casey, Getz and Galvan 2008, 62-77).

Another aspect regards aberrant behavior in adolescents with cerebral organic dysfunction or intellectual deficiencies. While for the first group, behavior oddness, non-voluntary aggressive reactions and maladjustment are more specific, for the second group, mild to medium deficiency describe a lot of the adolescents involved in criminal activity (Copeciuc 2018, 49).

The familial environment is influencing the child since early years. The interpersonal relationship with family members, the internal set of values, the perception and attitude towards the child, acceptance or disapproving of the child's actions, reward and sanction pattern, existence of abusive or violent behavior are the main factors that affect the young through puberty and adolescence and a lot of these influences will remain during the adulthood. In terms of behavioral disorders, some of the most important elements present in cases of delinquency can be a disorganized family system, conflictual and abusive climate, and permissive attitude, authority problems such as indifference or autocratic and overprotective behavior. Although the family is not an internal factor, it is the immediate close environment that the child spends most time in. All aspects of family will have a direct impact on the child giving him the first line of principles and values that he will operate with (Delcea, Fabian, Radu and Dumbravă 2019, 370-371).

#### *External factors (macro-social aspect)*



The next circle of influence after family resides in the social space with all its constitutive elements: social status, community system, cultural and religious characteristics and economy. Poor social status, lack of material resources, habitation in disrupted communities and areas with high criminal activity rates, low access to modern infrastructure and cultural stimulation are just a little part of the macro-social factors influencing the young individual by creating a disproportional relation between necessities and possibilities and choosing illegal means to get the needs they have is easy to choose when there is already a neurobiological propensity to defiance and lack of impulse and emotion control. Also, mass-media and social-media are a big motivational trigger for non-realistic desires which will lead to hazardous risk-taking and defiance for low and social norms (Dishion, Nelson and Bullock 2004, 515-530).

*Educational and group factors (micro-social aspect)*

As stated above, information absorption and educational activity are heightened activities during this period. A correct approach and a healthy educational stimulation are keys to a positive development to adulthood. Familial primary education is the structure on which school is adding specific intellectual and social stimuli. But the informational matrix received in the school environment is not all that matters. The scholar environment, from the group of colleagues inside and outside the class, to the type of school and the type of educative system used, multiple elements will influence the child behavior and will set a big part of his attitude and personality. Connection to the other children, socializing and being part of a group has the first impact as the characteristics of these relationships will determine the way the child adapts to school environment and responds to the learning activity. Stigmatization, isolation, integrative and relational deficits can negative influence the way the adolescent responds to education inside school environment and, on how the future adult may respond to society. Intellectual stimulation is vital not only for professional and intellectual purposes but also for changing one's system of principles and values. Lack of interest in school, inappropriate and disrespectful attitude toward teachers and other authorities, school abandoning and interests for easy satisfactory results are the main characteristics of children with behavioral problems. Adding an outside group with negative values and antisocial tendencies will only worsen the status of the adolescent because groups tend to give him empowering sensations and courage for defiance and rebellion but also it can influence choices and goals by being a fake positive model and principle set (Dukes and Lorch 1989, 239-251).

Unfortunately, in some cases, the educational system has flaws that also negatively influence the adolescent. For children with low efficiency in school, there can be a major disruption between their expectations, the school's expectations and the family expectations which will cause frustration and adaptation problems with negative outcomes in behavioral and personality aspects. Also, lack of extracurricular and artistic activity or insufficient in-school motivation for these domains can leave out talented children and frustrating them by making them not adapted and not aligned to the *normal educational parameters*.

School is not always prepared to face all types of students and all types of situations, especially institutions from rural areas and there have been stated some cases in which the problem resides in the teacher's manner of communicating, motivating and working with the teenager, especially with children that have behavioral problems. The external stigmatization from family, school groups and educators will turn into self-stigmatization and low self-esteem in adult life with possible antisocial and risk behavior during adolescence (Glenn and Raine 2014, 54-63).

### **Psychological characteristics of adolescents with deviant behavior**

Psychological processes are heightened and chaotic in this period even on a normal basis. Analyzing the elements of psychopathology regarding deviant behavior, it is possible to contour the picture of the problematic adolescents that could need more attention from the micro and micro-social environment.

After 14-15 years old, the child has discrimination capacity over details which will allow him to analyze and respond to various stimuli. Every sensation and the perceptive process is increased or overreacted and he searches for originality and adrenaline and a chance to be recognized and accepted.

Language is an essential part of the attributes of every individual assimilates. By 18 years old, an adolescent is capable of distinguishing usual language and academic language, using them correctly to drive his social integration, he has also a scientific language and he starts to develop an individual way of expressing himself. Deviant behavior will describe the opposite of that: difficult expressing, hostility in or to communications, using trivial expressions to overcome poor language skills, vague answers and irritability and irascibility when forced to sustain a dialogue more than he is capable to. (Herrero, Estévez and Musitu 2006, 671-690).

Understanding the manner of thinking of a teenager is a challenge even in normal situations. In behavior disorders, abstract operational thinking defects are usually recognized. Also, there is a distorted self-analyze and critical view of reality with low awareness of the importance of social and interpersonal activity (Sturman and Moghaddam 2011, 1704 – 1712).

If in normal conditions, imagination is the process that helps a child to discover himself and the world around him, getting him dreams, desires and goals, in behavioral disorders we can find an increased imagination and vivid dreaming without a solid real foundation. Also, we can see a brutal oscillation between a reality that is not satisfactory for him and an extreme idealism.

Long term memory is what prevails at his age, recording information and organizing his space and time inside the general space and time concept. In behavioral disorders, short term memory is more developed than long term memory and affective memory exceeds verbal and effector memory which leads to discrepancies and non-realistic expectations and motivational executory processes (Kjelsberg 1999, 276-282).

Learning is analyzed as an external factor but also as an internal one as self-analyze and self-conduction are important aspects of the adolescent process. Learning skills in school are exceeded by learning through and from experiences that the child considers beneficial or model. Copying behaviors and attitudes are specific to this period and more prevalent in cases of negative influences (Thomson 2016).

Deviant behaviors tend to approach two kinds of personalities in extreme manners. The extrovert tends to have authority issues with violent tendencies, defiance of rules, and a need to control and dominate his environment. On the other hand, the introvert is usually a child from vicious familial climate, that is easily influenced and conditioned in negative activities and some of them tend to acquire dependencies as their will is not strongly developed (Steinberg 2013, 513-518).

Affectional processes and sexuality tend to govern the adolescent's will and activity. As sexual awareness increases and emotional neuronal and hormonal processes are heightened, impulse control and rational processes decrease, putting the child in a vulnerable, contrasting position. The adolescent can pass between extremes very easily, from intense feelings to emotional indifference with contradictory attitude and intense psycho-emotional lability. In some cases, intense feelings and low impulse control can

drive teenagers to lead risk activity with law-breaking and important moral swerve (Lo, Cheng, Wong, Rochelle and Kwok 2011, 48-55).

In the matter of intellectual stimulation, 2 extreme groups engage in risk behaviors – children with low or limit intelligence or children with very high intelligence. But intellectual stimulation and IQ is not the main problem but one of the factors. The problem that triggers behavior disorders and deviance is the major cognitive dissonance, with eliminating real and authentic values with easy acceptance of fake values (Şatalan and Şatalan 2018, 198-201).

Chaos and extremism define the character and personality of adolescents with behavioral problems with 3 main characteristics – lying, instability, and impulsivity. We can describe these elements from the legal medicine point of view, like the incapacity of maintaining or establishing attention and attitudes, of having constant and uniform reactions, and correctly assess a situation and motivate an action (Lybbert, Ryland and Bean 2019, 98-104).

### **Risk behavior and delinquency manifestations in adolescents**

In the matter of forensic psychiatry, the most frequent felony that adolescents are engaged in is theft. Usually, it starts inside the family and then extrapolates in the external environment and it transforms rapidly from small value items into important sums or assets. There are other delinquent activities that theft is associated with and in most of the cases, it is a group action. Motivation and circumstances of theft are important as they describe the teenager's socio-familial problems. As far as motivation goes, there is the imitational activity, conditioning, and incentive auctioning, compensational or necessity acts or even revenge acts, usually accompanied by violent outbursts (Silveri, Dager, Cohen-Gilbert and Sneider 2016, 244-259).

Running away and vagrancy represent a sudden and abrupt escape from a vicious familial climate as a reflexing of emotional and psychological intense stress. Some children run away from school or family as a result of conflictual states or that manifestation can reside in a need for thrilling experiences and adventure or because they need to stand out in a defiant way.

Some authors are considering scholar failure as a deviant subsequent behavioral element. Both subjective on objective opinions have to take into consideration the fact that educational failure is not entirely the fault of the adolescent's inner and outer characteristics but also, we have to consider familial and scholar factors as equally guilty. If a subjective opinion is allowed, school failure is more of a socio-familial system's failure than a child's fault.

Psychopathological manifestations can enter the domain of delinquency (pyromania, psychotic violent manifestations) but they enter the field of medical therapy and social protective and rehabilitation protocols. The presence of critical discernment is the main subject in psychopathology and forensic psychiatry and these cases require special protocols and intensive psychological and pharmaceutical care (Markova and Nikitskaya 2017, 36-46).

Drug, nicotine, and alcohol addiction is another deviant behavior that not only endangers social balance and systems but also the self of the active subject. First of all, dopaminergic activity in cerebral functions represents a vulnerability for developing addictions in adolescents. On top of that, depression, the need to escape from unsatisfactory reality and anxieties are pushing these children into this kind of risky behavior. Cerebral and biological side effects are also a serious mortality and morbidity factor in the moment of substance abuse and for the future. As for social and legal aspects of the problem,

violence, and felonies that subside from the addictive activity and behavior are the main concern (Scheppers 2017, 143-159).

Sexual deviance is another element of behavioral disorders. Sexual awareness and emotional impulses appear during puberty interacting with other bio-psychological factors, it is normal for every adolescent to be in a curious and continuous search for his sexual identity and satisfaction. The problem appears when experiences tend to be exaggerated in search of exhibitionism and defiance or when violent acts and psychoactive substance consumption are added.

Aggression and homicide are the most serious phenomenon appearing in this age period with serious legal and social consequences for the active subject and for the affected persons. Premeditation is not specific for these cases but accidental events during other delinquent activities may happen (theft with violent attack of conflictual situations with fatal blows where the active subject could foresee the consequence of his action but didn't because of the high impulsivity and lack of emotional control) (Nicolaescu, 2017).

Depression and suicidal behavior in adolescents are more serious than adult depressive disorders. Fragile characters and personality, in the middle of neurobiological abrupt transformations and conflictual situations in a socio-familial environment or unsatisfactory state regarding the internal and external expectations, added to frustrations, psycho-emotional lability and instinctual profound disruptions can lead to a critical integrative and adaptive deficits with depressive manifestations that are hard to control and attend. Some symptoms are even hard to recognize especially during the last years when social-media has ruptured reality from media-reality distorting the adolescent's system of values and life expectations and leading to the creation of fake life story and identity to be recognized in a fake world. The result is severe sadness with low motivation, self-negative perceptions, feelings of solitude, uselessness, hopelessness, underestimating the meaning of life and social values. Some of these children fight this situation by referring to drugs and alcohol but in severe cases, consuming or not consuming substances can lead to the same result – the perception of life futility and suicidal behavior with high rates of fatal results. The *honest* suicide has a high rate of success because preliminary symptoms are hard to recognize in most of the cases and the suicide attempt is well planned and conducted. This is the reason why psychological assessment in school and integrative efforts are important for all adolescents, especially those with negative material, familial and educational stimulation. It is important also to separate authentic depressive behavior from the demonstrative forms of depression and suicidal attempts. Demonstrative suicidal behavior is a form of emotional blackmail in order to influence decisions and sanctions regarding the teenager's actions or it could be a form of attention deficit. The symptoms in these cases, are not only visible but extreme and even theatrical and the suicidal attempts are also dramatic but in medical terms, not a true life threatening situation. Cases in Romanian pediatrics clinics include often multiple painkiller pills like ibuprofen and acetaminophen or superficial excoriations on anterior face of the arms but not deep enough to affect blood vessels. These types of behavioral problems need other approaches and attention in a scholarly and familial environment (Roman 2018).

## Conclusions

Behavioral disorders in adolescents, deviance and delinquency have roots not only in the extreme and aberrant conduit of the child but it is also a deficit of social, legal and familial and educational system that is not always prepared to support these cases. Conclusions on this paper are organized in an attempt to structure a prevention plan as preventive actions are more beneficial than corrective processes which tend to have less positive outcomes. Future development of the child is important and integrative,

educative and psychological measures are vital before the teenager makes severe mistakes with important consequences. Limits to prophylaxis in this matter reside in the fact that it can concentrate actions on causes and factors which can be corrected in short term with immediate effects.

Prevention of juvenile delinquency must act on all environments and levels that involves the life of the adolescent and it must go in 2 directions: one is a development action, with modeling the young man's social and moral values and respect for education and law as he will grow to be a healthy and operational active subject of society; the other approach is the disrupting and eliminating negative influences and factors in the child's life. This is not only an action that starts with the individual himself but also a social effort, starting from the negative factors inside the cultural, political, and educational organization of society (Young, Greer & Church 2017, 21-29).

Of course, every state and every social system has its specifics and significant negative and positive factors so prevention is characteristic to every community depending on their cultural, religious and educational values. But beyond that aspect, there is a uniform present element in all societies with vital importance in prevention and rehabilitation of these cases. Every antisocial act and every active subject of delinquency or deviance is viewed as a negative factor and the immediate social response is isolation, stigmatization and elimination of that factor. This is the main reason why most of the problematic adolescents don't have real chances of changing their lives for the better or readapting to healthy systems and therefore, they will continue to remain in a defect environment and act against the system that removed them. Acceptance, understanding, real chances for integrative and adaptive processes and sustained psycho-social attendance for these adolescents may offer a real chance, especially when familial and material environments are not beneficial. Also, a child that has undergone corrective measures for delinquency activities must be adapted to normal social environment as fast as he exits the sanctioning program. Putting them into continuous special educational care and stigmatization can be traumatizing in the way that the child will understand that he will never be normal and his place will never be in a normal social life, even when he exists in the adolescent period. That would be the reason for delinquent and deviant behavior relapses and as the individual evolves to adulthood, the negative factors will have more and more influence on his personality, behavioral disorders leading to psychopathological manifestations or severe delinquent activity with more serious implications.

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# Environmental Sustainability Through Textile and Apparel Upcycling

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**ABSTRACT:** The textile industry is among the most essential consumer goods industry; however, it is accused of being one of the most polluting industries due to production and consumption of textiles. The affluent segment of society through its “make-use-and-throw” approach gives rise to large scale manufacturing and pressure of disposing of used clothing. The textile industry, therefore, has made attempts to counter this problem through recycling. Yet another method, textile upcycling, is taking ground as a sustainability measure; an important technique that enables prolonging of textiles lifecycles and slowing down unnecessary textile production. Up-cycling is not a new concept, it originated from the 1930-40s, during the World Wars, times of little economic ability and material resources. In developing countries, up-cycling is a way of life especially, in rural areas due to expensive raw materials; hence, they use what is available to create handicrafts, clothing, etc. Given that up-cycling makes use of already existing pieces, it is a way of keeping ‘unwanted’ items out of the waste stream by creatively/innovatively reusing materials that may otherwise end up in landfills, a step towards achieving zero waste. Recycling requires energy and resources to gather, sort and process the waste while benefits of up-cycling include resource conservation and less carbon footprints. The study performed an evaluation of textile waste generated by fashion designers, suggesting ways in transforming both consumer waste and post-consumer waste into fashionable apparel. Five apparel up-cycling solutions were explored through redesigning and reconstructing of textile waste converting them into fashionable products.

**KEYWORDS:** textile industry, textile waste, redesign, recycling, upcycling, sustainability

## Introduction

‘Fashion calls for constant change which urges consumers to indulge in purchasing garments to keep track with the latest trends. These practices result in large consumption patterns of clothing while the non-use of fashion apparels is hidden truth. Clothes that are purchased with intense interest lie idle either in the wardrobe or in the landfill. The textile industry is among the most essential consumer goods industry; however, it is accused of being one of the most polluting industries due to production and consumption of textiles’ (Radhakrishnan 2020, 59).

Around 1.8 million tonnes of clothing waste is generated annually in the UK accounting for around 5% of total UK household waste, with the lifetime of many garments unduly short (Cooper, Hughes, and Claxton 2015, 73). With reference to the environmental challenges resulting from the textile industry it is, therefore, imperative there is increased focus and effort for sustainable textile and apparel production and consumption practices, for a cleaner and more environmentally friendly and safer continent. Given the Sustainable Development Goals (SDGs) that are a pertinent topic, many researchers are looking into the problem of sustainability from different perspectives as illustrated in the following statement:

“The increased need to consider sustainability in the field of apparel is gaining awareness among designers, producers, marketers, and consumers who are currently considering their next moves in the arena of apparel products, design, and innovation. The paradox of fast fashion and the pursuit of modernity, alongside the need to care for the earth’s resources in a sustainable manner that includes social, economic, and environmental impacts, is a difficult dilemma” (DeLong et al. 2017, 48).

It has been observed that it takes about one year for natural fibres like wool to decompose and it even takes longer for man-made fibres to decompose. However, their manufacture creates pollution and they are hard to recycle with nylon taking 30 to 40 years to decompose (Challa 2007). As they decompose, they release gases into the atmosphere and some chemicals to the soil. These gases are inhaled by humans as polluted air and they also consume animal and plant product. However, their manufacture creates pollution and they are hard to recycle (with nylon taking 30 to 40 years to decompose).s infected with diseases from toxins. There is, therefore, a dire need for research and to assess ways in which environmental sustainability can be fostered through textile up-cycling in order to prevent catastrophic ecological degradation that threatens the existence of humanity. Thus, it is important that the fashion industry considers the uptake of environmentally friendly technologies.

## Literature Review

Around 1.8million tonnes of clothing waste is generated annually in the UK, accounting for around 5% of total UK household waste, with the lifetime of many garments unduly short. Over the last 15 years, fashion has become faster and cheaper. The concern is that ‘fast fashion leads to fast landfill’ (Cooper, Hughes, and Claxton 2015, 73-74). The impact of textiles and clothing industry on the environment goes beyond emissions. Dyes used to produce toxic chemicals pollute waterways. Materials gathered for wood-based fabrics like rayon and viscose adversely contribute to deforestation (Schipani 2019).

Designers and product developers are taking greater responsibility for the problems presented by the inefficient and unsustainable systems used to create new fashion items. The culture of transience, newness, and conceived obsolescence, so prevalent in the fashion industry, has led to growing over-consumption and consequently high volumes of waste. Clothing is often disposed of with as much as 70% of its lifetime still left (Han, Tyler, and Apeagyei 2015, 130).

## Landfill Emissions and Global Warming

‘The Ellen Macarthur Foundation, reported, textile production produces 1.2 billion tonnes of greenhouse gas every year. The United Nations estimates that 10 percent of total global emissions come from the fashion industry’ (Schipani 2019). In decades prior landfills were put in place, anything and everything was dumped and buried underground. This waste then overtime decompose releasing toxic toxins and chemicals, e.g. methane, a potent greenhouse gas that contributes to global warming. As a potent greenhouse gas, methane traps up to 20 times more heat in the atmosphere compared with carbon dioxide the Environmental Protection Agency (EPA) states Landfills have a distinctive effect on air pollution, nature, land, and humans. Soil in the area may be saturated with chemicals or hazardous substances. As rain falls on landfill sites, organic and inorganic constituents dissolve, forming highly toxic chemicals leaching into groundwater (Newton 2018).



In their study, DeLong et al (2017) indicated that, since Industrial Revolution, the fashion industry's impact on earth's resources has grown to such an extent that has led to social, environmental, and economic consequences that must be addressed. In support of gravity of the problem of textile waste, other studies show that there is a great need for effective garment waste reducing, recycling and disposal management which is motivated by increasing cost and decreasing availability of landfill space, a dumping area for textile waste (Jahan 2017, 266; Kavitha & Manimekalal 2014). Hence, the move towards sustainable strategies by the fashion industry. Furthermore, the authors (2017) noted that, according to EPA 2012, in 2010, an estimated 13.1 million tonnes of textiles were generated in the US; while the recovery rate for recycling for all textiles was only 15%, that is 2.0 million tonnes, with 11 tonnes dumped in landfills across the country (US Environmental Protection Agency 2012). Dyes and chemicals in fabric and other components of clothing and shoes leach into the soil, thereby contaminating both the surface and ground water.

Studies have shown that decomposing clothing releases methane, a harmful greenhouse gas which is a significant contributor to global warming. Notwithstanding that there is a great demand for second-hand clothing, in developing countries, there is need to motivate people to move from 15 percent recycling to 100 percent (Wallander 2012). The fashion industry is amongst lots of other industries which are sources of greenhouse gas emissions as it accounts for 10 percent of global carbon emissions and remains the second largest industrial polluter, second to the oil industry (Conca 2015).

### **Can Fashion Stop Climate Change?**

The fashion industry greatly contributes to warming the planet, 1.7 billion tonnes of carbon dioxide in 2015. This translated to almost 5% of manmade CO<sup>2</sup> emissions more than aviation and shipping combined, with an increase to 8% in 2018. Efforts to get zero net greenhouse gas emissions requires drastic changes in the way clothes are produced and consumed. That is starting from the raw material wherein polyester accounts for 65% of all fabric production and cotton with 21% industry emissions. Fast fashion trend greatly contributes to carbon emissions as people are buying more clothes than ever, wearing them fewer times, repairing the garments less, also disposing them sooner. The fashion industry, therefore, must adopt and carry out practices that would help in reversing its harmful practices. The Fashion Industry Charter for Climate Action, launched in 2018 under the auspices of United Nations, had goals set to help curb fashion industry pollution e.g. engage in set commitments for the reduction of 30% greenhouse gas emissions by 2030. Switching fabrics e.g. from virgin polyester to recycled material can reduce carbon footprints of polyester by 40%. Hence, use of more sustainable fabrics would greatly reduce the climate impact of fashion in the future (Common Objective 2019).

### **Sustainability and Environmental Issues in the Fashion Industry**

Sustainability deals with procedures and practices aimed at reducing environmental pollution and it has far-reaching implications. It encompasses many areas, and with those pertinent to the fashion industry as; materials use, production, consumption, disposal, and recycling. Full life cycle analysis (LCA) of a product, is an involved process yet an important aspect currently gaining ground; and, it examines the way production, use, care, and disposal of a product affects the people who use it and their environment. Hence LCA, therefore, encompasses everything from raw materials used, through to the treatment of the

generated waste during production, processing; and the impacts resultant from consumer use, care/cleaning through to disposal or recycling of the product. With reference to textile products, consumers face many difficult choices in decision-making of the better product from available products. Success on what is available in the market is dependent on consumers demanding “green” eco-friendly, recycled, or sustainable products. Whilst the LCA is a desired approach to sustainability in the fashion industry, ‘identifying the complete environmental ramifications of the production, distribution, use, care, and disposal of textile products is a complex multi-dimensional problem’ (Kadolph 2014). Environmental issues affect the processing of raw materials to the production and distribution of the final product and its disposal.

### **Recycling and Up-cycling**

The affluent segment of society through its “make-use-and-throw” approach gives rise to large scale manufacturing and pressure of disposing of used clothing. The textile industry, therefore, has made attempts to counter this problem through recycling. Yet another method, textile up-cycling, is taking ground as a sustainability measure; an important technique which enables prolonging of textiles lifecycles and slowing down of unnecessary textile production. Given that the goal of up-cycling is to prevent wasting potentially useful materials by making use of existing ones; it is therefore, one good strategy to protect ecosystems (DeLong et al. 2017).

Up-cycling is not a new concept, it originated from the 1930-40s, during the World Wars, the times of little economic ability and material resources. In developing countries, up-cycling is a way of life especially, in rural areas due to expensive raw materials; hence, they use what is available to create handicrafts, clothing etc. (Dsouza n.d.). Up-cycling, therefore, has an inherent stake in other sustainable activities such as design for reuse, reduction of carbon and water footprints, reduction of air pollution (greenhouse gases) etc. Recycling and up-cycling play a major role in the sustainability criteria of economic, environmental, and social dimensions. Recycling in the fashion sector, contributes to textile waste elimination through reuse of materials and finished garments, environmental conservation especially the reduction in landfill and pollution through redirection of waste to alternative uses (Kellock 2014).

‘Up-cycling used clothing could transform textile waste into raw materials for new fashion items’ (Janigo, Wu, and DeLong 2017, 254). Up-cycling is the newest sustainability trend within the retail industry and focuses on reusing discarded objects or materials to create a product of higher quality or perceived value than the original. Through up-cycling, cloth and textile waste are reduced by reusing deadstock or gently used fabric to create new garments and products. Up-cycling can use pre-consumer or post-consumer waste or a combination of the two (Petro 2019). Thus, up-cycling is a process that involves amending, restyling or creation of a completely unrelated product to clothing. Up-cycling also implies application of high design and craft techniques with a finished product often of a higher retail price than it could have been as the original (Kellock 2014).

### **Sustainability and Fashion Designing**

‘The fashion industry is the backbone of textile and apparel production as all endeavors start with the design phase. Designers today have a different motto, and they work for long-lasting sustainable designs which in turn will promote sustainable consumption and production patterns among end users. The role of sustainable design development brings into realization the attainment of the 12th goal (Responsible Consumption and Production) of the UN Sustainable Development Goals.

Many studies and reports have shown that consumers are aware of the problems related to fast fashion and are looking out for sustainable products. Sustainable design formulation calls for assurance of a long-term product which satisfies the need of the customer' (Radhakrishnan 2020, 59).

Researchers have brought to the fore the awareness of the widespread recognition of the fashion industry's current practices, which have proved to have an adverse environmental, economic, and social impact. Fashion designers are, therefore, key to the transformation to a sustainable fashion industry by developing products with consideration of the environment, economic, and social issues throughout the products lifecycle (Kozlowski, Bardecki, and Searcy 2019). Consumers' need for fashion novelty and newness has driven them to purchase new and diverse apparel products frequently, which, at most times are underutilised, hence end up being disposed of. Fast fashion, low cost clothing collections is by its very nature, a fast-response system that encourages and speeds up consumers' acquisition of more styles of lower prices, thereby encouraging more purchases resulting in increased landfill waste. High street retailers entice their customers into coming back by sourcing and introducing new trends on a weekly basis as they introduce new items and replenish stock (Joy et al 2012, 275).

Transformed apparel designs provide an alternative option of changing to different styles without purchasing new products; a venture that requires, a good understanding of garment construction quality, technical knowledge, and skills. Unfortunately, it has been observed that there are critical skill gaps in the fashion industry and evidenced in the classroom where students show lack of confidence in experimenting with construction skills (Allsop & Cassidy 2019, 1).

### **Materials and Design Brief**

This study, therefore, is based on a design project that explored available opportunities that can be used to design garments that lessen the impact on the environment, while addressing the social, economic, and ethical concerns. The sustainable design collection of ladies' ready-to-wear apparel was complemented by accessories such as a clutch purse, shoes, necklace, and bracelets; and exhibited an appeal and quality to convince mainstream consumers that sustainable fashion can be the norm. The selected pinafore dress, as an emerging trend, is a versatile design that can be used to create various looks when worn with different tops. Back straps of the outfit resemble suspenders giving it a casual look. Though pinafore dresses are on the casual side, but the design can be dressed up, with a detachable overskirt as has been added to the pinafore design to create a perfect out to dinner look (Figure 1). The chosen design, though labour intensive was the most outstanding. The pinafore dress has simple square patch works complemented by a cape that can be transformed into an overskirt if the occasion calls for it. Templates were used to cut pieces of fabric from fabric scraps, into square and rectangle shapes for the skirt and triangles for the layered overskirt respectively; and thereafter, arranged as patchwork into rows and columns and sewn together.

Geometric patchwork should be very carefully made as the slightest inaccuracy throws them out of balance and pieces will not fit together. This is time consuming and labour intensive requiring a lot of hand work in joining the pieces. The medium-sized triangle patchworks are ideal for repurposing scrap fabrics, but not easy to sew, as they utilise a lot of leftover material and are time consuming. A lot of expertise is needed to join the pieces of triangular shapes.


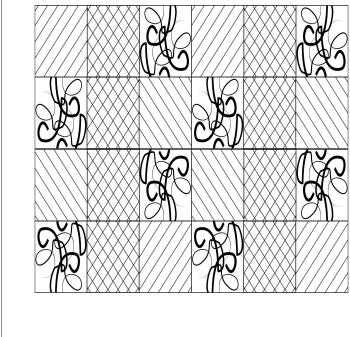
Final Design - Pinafore and overskirt	
Pinafore dress with multi-coloured patchwork overskirt	Patchwork arrangement for pinafore skirt
 <p>FRONT</p> <p>BACK</p>	

Figure 1. Technical Illustrations [Pinafore dress and Patchwork]



Pinafore dress with strip-lacy cape	Pinafore dress over T-shirt
	

Figure 2. Pinafore dress designs from fabric scraps with complementary shoes



Figure 3. Shoe design covered with suede fabric scraps

**Conclusion, Implications and Recommendations**

This study serves to demonstrate that implementing the up-cycling method in the design process significantly decreases the environmental impact of a garment, by providing a solution to the problem of textile waste, and thereby, reducing the use of new material.

People are aware that off-cuts thrown into landfills or burnt are harmful to the environment. Decomposing clothing and textile releases methane, harmful greenhouse gas and a significant contributor to global warming. Like other wastes, textile waste disposal through landfill and incineration is responsible for global warming. Textile waste material in the form of post-consumer waste, pre-consumer waste, and production waste, are all essential in implementing up-cycling. The three types of textile waste can be used in fashion design, each, however, requires a different technique when used as an input material, depending on the objective and functionality of the designed product. Up-cycling with production waste can be most efficiently used within the production company itself, by sending all generated waste back to the production process; and designing patterns for side products to be easily made of the textile leftovers.

Fashion conscious or not, clothes are a necessity, and today's fashion industry is faced with one of the biggest challenges of how to create fashion for a growing world population at the same time protecting the planet by ensuring that fashion waste headed for the landfill can be turned into something creative. Creating less waste goes back to pattern design. Zero waste must be incorporated into design before cutting out the fabric. Pattern makers should create garments where pieces of fabric resemble an interlocking jigsaw puzzle, thus resulting in fewer left over scraps. Textile waste, an increasingly critical issue in the fast fashion industry, is causing devastating harm to our environment. It is therefore important that the fashion industry in putting itself on the frontline of the battle against waste, makes "Zero waste pattern making" a major consideration and practice in its manufacturing enterprises. Given that Americans discarded 13.1 million tonnes of textiles in 2010, with 11 million tonnes dumped in landfills (DeLong et al. 2017), it is important that steps be taken to decrease textile waste for recycling and up-cycling.

Textile recovery and recycling are important and beneficial to the environment as they reduce the need for landfill space. The fashion industry must promote sustainability of the environment through promoting the up-cycling concept. It is, therefore, prudent that the long-ago practice of repairing clothes for extended use be encouraged. This could be infused into the curriculum together with recycling and up-cycling concepts for a beneficial contribution towards a sustainable environment. The hope being that the Zimbabwean fashion industry, freelance designers, and entrepreneurs could optimise this concept; and thereby, contribute to a sustainable environment, free from the negative impacts of global warming. This would be a positive step towards the global fight against climate change that is devastating the world.

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# The Parents' Maintenance Obligation towards the Minor Child and the Descendant over the Age of Majority Pursuing Their Studies in Romanian Law

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**ABSTRACT:** According to the provisions of the Romanian Civil Law, the child is entitled to a standard of living fostering their physical, mental, spiritual, moral and social development. The responsibility to ensure the best living conditions required for the child's growth and development rests with the parents or, as applicable, with the legal custodians. In this regard, the parents are bound to provide a dwelling for their child, as well as the conditions required for the growth, education, learning, professional training of the same, as well as a healthy living environment. The maintenance obligation rests with both parents, regardless of whether they are the biological, adoptive parents, or whether they are married, divorced or if they have children outside the marriage and it is granted to the minor up to the age of 18 (the majority age), and, if they are still pursuing their studies, up to graduation, without, however, exceeding the age of 26.

**KEYWORDS:** maintenance obligation, alimony, need state, pursuing of studies, parents, minor child, descendant over the age of majority

## Introductory notions on the maintenance obligation between parents and children

Whereas the former regulations and the current Civil Law do not define the notion of “*maintenance of the minor children*”, this task rested with the courts of law and the doctrine in the field. Thus, in a decision of our supreme court (Supreme District Court, decision no. 351/1980, published with “*Revista română de drept*” issue 9/1980, p. 60), ruled upon under the auspices of the currently repealed Family Code, it was held that *the maintenance of the minor child* is to be construed as “*the provision of all that is needed for the raising and education of the minor child, including a dwelling*”. Similarly, in the specialized literature (Avram 2016, 510; for a proper definition and further details, see Moloman 2012, 237-240) published after the adoption of the Civil Law in 2011, the *legal maintenance obligation* is construed as “a person's legal duty to provide to another person the required means of subsistence, both in material, and in spiritual terms” (for further definitions, with some nuances, see Florian 2018, 575; Lupașcu and Crăciunescu 2017, 630; Bodoașcă 2015, 471; Dogaru 1978, 12).

According to the provisions in art. 47(1) of the Law no. 272/2004 **on the protection and promotion of the child's rights**, republished (in the Official Gazette of Romania, Part I, issue 159 of 5 March 2014), the child is entitled to a living standard fostering their physical, mental, spiritual, moral and social development. The responsibility to ensure the best living conditions required for the child's growth and development rests with the *parents* or, as applicable, with the *legal custodians*. In this regard, the parents are bound to provide a dwelling for their child, as well as the conditions required for the growth, education, learning, professional training of the same, as well as a healthy living environment [art. 47(2) of the Law no. 272/2004, republished].

It should be highlighted that *the maintenance obligation rests with both parents*, regardless of whether they are the biological or adoptive parents, married, divorced or if they have children outside the marriage. This principle, according to which both parents are responsible for the raising of their children and in exerting their parental rights and obligations they should always consider *the higher interest of the child* and *should promote the material and spiritual wellbeing of the same*, is consecrated in art. 36 of the Law no. 272/2004 **on the protection and promotion of the child's rights**, republished.

Starting from this principle consecrated by the law, in a case (Drăgășani Law Court, Civil Decision no. 1856/2014, published at [www.portal.just.ro](http://www.portal.just.ro)), the court has shown that “the minor's interest is to also receive alimony from the parent to whom he/she was not entrusted. In case the parent who is under an obligation to pay alimony does not obtain any revenue or holds no material means, but is able to work, in this case, the defendant cannot be exempted from the maintenance obligation because any person capable of work can obtain revenue from work. Hence, **the absence of revenue do not exonerate the debtor from the maintenance obligation, the defendant being bound to take the required steps in order to obtain revenue that is at least equal to the minimum domestic income.** The notion of “means” referred to in the Civil Law does not only encompass the material means, but also the capacity to work of the person bound to pay alimony, which is the source of the material means. Thus, through the application of this rule, encompassed in the notion of means, the court may presume that this revenue or other financial sources of the maintenance obligation debtor are available, because it would otherwise be impossible to explain how it is that the defendant provides for his own subsistence. Upon the calculation of the alimony amount, the provisions in art. 529(2) of the Civil Law are to be considered as well as the current minimum domestic income”.

At the same time, as stipulated in art. 510 of the Civil Law, “the loss of the parental rights does not exonerate the parent from the maintenance obligation towards the child”.

The Civil Law regulates the parents' legal maintenance obligation towards their child in art. 499 and art. 525, and several peculiarities of the maintenance obligation between parents and children may be derived from the interpretation of these provisions, which we will illustrate and analyze herein below (for a review of the parents' legal maintenance obligation towards their children, see Gabriela Frențiu 2019, 109-136; Axente in Avram, coord. 2018, 211-239).

### **The child's need state**

According to art. 525(1) of the Civil Law, the minor requiring the parents' maintenance *is in need* if they are unable to obtain the required subsistence means out of their own work. As it may be noticed, the child's need state is appreciated in the light of the *impossibility to obtain revenue from work*, not in the light of the possibility to provide for their own maintenance out of their own assets.

For instance, in a case (Bucharest District Court, 4th Civil Division, civil decision no. 959 of 27 April 2009, unpublished, *apud* Roșu and Rădulescu, 141-143, case 63), having as subject-matter the increase of the alimony established in favor of a minor, the court ruled that “the minor is not in need, considering the estate she owns, as well as the income obtained by the mother, as well as the rent ad for the studio owned by the minor and the alienation of the ownership share of the property”.

If the minor has a source of income that *is not sufficient*, the parents are under *the obligation* to provide the required conditions for their raising, education and professional training [art. 499(2) of the Civil Law].



Regarding the minor's assets, even though, as stipulated in art. 525(1) of the Civil Law, they are not taken into consideration upon the assessment of the minor's need state, paragraph (2) of the same article stipulates that, in case the parents could not provide for the child's maintenance without endangering their own subsistence, the custody court may allow for the provision of the maintenance through the sale of the assets owned by the minor, except for the strictly required ones.

### **Subject-matter of the maintenance obligation**

According to art. 499(1) of the Civil Law, "the father and the mother are jointly bound to provide for the child's maintenance, ensuring everything that is required for the subsistence, education, learning and professional training of the same". At the same time, as stipulated in paragraph (2) of the same article, "if the minor does individually obtain an income, which is, however, insufficient, the parents are bound to provide the required conditions for the raising, education and professional training of the same".

Pursuant to the interpretation of the provisions in art. 499(1) and (2) of the Civil Law, it follows that *the subject-matter of the maintenance obligation* of the parents has a *complex nature*, because it does not only suppose the provision of the required means of subsistence (food, clothing, dwelling, medication, etc.), but also of the ones required for the education, learning and professional training of the child.

This has actually been confirmed by the rulings of our courts of law, both in the case-law prior to the Civil Law in force, and in the case-law subsequent to the adoption thereof. For instance, in a case (Timiș County District Court, Civil Division, decision no. 202 of 11 February 1971, published in "Revista română de drept", issue 8/1971, 159, *apud* Avram 2016, 532, footnote 1), ruled upon under the auspices of the currently repealed Family Code, the law held that "the maintenance obligation towards a child is of a complex nature, consisting of a number of maintenance-related obligations – comprising food, clothing, dwelling, personal hygiene, school stationery, etc. -, and not only the provision of the maintenance in terms of providing food and a dwelling. Hence, the fact that, pursuant to a decision ruling in this regard, the child stays with one of the parents one month per year (during the holidays) does not mean that this satisfies all the child's maintenance needs and, hence, the parent will not be entitled to claim, during such month, the suspension of the alimony paid for the child to the other parent to whom the minor is entrusted for raising and education".

In another case (Cluj Court of Appeal, 1st Civil Division, Civil Decision no. 209/R/2015, published at [www.curteadeapelcluj.ro](http://www.curteadeapelcluj.ro), *apud* Moloman and Ureche 2016, 72, available online at <http://studia.ubbcluj.ro/download/pdf/980.pdf>), ruled upon under the auspices of the current regulations in the field, the court has shown that "a child does not only need clothing, footwear and food, but they also need decent and optimum living conditions – which supposes a home that is suitable for the raising of a minor child, clean, furnished and properly equipped, bright and warm –, they need proper school training, toys, books suitable for their age and, what is most important, they need permanent and constant love and attention, they need someone to look after their permanent and constant education and care, someone to play with them, to spend time with them, to explain and teach them all that is required and everything the child desires to know, someone to read them bedtime stories, someone to take them to the nursery/school and bring them back home, or take them to extra-school activities, someone to help them with their homework, someone to stand by them and constantly support them".

### Amount of the maintenance obligation

As also shown by our courts of law (Iasi Court of Appeal, Civil Decision no. 48 of 4 February 2011, available online in summary at <https://www.jurisprudenta.com/jurisprudenta/speta-fi6fscn/>), “the amount of the alimony is calculated based on the parents’ income, and the law level thereof cannot be a cause for the debtor’s exemption from their obligation. The payment of the alimony to the minor child is regulated under the law; the parents may agree on the amount and fulfilment means of this obligation, as allowed under the law, notwithstanding the higher interest of the child, such an agreement being subjected to a review by the court of law.”

According to art. 529(2) of the Civil Law, if the parent is under a maintenance obligation, the amount of the same is established to up to a fourth of their net monthly revenue for one child, a third for 2 children and half for 3 or more children.

For instance, in a case (Câmpeni Law Court, Civil Decision no. 596 of 17 September 2018, available at [www.rolii.ro](http://www.rolii.ro)) having as subject-matter bidding the father to pay monthly alimony according to the obtained income, the court ruled that “the maintenance obligation is established according to the needs of the one requesting it and to the payment possibilities of the debtor thereof and, in case the alimony is due by one parent for two children, it can reach the fraction of one third of the net income obtained, according to art. 529 of the Civil Law. The maintenance obligation is subjected to amendment and termination according to the provisions in art. 531 of the Civil Code. In this case, it is noted that the income obtain by the parent who is the debtor of the maintenance obligation amounts to RON 1583 and, hence, the amount of the maintenance obligation for the two children can be established up to the maximum of one third of this income, i.e., the amount of RON 250 per month for BMI and the amount of RON 277 per month for BPI, as of 2.04.2018, the date on which the current petition was lodged, and up to the children’s graduation date, but not beyond the age of 26”.

It should be highlighted that, as stipulated in paragraph (3) of art. 529 of the Civil Law, the amount of the maintenance due to the children, alongside the maintenance due to other persons, according to the law, cannot exceed half of the debtor’s monthly income. For instance, in a case (Argeş District Court, Civil Decision no. 145/2016, published at [www.rolii.ro](http://www.rolii.ro)), having as subject-matter the establishment of the alimony according to the maximum level allowed under the law up to the graduation from the university by the claimant and requesting the application of the provisions in art. 529(2) and (3) of the Civil Law, the court appreciated that “the establishment of the alimony up to the maximum level allowed under the law was not justified. Thus, according to art. 529(1) of the Civil Code, the maintenance is due according to the needs of the one requesting it and to the means of the one who is going to pay for it, and the need state of the person entitled to maintenance, as well as the means of the debtor of the maintenance can be demonstrated through any means of evidence, according to art. 528 of the Civil Law. **The appellee has only justified the need state in the light of her status as a student, without submitting any evidence as to the expenditure required for such higher education or the other parent’s failure to contribute to her maintenance. It is only on the basis of such evidence that the court could conclude that the appellee’s need state justifies the establishment of the alimony up to a level according to the maximum cap stipulated under the law.** In reviewing the provisions in art. 528 of the Civil Law, it should be taken into consideration that the appellant did produce proof as to the fact that he had remarried and that, in addition to the maintenance obligation towards his other two children resulting from this marriage, he also had the obligation stipulated in art. 325(2) of the Civil Law to contribute to the marriage-specific expenditure. Or, the first law court has ignored the fact that the maintenance debtor also had family obligations. In the light of those obligations and of the matters held regarding the appellees need state, the

alimony should be established below the maximum cap stipulated under the law, so as to abide by the provisions in art. 529(1) of the Civil Law”.

In a case (Mangalia Law Court, Civil Decision no. 1147/26.06.2014, final and binding pursuant to the Decision no. 699/6 June 2016 of Constanța District Court, rejecting the appeals lodged as groundless, published at portal.just.ro, available online in summary at <https://www.legal-land.ro/cuquantumul-pensiei-de-intretinere-a-minorului-prezumtia-ca-parintele-realizeaza-venituri/>) having as subject-matter the amount of the alimony and the presumption that the parent does obtain income, the court has ruled that, in the case, “the claimant has not produce proof as to the fact that the defendant obtains income from work in the Bahamas or that he was employed when she lodged the petition (15.07.2013) or during the divorce trial, considering that the photos she submitted with the case file, where the defendant is wearing overalls on a naval site, in circumstances leading to the mere presumption that he carried out work-related activities, had actually been taken, as it follows from the photographic sheets submitted by the defendant with the case file, prior to the date of 01.06.2013, the date mentioned on the social media page from which they had been copied.

Nonetheless, considering that the defendant did work in the Bahamas for quite a long period of time and that he still resided in that country, which leads to the admissible presumption that he does obtain income, even if he is not employed on the basis of a work contract, because, otherwise, he would actually hold no material means of subsistence for himself, the court will order the defendant to pay to the claimant, in the favor of the minor, an alimony of USD 300 per month, payable either in the reference currency, or in the RON equivalent of the same according to the NBR exchange rate published on the payment date, starting the lodging date of the petition, i.e. 15.07.2013, and until the minor turns 18 years of age, and shall order the defendant to pay the alimony thus established on the 20th of each month”.

It should be highlighted that the parent owing the maintenance obligation cannot be forced to pay alimony on the basis of presumptions and that such alimony cannot be randomly calculated in the absence of certain proof that the same obtains income on the basis of a legal employment contract. Thus, in a case (Galați Court of Appeal, Civil Decision no. 544 of 9 November 2011, published at [www.portal.just.ro](http://www.portal.just.ro), *apud* <https://legeaz.net/spete-civil/obligatia-de-intretinere-calcularea-acesteia-544-2011>) where the claimant requested the court to order through its decision the dissolution of the marriage because of the defendant’s fault, that he be entrusted the minor for raising and education and that the defendant be ordered to pay alimony and resume her maiden name, the court has found that “the claimant-appellant had constantly claimed that he worked as a day laborer in Italy, without an employment contract, and that he had no stable workplace. As a matter of fact, the appellee did not submit any evidence as to the income obtained by the claimant in Italy either before the court on the merits or before the court of appeal, simply stating that he should be bound to pay alimony according to the minimum income applicable in that state. (...) The claimant cannot be ordered to pay randomly calculated alimony as long as no evidence has been submitted as to the certain income obtained in Italy, on the basis of an employment contract. In the absence of certain evidence based on which the actual income obtained by the claimant can be set, the amount of the alimony will be established based on the minimum domestic income” as on that date.

### **The date as of which the maintenance is due**

The maintenance obligation becomes due when all the requirements under the law are cumulatively fulfilled, i.e., *the creditors need state* and, at the same time, *the existence*

*of the debtor's material means.* In most cases, the child's maintenance is voluntarily provided by the parents, through the very fact of their cohabitation as part of the same family (Florian 2018, 607).

In the case of disagreements, the interested party addresses the custody court, the maintenance becoming due as of the date on which the writ of summons was lodged, according to art. 532(1) of the Civil Law.

For instance, in a case (Iași Court of Appeal, civil decision no. 416 of 14 October 2009, available online in summary, at <https://legeaz.net/spete-civil-3/obligatia-de-intretinere-a-k2b>) having as subject-matter the alimony, the court has ruled that “the alimony is granted, in principle, as of the date on which the writ of summons is filed, not as of the date of the ruling or the date as of which the same becomes final and binding. If, during the divorce trial, the defendant produces proof as to his contribution to the maintenance of the minors out of his own free will, or in case the alimony was established through a court order upon the dissolution of marriage, the court establishes the maintenance obligation as of the ruling date”.

### **The parents' maintenance obligation towards the descendant over the age of majority pursuing their studies**

According to the provisions in art. 499(3) of the Civil Law, the alimony is granted to the minor up to the date on which they turn 18 years of age (the majority age), and if they are pursuing their studies, up to graduation, without, however, exceeding the age of 26 (for further details, see Turianu 1992, 52-56). The provisions in art. 499(3) of the Civil Law should only be regarded as a derogation from the condition as to the child being a minor, and not as an exception from the general alimony obligation in the context of the relation between the parents and the children. In other words, it cannot be concluded that the mere continuation of the studies automatically leads to the parents' obligation to pay alimony. Quite on the contrary, as shown in a case (Maramureș Tribunal, Civil Decision no. 339/A of 6 June 2019, available online at <https://www.jurisprudenta.com/jurisprudenta/speta-15f6yj6m/>), “in addition to the double condition established under art. 499(3) of the Civil Law, respectively the maximum age of 26 and the continuation of studies, the creditor must equally produce proof as to the need state and the debtor's possibilities. The only exception from the general regime may only be deduced in the light of art. 525 of the Civil Law, which only stipulates the possibility to order the parents to pay alimony in the case of minors as well even if the creditor holds assets that could be sold in order to satisfy their own needs”.

With regards to the phrase “pursuing of studies”, in a case (Dolj District Court, Minors and Family Division, Civil Decision no. 26 of 26 February 2010, published at portal.just.ro, *apud* Roșu and Rădulescu 2011, 151-152, case 69) having as subject-matter a petition for the suspension of alimony because his daughter had graduated from faculty and had registered for a second one, the court ruled that “it cannot be held that the claimant is no longer bound to pay alimony, because the phrase ‘pursuing of studies’ does not only refer to one faculty”.

As already mentioned, the maintenance obligation rests with both parents, whether biological or adoptive ones, even if they are actually separated, divorced or not married. Hence, as shown in a case (Bucharest District Court, 4th Civil Division, Civil Decision no. 959 of 27 April 2009, unpublished, *apud* Roșu and Rădulescu, 41-143, case 63) having as subject-matter a parent's petition to increase the alimony set in their favor, the court held that both parents were “bound to look after the health, physical development, education, learning and professional training thereof, being under an obligation to provide the required maintenance”.

At the same time, the right to maintenance exists regardless of whether the descendant over the age of majority is pursuing his/her studies in a state- or privately-owned institution. In this regard (The Supreme Court of Justice, decision noi. 1526/1992, published in “Dreptul” issue 7/1993, *apud* Turianu 2008, 339, case 3), in a case ruled upon under the auspices of the currently repealed Family Code, the court has shown that “the fact that the claimant is going to a private university and not to a legally regulated form of education cannot be taken into consideration as an argument in support of the fact that the parent does not hold maintenance duties, because the source of the maintenance obligation is the education and training obligation, regardless of the form thereof”. Moreover, in a case (Ploiești Court of Appeal, decision no. 76/1997 131, *apud* Turianu, 361-362, case 38) where the defendant, bound to pay alimony for his major daughter, pursuing her studies, has shown that she is able to obtain revenue from work because she was going to a faculty where attendance was not mandatory, the court decided that “the fact that the faculty attendance is but partly mandatory stays irrelevant considering that, even such type of attendance prevents the claimant from engaging in an income-generating activity, even the more so since she does not hold the professional qualification entitling her to apply for possible vacancies”. In another case (Bucharest City Tribunal, decision no. 1055/1993, *apud* Corneliu Turianu, 367) where the major child was a part-time student, the court decided that “nonetheless, considering the type of studies and the fact that the child is able to obtain income, he is not entitled to alimony; this is the case of the major child who is a part-time student and does not have to go to school every day”.

Finally, in a case (High Court of Cassation and Justice, Civil Division, decision no. 3799 of 20 May 2004, în [www.scj.ro](http://www.scj.ro), *apud* Roșu 2007, 107-109, case 41) having as subject-matter the granting of the alimony to the major child, who was in the 12th grade at a high school, and where the claimant was not recognized by his father, the court decided that “the appellant’s claimant that he had not recognized the claimant as being his child is of no relevance in the case, because the admission to paternity is not the only way of establishing the kinship towards the father, and the parent’s obligation to grant maintenance to his child exists, regardless of the manner in which the paternity was established”.

## Conclusions

To conclude, we could highlight that, in the Romanian law, *the maintenance obligation rests with both parents*, regardless of whether they are the biological or adoptive parents, married, divorced or if they have children outside the marriage. The parents are responsible for the raising of their children and the exertion of rights and the fulfilment of parental obligations should always take into consideration the *higher interest of the child* and *ensure the material and spiritual wellbeing thereof*. In other words, *the parents are bound to ensure the required subsistence means for their child*, both in material and in spiritual terms.

In this regard, in the Romanian law, the alimony is granted to the minor up to the date on which they turn 18 years of age (the majority age), and if they are pursuing their studies, up to graduation, without, however, exceeding the age of 26. These legal provisions in art. 499(3) of the Civil Law should only be regarded as a derogation from the condition as to the child being a minor, and not as an exception from the general alimony obligation in the context of the relation between the parents and the children. In other words, it cannot be concluded that the mere continuation of the studies automatically leads to the parents’ obligation to pay alimony. Quite on the contrary, as actually ruled by the courts of law as well, in addition to the double condition

established under art. 499(3) of the Civil Law, respectively the maximum age of 26 and the continuation of studies, the creditor must equally produce proof as to the *need state* and the *debtor's possibilities*. The only exception from the general regime may only be deduced in the light of art. 525 of the Civil Law, which only stipulates the possibility to order the parents to pay alimony in the case of minors as well even if the creditor holds assets that could be sold in order to satisfy their own needs.

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## ROMIȚAN: *The Parents' Maintenance Obligation towards the Minor Child*

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# **An Economic Value Approach to Intellectual Capital Accounting: A Case Study of Oman's Hospitality Industry**

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**ABSTRACT:** In the earliest ages people's commercial activities were predominantly based upon direct haggle system and subsequently, the keeping of records wasn't a part of commercial entities. Later on, in production activities, people started using some initial inputs thus, trifling prerequisite of estimation and transactions in monetary term was realized that helped to originate the coins and alternative currencies. Most of the transactions were wiped out of money, and principles of transactions upon credit terms became a part of business activities, recording of transactions became a compulsion to know the amount were outstanding to him by his customers and what as owing by him to his creditors. Now the day's commercial activities have reached at its advanced stage. In any form of business two categories of resources are used; active resources and inactive resources. A business cannot be operated without human resource. Human resource also be called as active resource as it uses the non-active resource and makes it doable to the most effective utilization of that inactive resource (Ojha 2013). We can understand that in contemporary production troposphere the indispensability of human resource has been reduced up to a great extent but still without a minimum quantity and quality of human resource, a business cannot be operated. Hence, the human resource will continuously have greater degree of favorable position over the inactive resources. This paper is an effort to explore prevailing practices of HRA in hospitality industry of Dhofar region in Sultanate of Oman by applying reformed Lev & Schwartz model.

**KEYWORDS:** active resources, inactive resources, human resources, HRS, hospitality industries, Lev & Schwartz model

## **Introduction**

One of the foremost notable omissions of our traditional accounting is demonstration of the human capital employed, except in the financial statements regarding human resources is entries within the Profit and Loss Accounts, in respect of expenses associated with workforce. These entries refer exclusively to day-to-day overheads incurred in cash on the labour whereas conventional assets used in the computation of financial gain are shown in the financial statement either within the type of capital subscribed by shareholders or as assets acquired with this capital like permanent assets and current assets however the financial statement is silent on the assessment of human capital used (Ojha 2013). Hence, within conventional accounting procedures most of the corporates replicate the amount of inventories, investment within the plant and instrumentation and also the condition of plant and instrumentation however ignore attention towards human organization that workers and their loyalty, skills motivation and capability of effective interaction communication and higher cognitive process.

The total absence of any detail regarding the prominence of human capital will be a severe handicap to higher cognitive process each by managers, using quantitative objectives and to investors, seeking to create a lot of rational choices regarding investment that they



hold or propose to shop for. From this it's clear that within existing conventional accounting system most of the vital policy judgements are based on something 25-50 % accounting as a result of human resources, the magnitude of the operating profit producing assets, being neglected and not enclosed in financial reporting.

Presently, human and intellectual capitals are seemed to be the strategic resources and so, clear estimation of their worth has gained vital importance. The fostered pressures for corporate governance and also the corporate code of conduct hard to please transparency in accounting have additionally support the requirement for methods of determining human value (Ojha 2013). The Company Act, doesn't specifically offer for discourse on human assets within the financial statements of the corporates. however, sensing the advantages derived from valuing and recording the human assets, a number of corporations have voluntarily disclosed all relevant information in their books.

The purpose of HRA is to portray the prospective of HR in pecuniary terms, at the time of artifact the organization's financial statements. The theory is examined from dual dimensions: (i) the investment in human resource; and (ii) the worth of human resource. The expenditure incurred for recruiting, staffing and training and developing the HR quality is that the investment in HR. The fruits of such investments are boosted productivity and profit to the organization. The yield that the investment generates is taken into account as the basis for HR value (Ojha 2013). Just like financial capital structure, that consists of varied forms of capital, the human capital structure consists of different kind of personnel in a company. the classes of employees; executives, supervisors, artisans, clerical and skilled-staff or semi-skilled employees. The composition and proportion of multifarious forms of personnel play a crucial role within the development of a company. People are the preeminent asset; the lone real distinction between one organization and the other is that the performance of the individuals. The survival, development and performance of a company rely heavily upon the excellence of force.

Human capital refers to the competency, capabilities, skills, and experience of the human members of the organization. it's that understanding that every individual has and which may be place to productive use. Internally and externally, HRA would deliver data, to investors and different employees, regarding the value of human resources, the returns on investments in training and development and the link between HR interventions and financial results (Ojha 2013). As the simplest way to assess human capital, HRA represents a novel method of thinking strategically. For internal use HRA are often thought-about a management tool, and for external use, a tool for identification of the enterprise/ organization (Frederiksen 1998).

### **Objectives of Study**

The primary purpose of human resource accounting is to facilitate the management of individuals as organizational resources. The present study has been concerned with the subsequent objectives:

1. To explore current practices in hospitality industries in valuing their human resources.
2. To investigate the current human resource valuation practices of hospitality industries.
3. To determine whether or not human resources valuation is worthy for internal management purposes moreover as for higher cognitive process by investors, financiers and creditors.
4. To determine the point of view of professional accountants and shareholders regarding the desirability of public disclosure of human resource information by the enterprise.
5. To recommend effective human resources accounting model.

## Importance of Human Resource Accounting

To ensure effective decision-making, human resource accounting can deliver a pool of information regarding intellectual capital to decision makers as stated below:

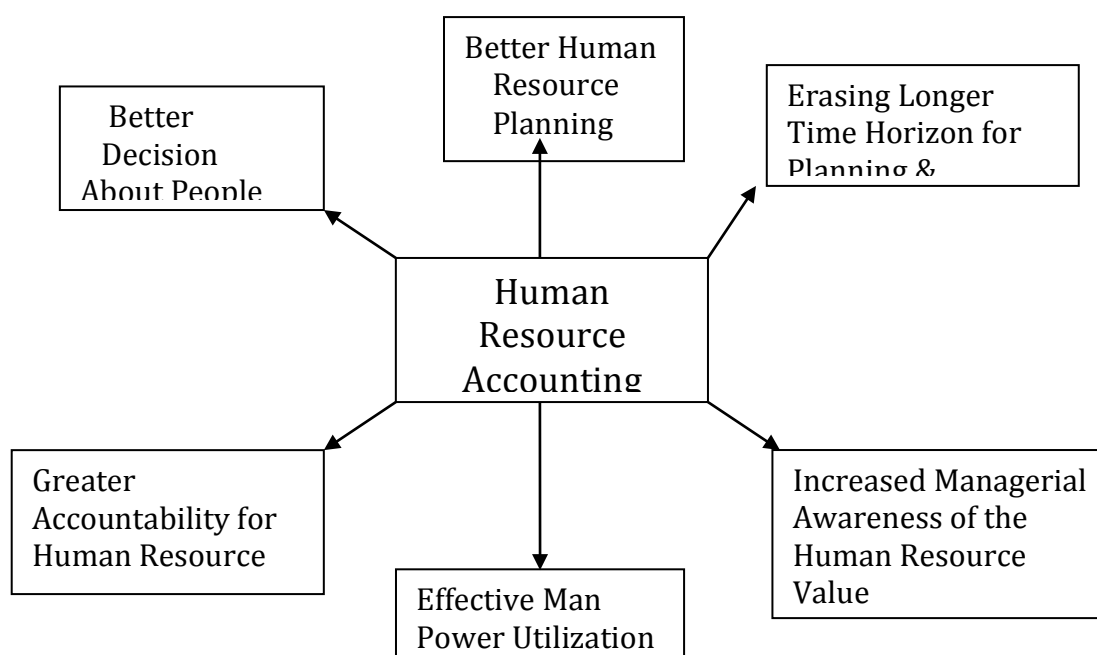
1. Human Resource Accounting helps the management in the employment,
2. It helps in locating and utilization of human resources.
3. It helps in deciding the transfers, promotion, training and retrenchment of human resources.
4. It provides a basis for planning of physical assets vis-à-vis human resources.
5. It assists in evaluating the expenditure incurred for imparting further education and training in employees in terms of the benefits derived by the company.
6. It helps in identifying the causes of high labour turnover at various levels and taking preventive measures to contain it.
7. It helps in locating the real cause for low return on investment, like improper or under-utilization of physical assets or human resource or both.
8. It helps in understanding and assessing the inner strength of an organization and helps the management to steer the company well through most adverse and unfavorable circumstances.
9. It provides valuable information for persons interested in making long term investment in the company.
10. It helps employees in improving their performance and bargaining power.

## Objectives of Human Resource Accounting

Putting in a capsule the objectives of HRA are:

- i. To improve management by analyzing investment in HR
- ii. To consider people as its asset
- iii. To attract and retain qualified people
- iv. To profile the organization in financial terms.

Diagram 1. Objectives of Human Resource Accounting



In detail the main objectives of a Human Resource Accounting system are as follows:

1. To furnish cost value information for making proper and effective management decisions about acquiring, allocating, developing and maintaining human resources in order to achieve cost effective organizational objectives.
2. To monitor effectively the use of human resources by the management.
3. To have an analysis of the human asset i.e., whether such assets are conserved, depleted or appreciated.
4. To aid in the development of management principles, and proper decision making for the future by classifying financial consequences of various practices.
5. To facilitate valuation of human resources, recording the valuation in the books of account and disclosure of the information in the financial statement.
6. To help the organization in decision making in Direct Recruitment versus Promotion, Transfer versus Retention, Retrenchment versus Retention, Budgetary control, etc.

### **Limitations of HRA**

Besides the importance of HRA, there are some limitations which make decision makers reluctant to adopt HRA, listed below:

1. There is no proper clear-cut and specific procedure or guidelines for finding cost and value of human resources of an organization. The period of existence of human resource is uncertain and hence valuing them under uncertainty in future seems to be unrealistic.
2. There is a fear that HRA may dehumanize and manipulate employees.
3. An employee with a comparatively low value may feel discouraged and develop a complex which itself will affect his competency to work.
4. The much needed empirical evidence is yet to be found to support the hypothesis that HRA as a tool of the management facilitates better and effective management of human resources.
5. In what form and manner, their value to be included in the financial statement is the question yet to be clarified, on which there is no consensus in the accounting profession.
6. As human resources are not capable of being owned, retained and utilized, unlike the physical assets, there is problem for the management to treat them as assets in the strict sense.
7. There is constant fear of opposition from the trade unions as placing a value on employees, which would make them claim rewards and compensations based on such valuation.
8. Another question is, of value being placed on human resources and how it should be amortized.
9. In spite of all its significance and necessity, tax laws do not recognize human beings as assets.
10. There is no universally accepted method of human asset valuation.

Notwithstanding, the above arguments against the human resource accounting, one cannot ignore the benefits derived by a firm in its work performance from the potentials of man power capabilities. As far as our country is concerned human resource accounting is still at the developmental stage.

## Literature Review

According to Flamholtz (1985), the value of an employee represents his current worth of the services that he might render to the organization in the future. As an individual passage from one position to another, at the identical level or at different levels, the profile of the services provided by him is probably going to vary. the current cumulative value of all the possible services that will be rendered by him during his/her association with the organization is that the value of the individual. Characteristically, this value is tentative and has two dimensions. the primary is that the expected conditional value of the individual and the second dimension of his value is that the expected realizable value, which could be a function of the expected conditional value, and also the probability that the individual will remain within the organization for the duration of his/her productive service life.

Given the uncertainty and also the exertion related to determination of the worth of human capital, Baruch and Schwartz (1971) suggested the use of employee's future compensation as a surrogate of his value. According to them, "the value of active resources personified in a person of certain age is the present value of his remaining remunerations from employment.

Hermanson (1964) proposed a model in his pioneering work on Michigan State University based upon the idea that a relationship exists between a person's salary and his value to the organization. He suggested the discounting of wage payments to people as a measure of a person's value to a corporation. He suggested the adjusted discounted future wage stream by an efficiency factor. To calculate Efficiency Ratio, he makes use of weighted average of firm's net income during the past five years. The weights are assigned in a very reverse order – highest to current year, i.e., 5 and 1 to the preceding 4th year.

Hekimian and Jones (1967) proposed Competitive Bidding Model. In this method, an indoor marketplace for labour is developed and also the value of the staff is decided by the managers. Managers bid against one another for human resources already available within the organization. The best bidder 'wins' the resource. There aren't any criteria on which the bids are based. Rather, the managers rely only on their judgment.

Likert and Bowers (1971) propose causal, intervening, and end-result variables, which determine the group's value to a corporation. Causal variables are those which may be controlled by the organization. These variables include managerial behavior and organizational structure. Intervening variables reflect organizational capabilities and involve group processes, peer leadership, organization climate, and also the subordinates' satisfaction. Both, the causal and the intervening variables determine the end result variables of the organization.

The Brummet, Flamholtz, and Pyle (1968) model follows the principle that a resource's value is equivalent to the current worth of the longer term services it will be expected to render, and thus, it can provide a basis of measuring the worth of a gaggle of individuals. According to this method, groups of human resources should be valued by estimating their contribution to the whole value of the firm. Thus, a firm's forecasted future earnings are discounted to see the firm's present value, and a little of those earnings is allocated to human resources bestowing to their contribution. This method was adopted to value the sales price within the insurance industry at the time of its acquisition or sale. Under this method an estimate is created of the contribution of human resources to the whole value of the firm.

Dr. S. K. Chakraborty (1976) has made a pioneering contribution by suggesting a model of valuation of human resources of a corporation. He has suggested that it's the foremost appropriate to incorporate human assets under the heading of Investment within the financial statement of a corporation.

**Research Gap:** Most of the models concentrate upon the uncertainty and the difficulty associated with determination of the value of human capital, and suggested the use of an individual employee's future compensation as a surrogate of his value. The researcher will divide group of employees into homogeneous groups of employees, such as unskilled, semiskilled, and skilled employees, engineers of different kinds, salesman, managerial staff, and etc. Average earnings profiles, based on census data, will be constructed for each group and the present value of human capital calculated. The sum of present values over the various employee groups will provide the total human capital value associated with the firm and will propose a refined model.

### **Research Methodology**

1. Sample Area: The present study is a resource approach to manpower. To make the study more concrete and meaningful, the researcher has selected four hospitality companies from different segments; Five star, Three Star, Two Star, and One star, for the purpose.
2. Period of the Study: 2014 to 2018
3. Valuation is based on most widely used "Lev & Schwartz" model.
4. Aggregate future earnings during remaining employment period of employees, discounted @ 10% p.a for all the years under study, provide present valuation.
5. Future earnings are based on current emoluments with normal incremental profile.

#### *Methods of Data Collection*

**Primary Sources:** The primary data for the purposes of the study have been collected from the corporate office, zonal office and divisional office and branches of hospitality companies. Personal interviews were held at various levels of the enterprises viz. managers, executives, supervisors, technical staff, clerical and office staff, etc. to collect primary data.

**Secondary Sources:** These include annual reports, journal and magazines, standard books, newspapers and other literature.

**Sampling Technique:** Sampling technique used in the study is deliberate sampling technique.

**Data Analysis:** Keeping in view the above objectives of the study, the researcher has adopted the following hypothesis to verify the results scientifically The Human Resource Accounting is in the initial stage of India and has not generally been adopted by most of the companies.

**Statistical Tools:** To test the given hypothesis and presentation survey findings, the appropriate statistical tools, wherever necessary, have been used.

### **The Lev and Schwartz Model**

This Model is also known as the Compensation Model. Given the uncertainty and the difficulty associated with determination of the value of human capital, Baruch Lev and Aba Schwartz suggested the use of an individual employee's future compensation as a surrogate of his value. According to them, "the value of human capital embodied in a person of age  $x$  is the present value of his remaining earnings from employment." This value for a discrete income stream is:

$$V_x = \sum_{t=x}^T \frac{I(t)}{(1+r)^{t-x}}$$

Where  $V_x$  = the human capital value of a person  $x$  years old.

$I(t)$  = the person's annual earnings up to the retirement

$r$  = a discount rate specific to the person and

$T$  = retirement age.

Because  $V_x$  is an ex-post value, given that  $I(t)$  is obtained only after retirement, and  $V_x$  ignores the possibility of death occurring prior to retirement age, the authors have refined the valuation model after incorporating  $P_x(t)$  the probability of a person dying at age  $t$  in the following manner:

$$\Sigma(V'_x) = \sum_{t=x}^T P_x(t+1) \sum_{t=x}^t \frac{I'i}{(1+r)^{t-x}}$$

- i. Where  $I'i$  = Future annual earnings
- ii.  $P_x(t)$  = the probability of a person dying at age  $t$ , and
- iii.  $\Sigma(V'_x)$  = The expected value of a person's human capital.

The firm's labour force will be divided into homogeneous groups of employees, such as unskilled, semiskilled, and skilled employees, engineers of different kinds, salesman, managerial staff, and etc. Average earnings profiles, based on census data, will be constructed for each group and the present value of human capital calculated. The sum of present values over the various employee groups will provide the total human capital value associated with the firm.

### Case Study of Tourism and Hospitality Industry in Oman

Sultanate of Oman, relatively new entrant in International tourism, has registered incredible growth, both in domestic and international categories, during the last five years or so. Every year, on an average six to seven percent growth is recorded by this enchanting destination. According to World Travel and Tourism Council (WTTC), the annual growth rate predicted for the country is estimated from six to eight percent until 2017 as new investments pour in for development. The accommodation sector has shown consistent progress over the last several years. According to a report released by the National Centre for Statistics and Information (NCSI), the number of tourists stayed in four-and five-star category hotels has increased by 10.8 per cent to 614,000 in 2013 over the previous year. According to the Middle East Hotel Benchmark Survey Report, Oman's hospitality sector recorded a strong growth in 2013, with occupancy rates rising up to 68 per cent in 2013, just behind that of the UAE and Saudi Arabia. Muscat was closely followed by Doha (64 per cent) and Jordan (61 per cent). Moreover, air transport in the country has registered a significant growth rate over the last few years and increased growth is predicted in the forthcoming years, especially on account of the new airports that are going to be commissioned soon. The air transport sector across the world has shown growth so far this year, but the growth in the Middle East region, especially in Oman is much higher than the international rates.

United Nations World Tourism Organization (UNWTO), in a press release reports that the Sultanate's tourism revenue from international visitors exceeded \$1 billion for the first time in 2012, making it one of the top tourism destinations in the Gulf region. Oman's

international tourism receipts increased from \$996 million in 2011 to \$1.095 billion last years. Currently, Oman is in the fourth place after the UAE, Saudi Arabia, and Qatar, whose international tourism receipts for 2012 were \$10.38 billion, \$7.43 billion, and \$2.85 billion, respectively. The Sultanate also took home top honors including the ‘20 Top Tourist Destinations in the World’ in the latest edition of the ‘National Geographic’ magazine – the only Arab country to figure in the elite list.

The Ministry of Tourism is working on a new strategy on tourism with support from an external agency specialized in tourism, in order to increase the contribution of tourism sector to the GDP of the country, press release of the Ministry says. The sector’s contribution to the GDP stood at 6.6 per cent in 2012. Meanwhile, the annual Arabian Travel Market roadshow reaches in Muscat recently, bringing together key industry players to discuss marketing opportunities to showcase Oman’s tourism ambitions.

The country is raising awareness of its tourism-related developments at this year’s Arabian Travel Market (ATM), where exhibitors may include the Oman Ministry of Tourism, Oman Airways and for the first time, Muriya Tourism Development. Developing new hotels and resorts and bringing them to market is one of Oman’s top priorities. A number of large-scale transport infrastructure developments will be coming to fruition over the next few years at a cost in excess of \$50 billion. This was demonstrated by figures from global research and analytics company Aranca, which revealed that as of July 2013, Oman had the largest growth in its active hotel development pipeline of all the MENA countries, up 59.9 per cent on July 2012, with 4,577 rooms.

Targeting international visitors is high on the agenda for Oman Air, which plans to go double-daily on its Muscat-London route and branch out into other medium- and long-haul markets when new A330 and B787 aircraft are delivered, taking its total fleet size to 50 by 2017. The current trends leading to the fact that the country is poised for incredible growth in the years to come and will occupy a leading position in the list of top tourist destinations in the Middle East very soon.

### **Analysis and Interpretation of Collected Data**

Number of employees and average cost and benefits to employees at Hilton Salalah is almost similar during the study period. The highest number of employees are 177 in the year 2017 and highest average cost and benefits to employees are 5,971 OMR in the year 2016. The minimum number of employees are 168 in the years 2014 and 2018, and minimum average cost and benefits to employees are 5,785 OMR in the year 2014.

The average value of human resource is 60,006 OMR.

The highest number of employees at Hamdan Plaza Hotel Salalah are 77 in the year 2014 and highest average cost and benefits to employees are 2,881 OMR in the year 2017. The minimum number of employees are 72 in the year 2018, and minimum average cost and benefits to employees are 2,135 OMR in the year 2014.

The average value of human resource is 31,672 OMR.

Number of employees and average cost and benefits to employees at Salalah Hotels remain same, three and 3,600 OMR respectively, during the study period. The average value of human resource is 36,699 OMR.

The highest number of employees at Al Jabal Hotel, Salalah are 18 in the years 2014 and 2017 and highest average cost and benefits to employees are 4,300 OMR in the year 2017. The minimum number of employees are 15 in the years 2016 and 2018, and minimum average cost and benefits to employees are 3,299 OMR in the year 2016.

The average value of human resource is 2,283 OMR.

## Tables

<b>HILTON, SALALAH</b>					
<b>Years</b>	2014	2015	2016	2017	2018
Total Cost & Benefits to Employees (OMR)	971,875	1,012,046	1,038,908	1,054,574	985,719
Number of Employees	168	172	174	177	168
<b>Average Cost &amp; Benefits to Employees (OMR)</b>	<b>5,785</b>	<b>5,848</b>	<b>5,971</b>	<b>5,958</b>	<b>5,867</b>
<b>HAMDAN PLAZA HOTEL</b>					
Total Cost & Benefits to Employees (OMR)	164,390	184,820	198,293	218,990	201,710
Number of Employees	77	74	76	76	72
<b>Average Cost &amp; Benefits to Employees (OMR)</b>	<b>2,135</b>	<b>2,498</b>	<b>2,609</b>	<b>2,881</b>	<b>2,802</b>
<b>SALALAH HOTELS</b>					
Total Cost & Benefits to Employees (OMR)	10,800	10,800	10,800	10,800	10,800
Number of Employees	3	3	3	3	3
<b>Average Cost &amp; Benefits to Employees (OMR)</b>	<b>3,600</b>	<b>3,600</b>	<b>3,600</b>	<b>3,600</b>	<b>3,600</b>
<b>AL JABAL HOTEL</b>					
Total Cost & Benefits to Employees (OMR)	3,500	3,400	3,200	4,300	4,100
Number of Employees	18	17	15	18	15
<b>Average Cost &amp; Benefits to Employees (OMR)</b>	<b>195</b>	<b>200</b>	<b>213</b>	<b>239</b>	<b>273</b>

## Computation of Value of Human Resource

	<b>E(x) (in OMR)</b>
<b>HILTON, SALALAH</b>	<b>60,006</b>
<b>HAMDAN PLAZA HOTEL</b>	<b>31,672</b>
<b>SALALAH HOTELS</b>	<b>36,699</b>
<b>AL JABAL HOTEL</b>	<b>2,283</b>



Example of Computation of Value of Human Resource at Hilton, Salalah:

$$\sum_{i=2014}^{2018} X_i = \sum \left[ \frac{104.9}{1000} (60 + 1) \right] \sum \left[ \frac{5785}{(1+0.1)^{12}} + \frac{5848}{(1+0.1)^{12}} + \frac{5971}{(1+0.1)^{12}} + \frac{5958}{(1+0.1)^{12}} + \frac{5867}{(1+0.1)^{12}} \right] = 60006$$

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# The Translation of Euphemisms for Genitals in the Quran

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**ABSTRACT:** The Quran is looked upon as the holiest and most sacred book in Islam. The issue of its translation continues to generate debate as to whether or not it is translatable. This paper investigates the translation from Arabic into English across three different translations of euphemisms for genitals in the Quran. The study consists of four different euphemisms for genitals within the Holy Quran. The paper aims to establish the degree of accuracy in terms of the meaning of the three translations compared to the source text. It also aims to establish the reasons behind any inaccuracies in these translations, and whether or not any such inaccuracy was a result of the translation approach adopted or a result of an inadequate understanding of the Quranic euphemism. The application of the theoretical framework used in this study was to justify the use of a number of references for the purpose of analysis. The three translations examined in this study are the English translations by Khan and Al-Hilali, Abdel Haleem, and Arberry.

**KEYWORDS:** Translation, Euphemism, Quran

## Introduction

Sacred texts of any religion tend to give guidance to the followers of that religion. Therefore, they play a vital role in the lives of devoted believers. Some followers only have access to the translated version of the sacred text which makes it important for such translations to show a very high level of equivalence. The translation of sacred texts such as the Quran will always pose difficulty for translators. Nonetheless, the idea of translating the Quran has led to many debates as to whether or not the Quran is actually translatable. When we focus on specific linguistic elements of the Quran such as euphemisms and make a comparison between different available translations we find many differences in the approaches, strategies, and techniques used by the translators. According to (Rahimi and Sharagard 2006, 36): "*Euphemisms are words and expressions used to soften or mitigate the reality of the ideas transmitted to an audience*". The use of euphemisms as a linguistic tool in different cultures and languages is evident and common. To investigate euphemisms linguistically, the researcher, according to (Al Barakati 2013) needs to study the linguistic situation which exists or the linguistic features which have resulted in the formation of such euphemisms. Euphemism is a common feature of Quranic discourse. This paper aims to study the translation of four euphemisms for genitals in the Quran, by comparing three English translations.

## Understanding euphemisms

A euphemism is an important and common aspect in many languages and cultures. It is used to soften the reality of certain subjects such as sex, death, sickness and other potentially distressing topics. It can also be used to save face and avoid awkwardness regarding some taboos or sensitive subjects that exist in some cultures. (Baker 2011, 245) is

of the opinion that cultures have different rules regarding "polite behaviour". In addition, they have different approaches regarding taboo and sensitive subjects.

According to (Alharbi and Madini 2019, 119) Arabic euphemisms consist of three main elements: "The first one is the euphemistic expression, the second one is the original expression, and the last one is the context of the situation".

### Data selection and methods

The three translations selected in this study are the English translations by (Khan and Al-Hilali 2011), (Abdel Haleem 2010) and (Arberry 2008). The samples selected are all euphemisms for genitals as mentioned in the Quran. Several references are used for the purpose of identifying the euphemism and establishing its literal meaning in both the source and target languages, such as the use of Arabic and English dictionaries. References to the purpose of revelation will be used to understand the context of the euphemism. Exegetical references (tafsir) will also be used to fully understand the meaning of the euphemism. Finally, three English translations of the Quran will be analyzed and compared to establish the accuracy of the translation of the selected euphemisms.

Nord's (2005, 42) text analysis approach will be adopted in this study. This approach can be applied by asking a number of questions in order to analyze "Extratextual factors" regarding the translated text. The questions are as follows:

1. Who is the author/sender of the text?
2. What is the sender's aim?
3. When and where was the text written?
4. When and where was the text delivered?
5. What is the purpose of the text?

The use of such a text analysis approach can help in determining the selection and analysis of the samples considered in this paper.

### Analysis

Sample 1: Q7: 26

وَرَسُولًا أَتَىٰ الْاِنْسَانَ فِي ذَاكَ رَاقٍ عَلَيْهِمْ ذِكْرُنْ

وَأَنذَرَهُمْ لِبَاسًا يُّوْاى سَوَاءَ اَنكُم

يَلْبَسُهُمْ

Euphemism 1: سَوَاءَ اَنكُم

Transliteration: sw,atikum

Translation:

Table 1. Euphemism 1

Khan and Al-Hilali (T1)	Abdel Haleem (T2)	Arberry (T3)
O Children of Adam! We have bestowed raiment upon you to cover your private parts,	Children of Adam, We have given you garments to cover your nakedness	Children of Adam! We have sent down on you a garment to cover <u>your shameful</u> <u>parts</u>

The chapter containing this text was revealed in Makkah. The chapters revealed in Makkah often promise paradise for believers, and warn sinners of the punishment of hellfire (Al Qahtani 2017, 21). Some of the Bedouins used to circumambulate the Sacred House in Makkah completely naked, with their women doing the same but for straps placed around their lower parts according to the book of reasons for revelations by (Alwahdy 1992).

According to the Arabic dictionaries of (Al Qamws Al Muhyt 2014), (muʿjm al mʿany 2010) and the exegetical references of (Al Jalalyn 2007) and (ibn Kathyr 2016), the word sw, h is a noun which means a person's private parts.

Khan and Al Hilali (hereafter T1) adopted a literal and euphemistic translation. Their translation managed to convey the intended meaning of the euphemism in the source text. According to (Holder 2007,308), the term 'private parts' is a euphemism for the human genitalia. Abdel Haleem (hereafter T2) also attempts a literal euphemistic translation by using the word "nakedness" but he also adds a commentary on a previous verse which mentions "conventionally translated as private parts, but the Arabic does not necessarily have this meaning". Arberry (hereafter T3) uses a literal euphemistic translation, and this translation conveys the exact meaning of the euphemism since, according to (Allan and Burridge 1991, 54), "shameful parts" is a reference for private parts.

All three translations have adopted a formal equivalence approach which, according to (Nida and Taber 1969), is more concerned with the source text and revolves around the message.

#### Sample 2 Q24:31

وَلَا تُفْجِرْنَ زِينَتَكُمْ لَئِيْلَ تَبْصُرْنَ بِالْمَلِكِ وَلَا تُفْجِرْنَ زِينَتَكُمْ لَئِيْلَ تَبْصُرْنَ بِالْمَلِكِ

Euphemism 2: فُجْرًا

Transliteration: furujahuna

Translation:

Table 2. Euphemism 2

Khan and Al-Hilali (T1)	Abdel Haleem (T2)	Arberry (T3)
And tell the believing women to lower their gaze (from looking at forbidden things), and protect their <u>private parts</u> (from illegal sexual acts) and not to show off their adornment except that which is apparent.	And tell believing women that they should lower their eyes, guard their <u>private parts</u> , and not display their charms beyond what [is acceptable] to reveal.	And say to the believing women, that they cast down their eyes and guard their <u>private parts</u> , and reveal not their adornment.

This Chapter was revealed in Madinah. The Chapters revealed in Madinah are usually more informative and legalistic, outline and relate to Islamic law (Sharia) (Al Qahtani 2017, 21). In this verse the topic of covering and protecting the private parts is mentioned. The noun 'farj' is a reference to one's private parts according to the Arabic dictionaries of (Al Qamws Al Muhyt 2014), (muʿjm al mʿany, 2010) and the exegetical references of (Al Jalalyn 2007) and (ibn Kathyr 2016).

T1, T2 and T3 all used a literal euphemistic translation to render the expression from Arabic into English. T1 used the procedure of addition which, according to (Newmark 1988, 92) is usually used with literal translations. Nonetheless, this addition did not result in the loss of meaning of the euphemism since the expression "sexual act" is considered a euphemism (Holder, 2007, 76).

## Sample 3 Q24:31

أُولَئِكَ الَّذِينَ لَا يُفْقَهُونَ

Euphemism 3: 'wraṭi alnisai,

Translation

Table 3. Euphemism 3

Khan and Al-Hilali (T1)	Abdel Haleem (T2)	Arberry (T3)
Or small children who have no sense of <u>feminine sex</u>	Or children who are not yet aware of <u>women's nakedness</u>	Or children who have not yet attained knowledge of <u>women's private parts</u>

This sample is extracted from the same Chapter and verse as sample 2. According to the Arabic dictionaries of (Al Qamws Al Muhyt 2014), (mu·jm al m·any 2010). and the exegetical references Al (Jalalyn 2007) and (ibn Kathyr 2016), the noun 'awrah is a reference to any private parts of the body which a person does not like to reveal. On the other hand, exegetical references make it clear that the noun in this verse is a reference to private parts (Al Jalalyn, 2007; ibn Kathyr 2016).

T1 adopted a literal but non-euphemistic translation as they used a clear reference to feminine sex. T2 uses a literal euphemistic translation as he refrains from mentioning genitalia. T3 also adopts a literal euphemistic translation by choosing the word *private parts* and, according to (Rawson 2002, 192) private parts is a euphemism for genitals. It is worth mentioning that the T1 translation may cause confusion for readers of the target text who have no access to the source text, as the source text does not mention feminine sex at all. Nonetheless, according to several exegetical references, the reference mentioned in this verse is female genital parts only.

## Sample 4 Q41:20

يَا أَيُّهَا الَّذِينَ آمَنُوا لَا تَقْرَبُوا

Euphemism 4: juluduhum

Translation

Table 4. Euphemism 4

Khan and Al-Hilali (T1)	Abdel Haleem (T2)	Arberry (T3)
Their hearing (ears) and their eyes and <u>their skins</u>	Their ears, eyes, and <u>skins</u>	Their hearing, their eyes and <u>their skins</u>

The Chapter was revealed in Makkah. According to the Arabic dictionaries of (Al Qamws Al Muhyt 2014), (mu·jm al m·any 2010) and the exegetical references of (Al Jalalyn 2007) and (ibn Kathyr 2016), the noun 'jild is a reference to the private parts.

T1, T2 and T3 translated the expression using a word-for-word euphemistic translation. Since the euphemistic expression is strictly a reference to private parts, an addition or a footnote is recommended to make the meaning much clearer to the reader. An addition according to (Dickins, Hervey and Higgins, 2002, 24) is "a translation in which something is added to the TT which is not present in the ST".

## Conclusions

The main aim of any translated text is to render the intended message of the source text to the target text readers. The translation of the Quran needs to be of a high level of equivalence as any mistranslation can lead to many difficulties on the part of the reader of the target text. Therefore, it is important for translators to try and convey the intended message with a high degree of accuracy. The analysis of four samples of euphemisms for genitals in the Quran reveals that three of the translations have tried to preserve the euphemistic language of the source text by trying to avoid the use of the overt meaning of the expression. Literal translation was the main procedure applied by the translators. There was a level of linguistic consistency between the three translators in using the same expression as a reference for genitals such as "*private parts, nakedness and skins*".

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## **An Analysis of the Long-Run Relationship Between Corruption and Debt Sustainability in Nigeria**

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**ABSTRACT:** Corruption and public debt have continued to increase in Nigeria despite the anti-corruption posture of governments over the years and justifications often advanced for accumulating debts. The rising tides of public sector corruption in Nigeria are pervasive with its debilitating effects on the economy. The government's anti-corruption campaigns have produced minimal results than expected as the country's performance on global ranking by Transparency International remains dismal. Coincidentally, the fiscal stability of the economy has been jeopardized by increased public debts without commensurate investments injected into the system. This paper examined the long-run relationship between corruption and debt sustainability in Nigeria from 1996-2019 and employed the Vector Error Correction Model (VECM) technique of analysis. The choice of the period covered was informed by the need for a large dataset which guarantees a robust outcome in time series analysis and to capture the year 1996 when Nigeria made its first appearance in the assessment of global perception of corruption by Transparency International. Findings revealed that corruption is negatively related to debt sustainability in Nigeria, suggesting that higher incidences of corruption make public sector debt unsustainable. The speed of adjustment of -0.7575869 is negative which is statistically significant at 5%. This shows that there is 75.76%-point adjustment taking place each period towards the long-run periods. There is, therefore, the need for effective anti-corruption institutions, revisiting of the whistleblower policy, and entrenchment of the culture of transparency in financial transactions in order to curtail the ravaging effects of corruption in Nigeria.

**KEYWORDS:** Corruption, Debt Sustainability, Vector Error Correction Model (VECM)

### **1. Introduction**

Corruption is a global phenomenon with prevalence in both private and public sectors. Although its impacts have been debated in literature, no one can deny that corruption is a major obstacle to growth in many countries. The level of corruption varies from country to country, while some countries have been able to reduce it to a tolerable level others are still grappling with it and its overbearing negative consequences. The 2019 reports from Transparency International reveal that among the first 10 economies perceived as least corrupt in the world are Denmark, Finland, Singapore, Sweden, Switzerland, Norway, Netherlands, Germany and Luxembourg. Whereas, the 10 most corrupt countries feature Somalia, South Sudan, Syria, Yemen, Venezuela, Sudan, Equatorial Guinea, Afghanistan, North Korea and Libya. In Sub-Sahara Africa, Seychelles, Botswana, Cabo Verde, Rwanda and Mauritius are ranked among the least corrupt countries with Somalia, South Sudan, Sudan and Equatorial Guinea representing the countries that are hit the most by corruption. Although Nigeria is not among the two extreme cases, it scored the lowest mark on

corruption perception index among 54 countries when it first appeared on the world ranking in 1996. Despite the anti-corruption posture of the present government in Nigeria, corruption seems to be on the rise. Out of the 180 countries used in 2019 analysis, the Transparency International report shows that Nigeria is ranked as 146<sup>th</sup> which is lower than the preceding year's performance in terms of perceived public sector corruption.

Amidst the rising corruption cases in Nigeria is the heavy debt burden that the country has accumulated in recent times. Presently, the country's public debt has risen to N31.01 trillion (\$85.90 billion) out of which \$3.36 billion is sourced from Budget Support Loan from International Monetary Fund (IMF). The balance is made up of domestic borrowings targeted at financing the revised 2020 Appropriation Act. The external component of the debt stands at N11.36 trillion or \$31.48 billion (DMO 2020). According to the Minister of Finance, Budget and National Planning, Nigeria's total public debt is projected to reach N38.68 trillion by December 2021 (Ogundele 2020). This is outrageous, especially when the levels of borrowing are not matched by corresponding investments. The country's infrastructural deficits and its manifestations in low power supply and bad roads, among others have continued to undermine the growth potentials of the economy.

The coexistence of increasing debt profile and endemic corruption have provoked more questions and greater concerns than answers or solutions. A number of researchers have attempted to explore the relationship between corruption and public debt with the view to addressing the raging concerns. Their efforts have turned in a variety of results but with near-consensus on the devastating impact of corruption on public debt. Interestingly, the negative effects of corruption permeate across all regions of the world as well as the developed and underdeveloped economies. There is a handful of literature that contend that corruption is beneficial by removing government bureaucracies that frustrate investment. Despite the plethora of literature on corruption-debt nexus there are no specific efforts directed at examining the long-run relationship between corruption and debt sustainability in Nigeria. The aim of this paper therefore is to investigate whether changes in public sector corruption has implications on the sustainability of debt in Nigeria. The paper is structured into six parts: introduction; literature review, stylized facts, methodology, data analysis as well as summary, conclusion and recommendations.

## **2. Literature Review**

### ***2.1. The Concepts of Corruption and Debt Sustainability***

#### ***Corruption***

The World Bank (2007) defines corruption as an abuse of public office for private gain and in this sense, the public objective is either put aside or compromised for the self-interest of the perpetrators. This definition presents a narrow view of the concept of corruption as it narrows the meaning of the abuse of public office. In reality, corruption includes even private actions that are not just inimical for smooth social cohesion but undermines the basic principles of societal justice. Transparency International shares a related view on the meaning of corruption and puts it more succinct as the abuse of entrusted power for private gain. Although there is no much difference between the two opinions but replacing the public office with entrusted power links the concept of corruption to political office holders around the world who usually take advantage of the opportunities offered them through election to pursue personal gains at the detriment of the general public. Ogboru (2014) sees corruption as the violation of established societal laws and rules in such a way as to attract benefits to the guilty (public officials) at the expense of the general or wider public. This definition points to the legal aspect of corruption as well as aligns itself with the first two definitions. Summing the views raised above, it is obvious that corruption is a multidimensional concept and vices like economic and financial crimes, nepotism,



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favoritism or discrimination and partiality in the discharge of both public and private conducts (Folarin 2014).

In this paper, the definition put forward by Transparency International appears more plausible and has been adopted to assist in the understanding of this work. This is because public servants in Nigeria abuse entrusted power by giving or receiving monetary and non-monetary favors in exchange for their services, while businesses offer bribes to government officials to obtain lucrative deals. Corruption also involves the wrong use of public money as well as granting public jobs or contracts by politicians to their sponsors, friends, and families. It, therefore, follows that corruption can and do occur in business, government, courts, the media, and civil society, and across all sectors of the economy. Corrupt people are found among the politicians, government officials, public servants, businessmen, and members of the general public. The cost of corruption is enormous and covers economic, social, political, and environmental spheres of life. It destroys citizen's trust in public officials, debilitates democratic structures, impedes economic growth and development, and aggravates inequality, poverty, social division, and the environmental crisis.

### ***Debt Sustainability***

Debt sustainability as defined by IMF (2002) is a state in which a country's debt profile is consistent with its debt solvency without a recourse to major balancing correction to income and expenditure given the costs of financing. In the words of Kiptoo (2012), debt is sustainable where the borrowers are able to continually meet their debt servicing obligations without any balancing adjustment to income and expenditure. Loser (2004) asserts that external debt sustainability suggests the need to pursue a time-consistent path that allows such a minimum debt-servicing burden over time in a manner that does not hamper economic growth, and as a matter of fact in more general circumstances should enhance growth and development. According to Muwanga-Zake and Ndhaye (2001), a given debt is considered sustainable when the country indebted is in a position to meet the present and future debt service obligations fully without recourse to additional debt relief or rescheduling and able to avoid build-up of arrears with a minimum acceptable level of economic growth. Ayhan, Kurlat, Ohnsorge, and Sugawara (2017) define public debt sustainability as a part of fiscal space that deals with the long-run ability of any government to manage and fund its debt obligations. IMF (2000) proposed two sets of debt sustainability indicators, the first set includes debt to GDP ratio, foreign debt to exports ratio, share of foreign debt to total debt stock, government debt to current fiscal revenue ratio, short-term debt to total debt stock and share of concessional debt to the total debt stock. The second group of indicators consists of debt service to GDP ratio, government debt service to current revenue ratio, and external debt service to exports ratio.

### ***2.2. Theory of Corruption***

#### ***Functionalist theory of Corruption***

The functionalist's perception of corruption is that it is a way to facilitate the processes of getting things done. Corruption is considered useful and seen as a way to *grease the wheels* of economic progress by reducing the influence of government bureaucracies which slow down the process of decision making and retard the growth of investment. Investors and companies offer bribes to boost their chances of setting up businesses. The general consensus among the theorists is that corruption supports economic growth. Among the scholars that share this line of thought are Dreher and Gassebner (2011), Meon and Weill (2008), Bardhan (1997), Beck and Maher (1986), Lien (1986), Leff (1964), Huntington (1968) and Leys (1965) among others. A corollary to this idea is the *sand the wheels* theory of corruption. Scholars on the opposing side argue that an economic system that is efficient and less bureaucratic does not require corrupt practices to promote growth.

Therefore, corruption harms such economies by sanding the wheels of societal development as evident in the works of Djumashev (2006), Meon and Sekkat (2005).

However, the functional approach to explaining corruption has been criticized for its inability to provide a justification for the usefulness of corruption in society. It is difficult to determine beforehand when corruption will or will not be useful, the reasons why some people behave in a corrupt manner while others do not even when corruption is considered useful as well as the types of problems that can easily be fixed by functional corrupt solutions (Dupuy and Neset 2018).

### ***The Rational Choice theory of Corruption***

In the rational choice philosophy, human actions are driven by self-interest as well as the calculated expected benefits and costs. The concept of rationality in economics suggests that the objective of an individual consumer is to maximize utility and will choose only the best course of actions that guarantees that.

Three scenarios are often presented to provide an explanation to the rational choice theory of corruption: the prisoner's dilemma, the principal-agent problem, and the coordination problem. The prisoner's dilemma case for corruption posits that individuals have tendencies to pursue their personal gains as oppose to working for societal good. In this sense, corruption is rationalized by the need for self-satisfaction at the detriment of collective benefits. Kobis et al. (2016) used the concept of social dilemma to describe a situation where people mortgage long-term collective interest of the society for short-term self-interest by engaging in corrupt practices.

The principal-agent model sees corruption as a product of the relationship between principals (electorates) who entrust the agents (governments) with the power to act on their behalf by providing the needed public goods. Unfortunately, the agents often take advantage of the principals' trust and act in ways that maximize their selfish interests. The absence of perfect knowledge makes it difficult for the principal to monitor the actions of the agents. This spells an abuse of entrusted power for self-benefitting of private gains.

The coordination problem interprets corruption as an outcome of prevailing social norms that encourage corruption. In this case, society perpetuates corrupt practices despite the existence of anti-corruption agencies, the social norm motivates individual members of society to be corrupt. For example, norms such as nepotism increase individual propensity to act in a manner that is corrupt, and corruption in this sense is seen as the expected socially rational behavior. In addition, the mechanism to check corrupt activities in society becomes too weak or does not exist at all.

The implications of the rational choice theory of corruption as noted by Dupuy and Neset (2018) are diverse. Corruption related cases that are traceable to the prisoner's dilemma or principal-agent can be countered by offering rewards for ethical behaviors and punishment for corrupt practices. The provision of financial incentives to good behavior, guarantee the free flow of information, the establishment of accountability institutions as well as monitoring and sanctioning will help check corruption. Whereas, attitudinal change will be required to address corruption cases arising from social norms and coordination problem. There should be an intensive campaign about what ought to be the expected social behavior.

These theories are useful in explaining corruption in relation to its consequences on economy. Therefore, the functionalist and the rational choice theories of corruption have been adopted to guide in the interpretation of results in this study since corruption is the main explanatory variable in the model specified. Moreover, the choice of these theories is informed by their plausible relationships with corruption in Nigeria. For example, the greasing the wheels' proposition of the functionalist school appears to account for the rising cases of corruption among public office holders in Nigeria. Similarly, the self-interest

philosophy of the rational choice theory explains a natural tendency in human beings that may justify the endemic nature of corruption in the country.

### **2.3. Empirical Review**

Abula, Ben, and Ozovehe (2016) examined the impact of corruption on external debt in Nigeria from 1996 to 2014. The study employed Vector Error Correction Technique (VECM) to analyse time series data from following variables: external debt stock, corruption perception index, total public expenditure and exchange rate. Findings revealed that corruption and public expenditure have a significant positive relationship with external debt while the relationship between exchange rate and corruption is negative with respect to Nigeria in the long-run. The paper recommended the pursuit of policy of economic freedom by the government and intensified efforts at combating corruption.

Shittu, Hassan and Nawaz (2018) analyzed the impact of external debt and corruption on economic growth in the selected five SSA countries of Nigeria, Kenya, Malawi, South Africa and Uganda from 1990 to 2015. The gross domestic product which is the proxy for economic growth was expressed as the function of external debt, interest on external debt, corruption and gross capital formation. Using the Fully Modified Ordinary Least Squares (FMOLS) technique, results revealed that a positive relationship between corruption and economic growth and a negative relationship between external debt and economic growth. It was recommended that governments of the countries in the sample examined should adopt other alternative sources of capital for investment rather than resorting to external debt as well as combat corruption with renewed zeal.

Kim, Ha and Kim (2017) investigated the effect of corruption on the relationship between public debt and economic growth using a sample of 77 countries including both developed and developing with a dataset spanning from 1990 to 2014. The key variables used in the study include GDP per capita, human capital, inflation, government size, trade openness, deficit and corruption perception index. The pooled ordinary least squares (OLS), fixed effects models and the dynamic panel generalized method of moments (GMM) models were applied and findings showed that the effect of public debt on economic growth depends on corruption and that the sign of the marginal effect is negative in corrupt countries while public debt promotes growth in countries that are not corrupt and vice versa. Hence, an increase in corruption causes increase in public debt and reduces the prospects of growth in a corrupt economy. The main policy implication is that corruption exerts influence on public debt policies of governments. The paper recommended the strengthening of institutions by combating corruption to reduce the negative effect of public debt on economic growth and maximize the use of revenue in the long-run.

Cooray, Dzhumashey and Schneider (2017) explored the relationship between corruption, the shadow economy and public debt from 1996 to 2012 for 126 countries using Ordinary Least Squares (OLS), Fixed Effects, system of Generalized Method of Moments (GMM) and Instrumental Variable Estimation. The following two measures of corruption: corruption perception index of the Transparency International and the World Bank's Worldwide Governance Indicators were used as independent variable while debt to GDP ratio represented the dependent variable of the model. Results from analysis indicate that increase in corruption leads to an increase in public debt, increases in the size of the shadow economy leads to an increase in public debt and a larger shadow economy compounds the positive influence of corruption on public debt. The paper recommended a corruption reduction strategy that will help to minimize the negative effects of corruption on government debt through government expenditure.

Saad (2012) examined the causality between economic growth, export, and external debt servicing in Lebanon from 1970 to 2010. Using the vector error correction models and granger causality techniques, the paper suggested the existence of both long-run and short-

run relationships among the variables and a bidirectional causal relationship between GDP and external debt servicing. Moreover, the existence of unidirectional causality from external debt to exports, from exports to economic growth, and from exchange rate to economic growth were established. The paper, however, made no recommendations from these findings.

Jalles (2011) examined the impact of democracy and corruption on the debt-growth nexus in developing countries in a panel analysis of 72 developing countries for the period 1970-2005 using the system-GMM. The model expressed GDP per capita as a dependent variable and the lagged values of real per capita income, population growth rate, gross domestic investment as percentage of GDP, gross secondary school enrolment, central government fiscal balances as percentage of GDP and exports plus imports as share of GDP as explanatory variables. Findings revealed that countries with lower corruption manage their debt better and experience lower debt. Also, in countries with lower corruption levels both the positive and negative effects of debt on economic growth, modelled with non-linear specifications, are significant. Although evidence from the sample does not support the Debt-Laffer curve, the level of debt at which the impact on growth becomes negative is higher in countries with lower corruption levels. The paper recommended the implementation of the High Indebted Poor Countries Initiative (HIPC) and additional disbursement to be made in countries with low corruption levels to promote efficiency in governance.

Ogboru (2006) examined the relationship between foreign debts, corruption and infrastructural development in the Nigerian economy from 1980 – 2000. Using both quantitative (OLS) and qualitative techniques of analysis, findings revealed that corruption distorts the economy through waste, misallocation and misappropriation of resources, and contributes to the debt problem in Nigeria. In addition, debt stock and debt servicing were found to reduce the scarce resources available in the country for infrastructural development, while corruption diverts resources from public coffers to private pockets of the political class. The study recommends annual debt rescheduling and debt repudiation.

Del-Monte and Pennacchio (2020) analyzed the relationship between public sector corruption and public debt in OECD countries for the period 1995-2015. The paper employed fixed effects (FE) and Arellano-Bond (AB) first difference Generalized Method of Moments (GMM) to analyze the data. The ratio of general government gross debt to GDP was modelled as the dependent variable with corruption perception index as the main explanatory variables. Other controlled variables in the model are GDP per capita, inflation, interest and government size. Results show that corruption increases public debt and the impact depends on the size of government expenditure. Specifically, reducing corruption by half leads to a decrease in public debt by 2% in the short term. It was therefore suggested that improved control of corruption will likely reduce public debt in advanced economies.

Fagbemi and Olatunde (2019) investigated the long run and short run impact of corruption on public debt in Nigeria from 1996 to 2017 using ARDL bound test to co-integration analysis. Among the variables included in the model include public debt measured as percentage of debt to GDP, corruption perception index, control of corruption, GDP per capita, inflation and national expenditure. Findings revealed that both corruption index and control of corruption have an insignificant adverse effect on public debt in the long run, but with a significant influence in the short run. Also, a bi-directional causality between corruption index and public debt was established with no evidence of causality found between control of corruption and public debt. The paper recommended strong corruption-based control mechanisms to be put in place to decrease fiscal deficits and debt reduction.

Njangang (2018) examined the impact of corruption on public debt using a panel of 29 Sub Saharan African countries for the period 2000 – 2015. The paper employed the system generalized method-of-moment (GMM) estimator and included the following variables in

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the model: corruption, debt ratio to GDP, government expenditure, inflation, openness, military spending, GDP per capita, population, and political stability. Results revealed that corruption exerts positive effect on public debt within the sample countries. Hence, it was recommended that the anti-corruption fight in Sub-Saharan African countries be intensified to ensure efficiency in public spending and reduction in debt.

Grechyna (2012) studied the relationship between public corruption and public debt using a panel of 30 OECD countries for the period 1995-2010. OLS and the system GMM estimator techniques were employed for the analysis of data collected on debt, GDP growth, unemployment, debt Service, government size and corruption. Results showed that in developed countries increase in corruption leads to higher public debt. The paper concluded that public corruption might be highly correlated with other political factors, such as political instability and political turnover.

It is evident from empirical literature that corruption exerts negative consequences on public debt, increased corruption is associated with rising debt burden and vice versa. In addition, this negative impact of corruption on debt is true for both developed and developing economies. However, much of this previous work have concentrated on either examining corruption-growth nexus or corruption and public debt relationship with no attention given to how corruption relates to sustainability of debt in Nigeria. The focus of this paper is on corruption and debt sustainability and a new and important variable, the oil revenue has been introduced into the equation to gauge the revenue-debt effect. The inclusion of this variable is based on the fact that the larger share of the country's revenue is derived from oil.

This paper is anchored on the work of Abula, Ben, and Ozovehe (2016) for its degree of relatedness to the current study. Both studies are time series in nature and the methods of analysis applied as well the country of study is similar. Consequently, this has become the premise upon which the outcome this paper is mirrored in terms of its contribution to literature.

### 3. Corruption and Public Debt in Nigeria

#### 3.1. *An overview of the Nigerian Economy*

The Nigerian economy is a mixed, resource-endowed, mono-product and an emerging market. It is ranked 6<sup>th</sup> in the world's oil production scale and often referred to as the biggest economy in Africa. The public sector still plays a dominant role in the ownership and control of resources despite the introduction of the Structural Adjustments Programme (SAP) of the World Bank three decades ago. Besides the abundance of fossil fuels, the country is a home for over 200 million people and often considered the most populous black nation as well as market for variety of finished and unfinished goods.

Like many economies around the world, the Nigerian economy is subject to the fluctuations that are induced by trade cycles. Between 1961 and 2018, the country suffered negative growth rates with the lowest at -15.74% in 1967. Economic growth peaked at 25.01% in 1970 due to oil boom, the economy slipped into a four-year recession in the early 80s and recovered in 1985 when growth rate rose from -1.12% in 1984% to 5.91% in 1985. This positive growth in GDP continued to the period 1993-1995 when another recession set in. From 1996, the economy continued on the path of recovery and boom with positive growth rates until 2016 when changes in global oil prices pushed it to a recessionary period. This suggests how responsive the Nigerian economy is to changes in oil prices. The economy is believed to have picked up and as of 2018, the annual growth rate is put at 1.94% (World Bank 2020).

The performance of the Nigerian economy in the last five years has been dismal, as shown by the three major indicators of inflation, GDP and unemployment figures. Statistics

from World Development Indicators (2020) reveal that inflation skyrocketed from single-digit rate of 9.01% in 2015 to double-digit rates of 15.68% in 2016, 16.52% in 2017, 12.09% in 2018 and 11.40% in 2019. This put pressure on the income of households, eroded the purchasing power of naira with unprecedented rising prices and caused an unbearable rising cost of living. Unemployment figures within these periods have shown a steady rise by moving from 9.00% in 2015 to 13.34% in 2016, 17.46% in 2017, 22.56% in 2018 and 23.10% in 2019 (IMF 2020). The socio-economic effects of the increasing unemployment rates in Nigeria include rising dependency ratio, escalation in crime rates and reduction in national output among other problems that the country is faced with. In addition, the country's population has continued to grow in the past five years. Nigeria's population moved from 181 million in 2015 to 185 million in 2016, 190 million in 2017, 196 million in 2018 and 200 million in 2019 (World Bank 2020). Some of the macroeconomic consequences of population growth are the rise in unemployment rate, reduction in the rate of capital formation and fall in standard of living. The impact of COVID-19 on businesses and individuals has added to the country's economic woes and present a gloomy outlook. IMF (2020) predicts a -5.4% contraction of the Nigerian economy in 2020, suggesting an imminent phase of another recession.

### ***3.2. Corruption in Nigeria***

Corruption cases in Nigeria have continued to grow since independence despite efforts of successive governments to combat it. Although the causes of corruption are multi-dimensional, the Nigerian case is often linked to the growth of public sector, the discovery of fossil fuels, personal greed and ethnicity. Corruption in Nigeria is sometimes linked to military intervention in politics, as the military often accused the politicians of corruption and considered this a motivation for venturing into politics (Metz 1991). However, no military government has left the country better off in terms of corruption, for example, it was alleged that the regime of General Ibrahim Babangida failed to account for \$12.4 billion, the Gulf War windfall and in 2000, more than \$1 billion were discovered in various accounts throughout as loot from Abacha's administration. In 2012, the United States Department of Justice was reported to have announced that a Japanese construction company, Marubeni Corporation offered a bribe of \$54.6 million to officials of the Nigerian government in order to obtain a \$6 billion worth of contract in oil and gas sector in Bonny (Olorok and Baiyewu 2015). A case of \$20 billion oil revenues accrued to the national treasury was reported as unremitted by the then Central Bank Governor during Jonathan's administration in late 2013. In spite of the present government's stance of zero tolerance for corruption, the country's performance on the Transparency International ranking still remains dismal as the 2019 report puts the nation as 34<sup>th</sup> most corrupt in world. Public sector corruption is endemic and pervasive in sectors like oil and gas, defense and various institutions of government (Premium Times 2020).

Successive governments have evolved laws and established institutions to check the menace of corruption which is believed to have undermined the country's growth and development. The following legislations were brought at different times to fortify the anti-graft war in Nigeria: EFCC Establishment Act 2004, Independent Corrupt Practices and Other Related Offences Act 2000, Advance Fee Fraud and Other Related Offences Act 2006, Money Laundering (Prohibition) (Amendment) Act 2012, Miscellaneous Offences Act, Code of Conduct Act, Nigerian Extractive Industries Transparency Initiative Act, Freedom of Information Act 2011, Fiscal Responsibilities Act 2010, Penal Code Laws of Federation of Nigeria 2004, Criminal Code Law of Federation of Nigeria 2004, Banks and Other Financial Institutions (Amendment) Act 1991 and Failed Banks (Recovery of Debts) and Financial Malpractices in Banks (Amendment) Act 1994. These Acts led to the establishment of anti-corruption agencies like the Code of Conduct Bureau (CCB), the

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Independent Corrupt Practices and other Related Offences Commission (ICPC) and the Economic and Financial Crime Commission (EFCC).

## 3.3. Nigeria's Debt Story

In 1964, the Italian government advanced a US\$13.1 million loan to Nigeria for the building of the Niger Dam, this marked the beginning of Nigeria's indebtedness to Paris Club of Creditor Nations. The post-civil war era marked the beginning of increased borrowing in Nigeria since funds were required for reconstruction and rehabilitation of projects. The fall in crude oil prices in 1982 caused an increase in interest payment as well as penalties associated with defaulting thereby making it difficult for Nigeria to offset her loans. The military era of 1985-1993 and 1993-1998 witnessed a continuous rise in debt as the country even stopped payment of the Paris Club component of her total debt. However, with the return of democracy in 1999, the country began to pursue an aggressive debt relief campaign. The result was US\$18 billion in debt relief in 2005 from the US\$36 billion accumulated debt stock in 2004 (DMO 2005).

The country's debt which is made up of the external and domestic components has been on the rise since 2006. The figure increased from N2,204.72 billion in 2006 to N23,295.07 billion in 1999. External debt includes the country's indebtedness from multilateral creditors, Paris Club, London, promissory notes, bilateral, euro bond, diaspora bond and others while domestic debt is composed of treasury bills, Federal Government of Nigeria (FGN) bonds, treasury certificates, promissory note, FGN Sukuk, treasury bonds, development stocks, FGN green bond and FGN Saving bond. The FGN Sukuk, green bond and savings bond became part of domestic debt in 2017, but treasury certificate and development stocks have not contributed to domestic debt in the last four decades (CBN 2020).

## 4. Methodology

The study employed Vector Error Correction Model (VECM) as dictated by the outcome of preliminary tests. Results of unit root tests from the Augmented Dickey-Fuller and Phillips-Perron techniques show that series are integrated in first difference, it became necessary to conduct a co-integration test with a view to determining the existence or otherwise of a long-run relationship. This is confirmed by the trace statistic and hence the choice of VECM. The econometric software used for the analysis is STATA 13.

### 4.1. Model Specification

Debt sustainability is modelled as a dependent variable with corruption, oil revenue, exports and external debt stock as independent variables.

$$DTS = f(CPI, ORV, XPO, EDS) \quad (1)$$

Where:

DTS = DebtSustainability

CPI = Corruption

ORV = OilRevenue

XPO = Exports

EDS = ExternalDebtStock

The VECM in a five-variable model ( $DTS, CPI, ORV, XPO$  and  $EDS$ ) becomes:

$$\Delta DTS_t = \gamma + \sum_{i=1}^{p-1} \delta_i \Delta DTS_{t-i} + \sum_{j=1}^{p-1} \phi_j \Delta CPI_{t-j} + \sum_{m=1}^{p-1} \psi_m \Delta ORV_{t-m} + \sum_{n=1}^{p-1} \sigma_n \Delta XPO_{t-n} + \sum_{p=1}^{p-1} \pi_p \Delta EDS_{t-p} + \lambda_1 ECT_{t-1} + e_{1t} \quad (2)$$

$$\Delta CPI_t = \eta + \sum_{i=1}^{p-1} \delta_i \Delta DTS_{t-i} + \sum_{j=1}^{p-1} \phi_j \Delta CPI_{t-j} + \sum_{m=1}^{k-1} \psi_m \Delta ORV_{t-m} + \sum_{n=1}^{p-1} \sigma_n \Delta XPO_{t-n} + \sum_{p=1}^{p-1} \pi_p \Delta EDS_{t-p} + \lambda_2 ECT_{t-1} + e_{2t} \quad (3)$$

$$\Delta ORV_t = \theta + \sum_{i=1}^{p-1} \delta_i \Delta DTS_{t-i} + \sum_{j=1}^{p-1} \phi_j \Delta CPI_{t-j} + \sum_{m=1}^{p-1} \psi_m \Delta ORV_{t-m} + \sum_{n=1}^{p-1} \sigma_n \Delta XPO_{t-n} + \sum_{p=1}^{p-1} \pi_p \Delta EDS_{t-p} + \lambda_3 ECT_{t-1} + e_{3t} \quad (4)$$

$$\Delta XPO_t = \mu + \sum_{i=1}^{p-1} \delta_i \Delta DTS_{t-i} + \sum_{j=1}^{p-1} \phi_j \Delta CPI_{t-j} + \sum_{m=1}^{p-1} \psi_m \Delta ORV_{t-m} + \sum_{n=1}^{p-1} \sigma_n \Delta XPO_{t-n} + \sum_{p=1}^{p-1} \pi_p \Delta EDS_{t-p} + \lambda_4 ECT_{t-1} + e_{4t} \quad (5)$$

$$\Delta EDS_t = \nu + \sum_{i=1}^{p-1} \delta_i \Delta DTS_{t-i} + \sum_{j=1}^{p-1} \phi_j \Delta CPI_{t-j} + \sum_{m=1}^{p-1} \psi_m \Delta ORV_{t-m} + \sum_{n=1}^{p-1} \sigma_n \Delta XPO_{t-n} + \sum_{p=1}^{p-1} \pi_p \Delta EDS_{t-p} + \lambda_5 ECT_{t-1} + e_{5t} \quad (6)$$

Where:

$\Delta$  = difference operator

$p - 1$  = lag length reduced by 1

$\lambda_i$  = speed of adjustment parameter with negative sign, and

$ECT_{t-1}$  = error correction term which is the lagged value of the residuals obtained from the co-integrating regression of the dependent variable on the independent variables

$\delta_i, \phi_j, \psi_m, \sigma_n, \pi_p$  = short-run dynamic coefficients of the model's adjustment long-run equilibrium.

$e_{it}$  = error terms

The long-run equation can be summarized as:

$$DTS_t = \alpha_0 + \alpha_1 CPI_t + \alpha_2 ORV_t + \alpha_3 XPO_t + \alpha_4 EDS_t + \mu_t \quad (7)$$

Where:

$\alpha_0$  = constant term,

$\alpha_1, \alpha_2, \alpha_3, \alpha_4$  = coefficients, and

$\mu_t$  = error term.

## 4.2. Description of Variables

### **Debt Sustainability**

This is the dependent variable of the model, measured by total debt service to exports of goods, services and primary income. It is expressed in percentages and used to gauge the level of debt sustainability of countries. The lower the ratio, the better for the economy and the more likely the country is able to sustain its indebtedness. On the other hand, higher values are danger signals and depicts the level of debt burden accrued to the country. The variable is sourced from World Bank development indicators database.

### **Corruption**

Corruption is the main explanatory variable that the research is conceived to determine its impact on the debt sustainability of Nigeria. Corruption siphons resources, both funds borrowed which forms debt and revenue generated thus makes debt service obligations difficult or even impossible. In this context, corruption is measured by the index of its perceptions developed by Transparency International. The index is an average score of a country given by international businessmen and financial journalists polled in a variety of contexts. Its value ranges from 0 to 10, with 0 representing the most corrupt and 10 indicating a clean country where corruption cases are minimal.

### **Oil Revenue**

Revenue is among the many factors that influence debt sustainability and as revenue rises, the government's ability to settle her debt obligation. On the other hand, dwindling revenue makes public debt unsustainable. This study considers oil revenue rather the general government revenue as major determinant in debt sustainability, given that the Nigerian



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economy thrives mainly on revenue from the oil sector. The variable is defined as percentage of oil revenue to total federally collected revenue as contained in the Central Bank of Nigeria Statistical Bulletin, 2019.

### **Exports**

Exports constitute the value of goods and services sold to the rest of world and include freight, transport, merchandise, travel, royalties, license fees, services rendered by financial services, communication, construction, information and business sectors as well as personal and government services. An increased export raises a country's ability to obtain foreign exchange and boost her chances of meeting her debt obligations. The theoretical relationship between exports and debt sustainability is therefore a positive one, implying that when exports value increases, debt ratio declines. The variable used in this model is the value of Nigeria's exports expressed as percentage of the country's GDP and sourced from World Development Indicators database of the World Bank.

### **External Debt Stock**

External debt is the part a country's total debt that is borrowed from foreign lenders and settled in the currency it was borrowed. It includes public borrowing, private non-guaranteed long-term debt, IMF credit and short-term debt. It is measured in this study as the ratio of total external debt stocks to gross national income. A rise in external debt increases the debt burden of country and increases the risk of sustaining her debts. Therefore, there exists a negative relationship between external debt and debt sustainability. The higher the external debt stock the lower the debt sustainability. The data for the variable was obtained from International Debt Statistics of the World Bank.

## **5. Data Analysis**

### **5.1. Unit Root Test**

It is customary in time series analysis to examine whether the dataset to be used is stationary or not and if stationary is it at levels I(0), first difference I(1), or second difference I(2). This is not only to guard against the use of non-stationary data but serves as a precondition for determining the choice of technique to be adopted. Anon-stationary data leads to spurious regression and ultimately generates misleading results. Series are considered stationary when they exhibit mean reversion, implying that the data generating process does not evolve around zero. The process of examining the stationarity of a given dataset in econometrics is called unit root test and among the variety of test types available in literature, this study adopts the Augmented-Dickey Fuller (ADF). The ADF is an augmented version of the Dickey-Fuller test expanded to include high order of regressive process in the model. It is simple and accommodates the complexity of econometric models that includes unknown order. The general form of ADF test is estimated by the following regression.

$$\Delta Y_t = \mu + \gamma Y_{t-1} + \sum_{j=1}^p \alpha_j \Delta Y_{t-j} + \beta_t + \omega_t \quad (8)$$

Where:

- $Y$  = time series,
- $t$  = linear time trend,
- $\Delta$  = first difference operator,
- $\mu$  = constant,
- $p$  = optimal number of lags in the depenent variable, and
- $\omega$  = random error term.

The results for the ADF test are presented below.

Table 1. Unit Root Test

Variable	Augmented Dickey-Fuller			Conclusion
	Level	First Difference	Order of Integration	
<b>DTS</b>	-2.724 (0.0699)	-5.645 (0.0000)	I(1)	Stationary
<b>CPI</b>	-3.156 (0.0936)	-5.890 (0.0000)	I(1)	Stationary
<b>ORV</b>	-2.068 (0.5639)	-5.271 (0.0001)	I(1)	Stationary
<b>XPO</b>	-3.381 (0.0539)	-5.8729 (0.0000)	I(1)	Stationary
<b>EDS</b>	-2.406 (0.1399)	-3.809 (0.0028)	I(1)	Stationary

*Source: Authors' Computation*

The unit root tests results show that all the variables: DTS, CPI, ORV, XPO and EDS are integrated at first difference denoted by I(1) at 1% critical value. The outcome of Augmented Dickey-Fuller test is presented in table 1.

### 5.2. Descriptive Statistics

These statistics provide information about measures of central tendency and dispersion as well as normality property of the data. Table 2 gives a summary statistics generated from the dataset.

Table 2. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Kurtosis
<b>DTS</b>	24	6.167144	4.600062	2.010662
<b>CPI</b>	24	2.097917	0.616921	2.369867
<b>ORV</b>	24	72.13742	11.20961	2.405657
<b>XPO</b>	24	22.22542	6.789761	2.44955
<b>EDS</b>	24	22.32442	21.27178	1.908376

*Source: Authors' Computation*

Table 2 gives the summary statistics of the series containing 24 observations and captured mean (measure of central tendency), standard deviation (measure of dispersion) and kurtosis (measure of normality). The average value for DTS is 6.167144 with 4.600062 deviation from its average. DTS is platykurtic with a kurtosis value of 2.010662. CPI has a mean value of 2.097917, a standard deviation of 0.616921 and platykurtic with a kurtosis value of 2.369867, implying a peaked curve. The mean value for ORV is 72.13742 with a standard deviation of 11.20961 and kurtosis value of 2.405657 which is platykurtic. XPO has an average value of 22.22542 and standard deviation of 6.789761 but exhibits positive kurtosis with value of 2.44955 and hence platykurtic. The mean value for EDS is 22.32442 and its standard deviation is 21.27178 while the kurtosis value stood at 1.908376 (platykurtic).

### 5.3. Correlation Matrix

The total number of observations in this study is 24 and the relationship of interest expresses DTS as the function of CPI, ORV, XPO and EDS.

Table 3. Correlation Matrix

	DTS	CPI	ORV	XPO	EDS
DTS	1.0000				
CPI	-0.6119	1.0000			
ORV	0.2070	-0.5369	1.0000		
XPO	0.0609	-0.4498	0.7598	1.0000	
EDS	0.6467	-0.8579	0.2483	0.2662	1.0000

*Source: Source: Authors' Computation*

From table 3, the correlation between any variables and itself is 1.0000. The correlation coefficients between CPI and DTS is negative (-0.6119), while DTS and other variables in the model are positively correlated as indicated by the signs of their coefficients. Specifically, ORV and DTS; XPO and DTS; and EDS and DTS all show a positive correlation each with 0.2070, 0.0609 and 0.6467 as coefficients respectively. A positive correlation coefficient means a positive relationship between the variables under consideration, implying that an increase in one will lead to an increase in the other. Conversely, a negative coefficient of correlation connotes a negative relationship, such that an increase in one variable leads to a decrease in the other.

#### 5.4. Co-integration Test

Results of the unit root test reveal that the series are integrated in first difference. This suggests the need to test for the existence or otherwise of the long-run relationship among the variables. In this case, it is appropriate to use the Johansen co-integrating technique. Co-integration test is carried out to determine the existence or otherwise of a long-run relationship among the variables under consideration.

The model for Johansen co-integration test expressed VAR of order  $p$  is as follows:

$$A_t = \eta_1 A_{t-1} + \dots + \eta_p A_{t-p} + \phi B_t + \varepsilon_t \quad (9)$$

Where:

$A_t$  = K – vector of non – stationary I(1) variables,

$B_t$  = d – vector of deterministic variables, and

$\varepsilon_t$  = vector of innovations.

Table 4. Johansen Tests for Co-integration

Maximum Rank	Trace statistic	5% Critical value
0	97.0068	68.52
1	51.5557	47.21
2	28.1221*	29.68
3	11.8762	15.41
4	3.9017	3.76

*Source: Authors' Computation*

Results of the Johansen test for co-integration show an evidencethat a long-run relationship exist among the variables in the model. From table 4, the trace statistic of 28.1221falls

below the 5% critical values of 29.68. This implies that there is the presence of at least two co-integrating equations in the model and hence, the VECM is employed.

### 5.5. The Vector Error Correction Model (VECM)

The VECM describes a system with a vector of two or more variables, derived by differencing a Vector Autoregressive (VAR). All the variables in the VECM are endogenous, implying the absent of exogenous variables. The model expressed in equation (2) is employed in the analysis line with the research objective and the results presented below.

Table 5. Vector Error-Correction Model

Dependent Variable: DTS			
Variable	Coef.	z	P> z
ECT and Short-run Dynamic Coefficients			
ECT	-0.7575869	-2.59	0.010
DTS	-0.0226772	-0.10	0.921
CPI	-1.951021	-0.60	0.548
ORV	0.1199685	0.72	0.473
XPO	-0.0093154	-0.05	0.958
EDS	-0.406214	-1.48	0.140
C	0.6771934	0.67	0.502
Johansen normalization restriction imposed (Long-run Coefficients)			
DTS	1	.	.
CPI	-3.851946	-2.19	0.028
ORV	0.1066941	1.59	0.111
XPO	0.2540973	2.52	0.012
EDS	-0.1919002	-5.04	0.000
C	-5.054339	.	.

Source: Authors' Computation

The ECT equation becomes:

$$ECT_{t-1} = [1.000DTS_{t-1} + 3.852CPI_{t-1} + 0.107ORV_{t-1} + 0.254XPO_{t-1} - 0.192EDS_{t-1} - 5.054] \quad (10)$$

The short-run VECM equation in (2) can be transformed into:

$$\Delta DTS_t = 0.677 - 0.023\Delta DTS_{t-1} - 1.951\Delta CPI_{t-1} + 0.120\Delta ORV_{t-1} - 0.009\Delta XPO_{t-1} - 0.406\Delta EDS_{t-1} - 0.758ECT_{t-1} \quad (11)$$

While, the long-run equation in equation (7) becomes:

$$DTS_t = -5.054339 - 3.851946CPI_t + 0.1066941ORV_t + 0.2540973XPO_t - 0.1919002EDS_t + \mu_t \quad (12)$$

Results of error correction regression analysis reveal that the speed of adjustment of -0.7575869 is negative and statistically significant at 5% given the probability value of 0.010. This shows that there is 75.76%-point adjustment taking place each period towards the long run periods.

Given that DTS is the dependent variable on the model, the coefficients of the normalization equation (long-run coefficients) in Table 5 indicates that CPI and DTS are negatively related. This implies that an increase in corruption leads to decrease in the country's ability to sustain its indebtedness. Specifically, a unit increase in CPI leads to -3.851946 decrease in DTS and vice versa. The result is statistically significant at 5% and

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consistent with *a priori* expectation which specifies a positive relationship between corruption and debt sustainability. The findings also support the *Sand the Wheels Theory* of corruption which considers corruption as inimical to societal growth.

The relationship between ORV and DTS is positive. It means that when oil revenue increases, debts will become more sustainable in Nigeria. A unit increase ORV leads to an increase DTS by 0.1066941 and vice versa. Although the result is not statistically significant at 5%, it shows that oil revenue has the potentials to reduce the debt burden of country if properly channeled. This is consistent with economic theory.

Similarly, XPO and DTS are positively related, suggesting that increased exports increase the potentials of the country to meet its debt obligations thereby making debt more sustainable. A unit increase in XPO lead to 0.2540973 increase in DTS at 5% significance level. The result conforms with economic theory, supports the export-led growth hypothesis in Nigeria and work of Medina-Smith (2001) for developing countries.

The relationship between EDS and DTS indicates a negative link between the two variables. An increase in external debt stock diminishes the country's ability to settle her debts. A unit change in EDS influences DTS by -0.1919002 at 1% level of significance. The results corroborate economic theory that rising external debt stock is inimical to the country's debt profile.

### 5.6. Post Diagnostic Tests

In order to ensure that the results obtained are free from common econometric problems and thus can be relied upon for policy formulation, diagnostics tests are necessary. For this purpose, autocorrelation, normality and stability tests were conducted and the results presented in table 6 and 7.

Table 6. Autocorrelation and Normality Tests

	chi2	df	Prob>chi2
<b>Panel A: Lagrange-multiplier test</b>			
<b>lag</b>			
1	20.7002	25	0.70920
2	14.7348	25	0.94736
<b>Panel B: Jarque-Bera test</b>			
<b>Equation</b>			
D_DTS	3.258	2	0.19617
D_CPI	1.38	2	0.50168
D_ORV	1.702	2	0.42697
D_XPO	0.986	2	0.61070
D_EDS	1.006	2	0.60461
ALL	8.332	10	0.59645

*Source: Authors' Computation*

Results of Lagrange-multiplier test show no evidence of autocorrelation in the series, both in lags 1 and 2. Similarly, the Jarque-Bera test for normality reveals that errors of the individual as well as the overall equations are normally distributed. The reasons for these conclusions were deduced from the probability values associated with the tests conducted. All the values as indicated in the table 6 are more than 5% critical, hence the need to accept the null hypotheses of no autocorrelation and normally distributed errors.

Table 7. Stability Test

Eigenvalue	Modulus
1	1
1	1
1	1
1	1
-.5469159 + .2417896i	.597979
-.5469159 - .2417896i	.597979
.5322501	.53225
.1169575 + .5108754i	.524092
.1169575 - .5108754i	.524092
-.02406096	.024061

*Source: Authors' Computation*

The result of Eigenvalue stability condition test shows that the VECM specification imposes 4 unit moduli, indicating that the model is stable.

## 6. Summary, Conclusion and Recommendations

Results from the analysis indicate that an increase in corruption as well as external debt stock make debt unsustainable in Nigeria. On the other hand, reducing corruption and external debt stock will have a reverse effect of enhancing the sustainability of the country's debt. However, rising oil revenues and exports will increase the government's ability to meet her indebtedness and vice versa. It can therefore be concluded that corruption in Nigeria worsens the national debt position and makes it less sustainable. In line with the findings, the following recommendations are advanced:

- There is need for a renewed vigor in the fight against corruption and effective institutions remain a critical factor in this regard. The Economic and Financial Crime Commission (EFCC) and other anti-corruption related agencies should be made truly independent, divorced of the influence of other arms of government. The whistleblower policy should be revisited and sustained and special courts be established and manned with incorruptible judges. Governments at all levels are to imbibe the culture of transparent financial transactions using ICT resources to track with ease the movement of funds.
- Nigeria's external debt stock should be regulated to reflect the actual growth of the economy. The debt management office should provide the government with useful guide based on the annual performance of the indicators of debt sustainability.
- Efforts to boost oil production should be intensified by implementing policies necessary for a peaceful Niger-Delta. Government should move beyond rhetoric to effect the cleaning up of Ogoni-Land which has become a major demand of the people of oil-rich region in order to boost oil revenue. In addition to this, government should work to secure a favourable deal with Organization Petroleum Exporting Countries (OPEC) regarding supply in a manner that ensures price stability.
- Export promotion policies are necessary to boost export content of the economy. To achieve this, the government should pursue its diversification agenda with all seriousness by looking into potentials that are inherent in the agricultural, mining and tourism sectors of the economy.

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## Appendix I

### Raw and Transformed Data used for Analysis

Year	DTS	CPI	ORV	XPO	EDS	dDTS	dCPI	dORV	dXPO	dEDS
1996	13.140000	0.690000	78.072067	23.020000	64.315236	-	-	-	-	-
1997	8.710000	1.760000	71.517358	28.650000	54.512873	-4.430000	1.070000	-6.554709	5.630000	-9.802363
1998	13.070000	1.900000	69.953633	18.140000	58.546020	4.360000	0.140000	-1.563725	-10.510000	4.033147
1999	7.610000	1.600000	76.320242	21.330000	50.254059	-5.460000	-0.300000	6.366608	3.190000	-8.291961
2000	8.760000	1.200000	83.501702	36.020000	51.143351	1.150000	-0.400000	7.181461	14.690000	0.889292
2001	12.720000	1.000000	76.517422	28.250000	44.924817	3.960000	-0.200000	-6.984280	-7.770000	-6.218534
2002	8.060000	1.600000	71.071980	23.240000	35.592654	-4.660000	0.600000	-5.445443	-5.010000	-9.332163
2003	5.930000	1.400000	80.551586	26.750000	37.748820	-2.130000	-0.200000	9.479607	3.510000	2.156166
2004	4.470000	1.600000	85.570718	20.250000	31.532993	-1.460000	0.200000	5.019132	-6.500000	-6.215827
2005	15.410000	1.900000	85.847679	21.030000	15.823019	10.940000	0.300000	0.276961	0.780000	-15.709974
2006	10.980000	2.200000	88.641686	29.520000	4.155071	-4.430000	0.300000	2.794007	8.490000	-11.667949
2007	1.440000	2.200000	77.920597	21.240000	4.604080	-9.540000	0.000000	-10.721089	-8.280000	0.449009
2008	0.760000	2.700000	83.016805	25.670000	4.078808	-0.680000	0.500000	5.096208	4.430000	-0.525272
2009	1.280000	2.500000	65.886616	18.630000	5.748673	0.520000	-0.200000	-17.130189	-7.040000	1.669865
2010	1.500000	2.400000	73.881896	25.660000	4.503249	0.220000	-0.100000	7.995280	7.030000	-1.245424
2011	0.510000	2.400000	79.869498	31.620000	4.557685	-0.990000	0.000000	5.987602	5.960000	0.054437
2012	1.340000	2.700000	75.327649	31.550000	4.145364	0.830000	0.300000	-4.541849	-0.070000	-0.412321
2013	0.490000	2.500000	69.768180	18.050000	4.319933	-0.850000	-0.200000	-5.559469	-13.500000	0.174569
2014	5.320000	2.700000	67.473631	18.440000	4.603129	4.830000	0.200000	-2.294549	0.390000	0.283195
2015	3.140000	2.600000	55.408248	10.660000	6.078750	-2.180000	-0.100000	-12.065383	-7.780000	1.475622
2016	6.320000	2.800000	47.964889	9.220000	7.892029	3.180000	0.200000	-7.443359	-1.440000	1.813279
2017	6.820000	2.700000	55.202149	13.170000	11.111724	0.500000	-0.100000	7.237261	3.950000	3.219694
2018	8.260000	2.700000	58.060261	15.490000	12.415290	1.440000	0.000000	2.858112	2.320000	1.303567
2019	1.971462	2.600000	53.951467	17.810000	13.178354	-6.288538	-0.100000	-4.108794	2.320000	0.763064

Sources:

- World Bank Development Indicators database
- Transparency International
- Central Bank of Nigeria Statistical Bulletin
- International Debt Statistics of the World Bank.





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