

# Alcoholic Beverages and Alcoholism Analyzed from The Science, Technology and Society Approach: In Search of Interdisciplinary



Yordanis Arias Barthelemi<sup>1\*</sup>, Justo Reinaldo Fabelo Roche<sup>2</sup>, Adelaida Adriana Valenciano Vega<sup>3</sup> and Adonis Lucas Verdecía Ortíz<sup>4</sup>

<sup>1</sup>Academic polyclinic Dr. Porfirio Valiente Bravo, Ricardo Riso Avenue, Songo-La Maya municipality, Postal Zone 94180, Santiago de Cuba, Cuba

<sup>2</sup>Academic polyclinic Dr. Carlos Juan Finlay, Francisco Hodelín avenue, Songo-La Maya municipality, Postal Zone 94500, Santiago de Cuba, Cuba

<sup>3</sup>Universidad de Ciencias Médicas de La Habana, Playa municipality, Postal Zone 11300, Cuba

<sup>4</sup>Universidad de Oriente, Patricio Lumumba Avenue, Postal Zone 90500, Santiago de Cuba City, Cuba

**Submission:** February 18, 2023; **Published:** March 01, 2023

**\*Corresponding author:** Yordanis Arias Barthelemi, Master in psychosocial intervention, Health psychologist, psychotherapists and university professor, Cuba

## Abstract

Through the present study, the need to visualize alcoholism and alcoholic beverages from the Science, Technology and Society Approach (STS Approach) is demonstrated; the few studies that relate these categories are corroborated and the objective of envisioning the possibility of using nanoscience in the prevention of alcoholism or in the rehabilitation of the addicted subject is pursued. The consequences of technoscience's in society are mentioned, with its two aspects (technophobes and technophiles) when it comes to understanding this paradigm, where the possible integration of nanotechnologies in our organisms as a hybrid is envisioned. It is evident that the scourge of addictions surpasses the health sector, where a true interrelationship between justice, culture, education, health, and local governments is necessary; verticalized the above from the Science, Technology and Society Approach. Nanoscience specialists are encouraged to create a nanomedicine to prevent alcoholism or rehabilitate the addicted subject.

**Keywords:** Science Technology and Society Approach; Alcoholism; Alcoholic Beverages; Epistemological; Spirituous Beverages; Alcohol Industries

## Introduction

### Linking alcoholic beverages and alcoholism with the Science, Technology and Society Approach (STS Approach)

The various forms of production of alcoholic beverages are striking, you can already taste a candy that contains a sip of alcohol in its center; coming to observe that in the Western world it is more frequently evident that these substances are the core of all human activities: say political, social or religious; where this harmful consumption of spirituous beverages is having a negative impact on the morale of the inhabitants of this society; being a sociocultural phenomenon to take into account from the science, technology and society approach. This academic movement (Science, Technology and Society Approach) since its inception has been aimed at understanding the scientific-technological phenomenon in a specific sociocultural context, whose current objective is to regulate the development of techno-sciences; This paradigm has demonstrated its usefulness in teaching media to understand dilemmas related to science and the benefits to society [1]; whose purpose is to interrelate science, technology and society in favor of human development, giving solutions to the problems in the existence of this being.

John Desmond Bernal was the founder of the social studies of science; but the Science, Technology and Society Paradigm [2-5] dates back to the end of World War II "thanks" to the Manhattan Project; where one of the pioneers was Vannevar Bush; followed by Barry Barnes, David Bloor, Steven Shapin, initially focusing their studies on the social background of science. On the other hand, we find Paul Durbin, Ivan Illich, Carl Mitcham, Kristin Shrader-Frechette and Langdon Winner, who studied the socio-environmental consequences of scientific-technical development. Both academic movements converge in rejecting the image of science as a pure activity, criticizing the conception of technology as a neutral science, and condemning technocracy; and whose programs focus on the field of research, the field of public policy and the field of education. Few have been the studies that have related alcoholic beverages and alcoholism to the science, technology and society paradigm, research on the harmful effects on society are known, epistemological contributions abound from the medical and social sciences when dealing with the subject. Since ancient times, the effects of these substances on the body have been studied and how they

lacerate moral aspects in the world, injuring societies due to the scarce control of spirituous beverages; there being an uncritical familiarity since its productions are the pillar in several Gross Domestic Products of many countries; therefore, they do not even question how harmful this consumption is to morality [6]. Through this dialogic, the objective of envisioning the possibility of using nanoscience in the prevention of alcoholism or in the rehabilitation of the addicted subject was outlined.

### **The Science, Technology and Society Paradigm**

This model [7-9] has as a fundamental premise the interrelation between these important spheres of reality, contributing to democratize decisions about technologies, the achievements obtained in their discoveries, advances, their use, and application in terms of their responsible action in the development of the society; since the imbrications of certain gadgets in the human organism to fulfill certain social functions (as a hybrid) is already envisioned. As a result of the global catastrophic crises on the planet [10,11], the science, technology and society paradigm needed to integrate the concept of the environment to enrich this model, since the sustainability of humanity through environmental balance is essential, whose mission is to achieve a scientific culture in the general population, so that they can make fair decisions about this academic approach and share a moral commitment. From the previous academic movement, a necessary political edge arises to make society scientifically literate, so that the population can make responsible decisions for or against a type of techno-science; In addition, basic subjects in secondary education that deal with technologies and their relationship with society are suggested. This approach has three fundamental perspectives: the development of techno-science [12] is a social process like any other, the changes produced by techno-science determine social life and nature itself, and the last one is to share a democratic commitment in decision-making with regarding their development. The Science, Technology and Society Paradigm (STS Paradigm) questions the benefits of technologies in favor of society, where more and more technological development will supplant the harsh or rigorous work that human beings (technophiles) have to do, there is another aspect that techno-science will enter in conflict due to its development and its social demand, creating a certain technological autonomy behind human needs, reaching the point where technologies can dominate human beings (technophobes).

### **Addictions must be understood as a single nosological entity**

As a result of the overwhelming development of techno-sciences, addictions [13-15] to these have emerged. This type of dependency is fashionable in the new generations, from addiction to cell phones, to the internet, to video games and even to social networks; but the tendency of addictions to be linked to a single nosological entity called dual psychopathological disorder, where the subject shows a co-morbid clinical picture, is verified. From a commercial perspective, the trend that little by little

we are being technologicalized is worrying, there are already household appliances for almost all human needs, seeking to satisfy our techno-fetish minds. The addiction to technology is closely related to the ingestion of alcoholic beverages, both have become a symbol in our western culture, it can already be seen on social networks how the bottle of rum or the can of beer is at the center of the image, it can be corroborated in our cultural, business, or political activities that these substances are the core. It is relevant to mention that in Cuba around 2% of its population suffers from alcoholism and little by little the level of consumption of spirits is higher in the world [16] And as a golden seal, the alcohol industries in the world diversify and increase their productivity, mixing this substance with sweets that our children consume.

The harmful effects of alcoholic beverages from the sciences represent a problem that can be the genesis of the behavioral change of any subject [17,18], promoting loss of their human values and affecting their body and of course promoting mental disorders; Until now, the social, humanistic and medical sciences have not been able to stop or reverse this sociocultural phenomenon; The sciences have focused mainly on the rehabilitation of addicts, characterize these sociocultural problems, describe the consequences in the organism or in society due to the consumption of these essences and from prevention work has been done mainly from psycho-education. From the social imaginary [19], there is an assumption that addictions is a sole responsibility of the ministry of health; but it is evident that this sociocultural scourge goes beyond this sector; where it is vital to face a true integration between the sectors of justice, culture, education and health through psychosocial intervention projects, all of them governed by local governments that are more effective in their implementation; It is also necessary to recognize that the sales of alcoholic beverages together with the technologies represent a large income in foreign currency, their export and import is vital for the Gross Domestic Product of many Latin American countries; and in the case of alcohol, it has great religious-cultural significance.

### **Nanosciences as a solution to the scourge of addictions**

The technologies go hand in hand with the demands in the markets and the sales of alcohol are interrelated with these products that invade our eyes, the machinery for the production of these drugs is perfected, where it is appropriate to ask ourselves a question from the Nanosciences (contribution by Nobel laureate Richard Phillips Feynman), Is it possible to prevent alcoholism from nanoscience? Is it possible to rehabilitate the addicted subject from nanoscience? Possibly this would lead to a decrease in sales and there would be a dilemma in the market, generating great economic losses or perhaps the war of the markets would arrive. Technologies do not always respond to human development and their advertisements through the mass media respond exclusively to the laws of the market, promoting sales through social networks where our adolescents

are skilled; These equipment such as laptops, mobile phones, video games and tables are generating new addictions, and this in turn boosting the subject's dependence on these gadgets; As a result of technological development, communication devices incorporated into our bodies could be seen as a hybrid element capable of adapting to our body and fulfilling its social purpose, or they could simply dominate us a little more.

Instead of decreasing the statistics of addicts [14], they show rates of their increase in the world, a response to this reality is that the market is not designed to lose and prevention strategies towards addictions try mostly to psycho-educate, perhaps an effective prevention is using nanomedicine and empowering people to self-criticize their decisions. It has been shown in several investigations that technophiles manifest itself in impulse control disorders, anxiety, and depression in people, perhaps this addiction will become incorporated as a gate drug along with cigarettes and alcohol, the bidirectional relationship between are.

All researchers agree that alcohol is the central axis in most crimes: say rape, fights, robbery, and assaults; linking also with venereal diseases. The consumption of cigarettes and alcohol go hand in hand as a dynamic duo, the age of initiation is in adolescence since in this stage changes of age arise, favoring experimentation, they tend to imitate their peers, the group has a great influence in the adolescent's behavior and added to their physiological, anatomical, and endocrine changes, the effect of these substances and technology is greater.

### **The media, the market and social representations do not agree.**

In the same way that the mass media advertise the sale of substances and technologies [20,21], they can also be used for educational, reflective or preventive purposes, all in search of other forms of life that are not only those of consumerism, This would be possible under better scientific policies in our Latin American region; but it must be recognized that these advertisements have a large economic investment, financed by the powerful of the market that impose themselves by eliminating possible competitions. On many occasions, society represents the addicted subject as a person without values, who does not have any disease, who has a lack of control in his life, associating it with life or family problems, and that only those dependent on the substance are alcoholics, those who sleep in the corners and walk uncontrollably; where our societies do not recognize the previous stages that derive from the systematic consumption of alcohol, installing a mental disorder that affects the creative adaptation of the subject in his environment; It will be that we have not yet understood the true essence of the behavior or noxa of the addicted individual, or it is only claimed that health professionals have the only and last word on this social reality.

It will be that by generating new social representations in non-addicted people and considering the individual driving

forces in the development of the subject, we would facilitate the prevention of this sociocultural scourge. It is necessary to remember that the roots of human beliefs are formed and enriched in the interrelation with the other, forged within a specific cultural context, and when it is possible to modify these social representations in the intervened, it is logical to think, ¿how long will they be established these social representations in the subject? On the other hand, there is the possibility that nanomedicine [22,23] may serve as a platform or means to eradicate alcoholism and/or rehabilitate the addicted subject; in the bibliographic references consulted, there are few epistemic and/or practical contributions that suggest this path of solution against this sociocultural scourge.

### **Conclusion**

It is corroborated that the scourge of alcoholism surpasses the health sector, where a true interrelation between justice, culture, education, health, and local governments is necessary; the above transversal zed from the Science, Technology and Society Paradigm (STS Paradigm). If alcohol productions are eliminated, those addicted to it will look for another substance available on the market, so it is not the harmful consumption of spirits that generates addictions, but the human being who is dissatisfied with his being. Nanoscience experts are urged to create a nanomedicine to prevent alcoholism or rehabilitate the addicted subject.

### **References**

1. Schepper GR, Dias MP, dos Santos AB, Vázquez-Alonso A, Miranda FW (2021) Concepciones de estudiantes de educación secundaria sobre las relaciones de interdependencia y calidad de vida relativas a la ciencia y a la tecnología. *Revista Ciencia, Tecnología y Sociedad* 16(46): 219-246.
2. Fuentes PD (2016) Aproximación crítica a los problemas sociales de la neuropatía epidémica cubana en su forma óptica. *Revista MEDISAN* 20(11): 5161-5170.
3. Quintero CC (2017) Dinámicas de formación en perspectivas ciencia, tecnología y sociedad en el contexto del siglo XXI globalizado. *Boletín virtual* 6(7): 1-15.
4. Psicología (2020) Conocimiento y Sociedad. Monográfico "Estudios de Ciencia, Tecnología y Sociedad (CTS): prácticas y conocimientos psi, modos de producción de subjetividad y mundos. *Revista Psicología. Conocimiento y Sociedad* 9(2): 1-7.
5. Salinas VJ, Oller FM (2020) Formar ciudadanos a través de la acción sobre los problemas sociales de la comunidad. *Revista Praxis educativa* 24(1): 1-14.
6. Arias BY, Gutiérrez MM, Rodríguez EA (2021) Reflexiones Sobre Religión, Religiosidad Y Bebidas Alcohólicas En La Santa Biblia Y El Sagrado Corán. *Bol Trastor Adict* 6(1): 53-57.
7. UNAM. (2022) Qué es CTS? *Revista Argo*.
8. Isoglio A, Echeverry-Mejía AJ (2019) Reconocimiento de experticias y orientación hacia problemas: Las prácticas de ciencias abiertas desde la perspectiva de la investigación integrada. *Revista Ciencia y Sociedad* 44(1): 29-42.
9. Ferrando KC, Paez OH (2019) Formación CTS en Ingeniería como marco para diagnosticar problemas y ofrecer soluciones situadas. 2019. XIII Jornadas de Sociología. Facultad de Ciencias Sociales. Buenos Aires.

10. Reverte SN (2020) Atención prestada a las interacciones CTSA en la educación científica. Universidad de Valencia.
11. Puerta DL, Angarica GL, Padilla GA (2017) El enfoque Ciencia-Tecnología-Sociedad (CTS) en el proceso de enseñanza aprendizaje de la Química en la Educación Superior. Revista Conrado 13(58): 142-147.
12. García CJ, Valcárcel IN, Rodríguez DC, Rodríguez GR (2019) Un Acercamiento A Problemas Sociales De Las Ciencias Médicas Y Las Tecnologías: Apuntes Para Su Análisis. Revtecnología 10(1): 97-100.
13. García MN (2018) Marcadores biológicos en trastornos por uso de alcohol y comorbilidad psiquiátrica asociada. Universidad Complutense de Madrid.
14. Ponce SL (2019) Eclecticismo psicológico en el abordaje de las conductas adictivas y patología dual. Universidad de San Carlos de Guatemala.
15. Matalis J, Andiñón O, Pardo M, Iniesta R (2016) Adolescentes y diagnóstico dual. En el servicio de urgencias psiquiátrica. Revista adicciones 28(2): 71-79
16. World Health Organization (2018) Global status report on alcohol and health. Geneva. Licence: CC BY-NC-SA 3.0 IGO WHO.
17. American Psychiatric Association (2018) Diagnostic and Statistical Manual of Mental Disorders, 5<sup>th</sup> (Ed). British Library. Arlington, VA, American Psychiatric Association.
18. World Health Organization (2016) International Statistical Classification of Diseases and related health problems. 10<sup>th</sup> revision. WHO.
19. García-Rodríguez G (2019) Aproximaciones al concepto de imaginario Social. Revista civizar: Ciencias sociales y humanas. 19(37): 31-42.
20. Pulido RM (2016) Comorbilidad entre uso de alcohol y tabaco y adicción a tecnologías de información: evaluación del modelo BIS/BAS Revista Medigraphic.
21. Guerrero CV (2016) Aproximación Teórica E Histórica Para El Análisis De Las Políticas Científicas Desde El Enfoque Cts En América Central 1980-2014 Revista Ciencias Sociales 3(153): 87-100.
22. Fernández SA (2019) La Enseñanza De Las Ciencias Sociales A Partir De Problemas Sociales O Temas Controvertidos: Estado De La Cuestión Y Resultados De Una Investigación Revista El Futuro del Pasado 10: 57-79.
23. Invernizzi N (2015) Nanotecnología dirigida a necesidades sociales. Contribuciones de la investigación latinoamericana en medicina, energía y agua Revista digital de sociología del sistema tecnocientífico 5(2): 1-30.



This work is licensed under Creative Commons Attribution 4.0 License  
DOI: [10.19080/ARR.2023.08.555747](https://doi.org/10.19080/ARR.2023.08.555747)

### Your next submission with Juniper Publishers will reach you the below assets

- Quality Editorial service
- Swift Peer Review
- Reprints availability
- E-prints Service
- Manuscript Podcast for convenient understanding
- Global attainment for your research
- Manuscript accessibility in different formats  
( Pdf, E-pub, Full Text, Audio)
- Unceasing customer service

Track the below URL for one-step submission

<https://juniperpublishers.com/online-submission.php>