

The Mapping Mechanism From the Source Domain “Electronic Devices” Onto the Target Domain “Human Being”: An Online Vietnamese Article Context

Nguyen Thi Bich Hanh

Faculty of Culture - Linguistics, Graduate Academy of Social Sciences, Vietnam Academy of Social Sciences, Hanoi, Vietnam

Le Vien Lan Huong

Foreign Languages Department, Vietnam Military Medical University, Hanoi, Vietnam

Nguyen Kim Cuong

Hanoi Medical University, Vietnam National Lung Hospital, Hanoi, Vietnam

Tran Huy Sang

Foreign Languages Department, Vietnam Military Medical University, Hanoi, Vietnam

Ngo Thi Tuyet

Foreign Languages Department, Vietnam Military Medical University, Hanoi, Vietnam

Abstract—The article is a study on the appearance of the metaphor “humans are electronic devices” in online Vietnamese articles to clarify the relationship in Vietnamese people's mind map between “electronic devices” and “humans”. Based on the correlation between experiences and knowledge from source domain mapping onto the target domain, this study aimed to decode the conceptual diagram, explain the mapping mechanism and the logically-organized mapping scheme of the conceptual metaphor, identify a unique cognitive style in the conceptual structure which is universally characterized by the Fourth Industrial Revolution. The research findings may be beneficial to journalism students who wish to employ conceptual metaphors in writing about physical and mental health. Additionally, hospital website builders, medical staff, doctors, researchers, biomedical therapists, and others in the medical field can use the findings as a reference to improve their skills in using conceptual metaphors in articles about health care and protection, health risk alerts, and understanding the operation mechanism of the human body as a machine. Furthermore, the research results may offer advertisers suggestions on how to use conceptual metaphors for describing health care products in a way that strongly affects consumer awareness about product values and changes their shopping behavior.

Index Terms—conceptual metaphor, human beings, electronic devices, machine metaphor, mapping

I. INTRODUCTION

A conceptual metaphor (also known as a cognitive metaphor) is the conceptualization of one mental domain via another; that is, it's a systematic mapping from one typically concrete source domain to create a cognitive model showing what is happening in the mind (Lakoff & Johnson, 1980). According to Lakoff and Johnson (1980), a conceptual metaphor is a cognitive mechanism through which the logic of abstract concepts is replaced by the logic of more concrete concepts. Conceptual metaphors are further defined by Kövecses as understanding one typically abstract domain of experience in terms of another typically concrete one (Kövecses, 2002). The source domain provides a relatively rich knowledge structure for the target concept domain which happens through mappings between the elements of domains A and B (Kövecses, 2002).

According to Kövecses (2002), metaphorical mappings have an important role to play in conceptual expression since they explain why specific attributes are used to understand the target domain. Lakoff (1993) demonstrates that mapping is one of the most common ways to conceptualize things. Mapping is not arbitrary, but based on everyday human experience and knowledge. As a result, it is used unconsciously. A fixed system of corresponding attributes that make up the source and target domains form conceptual mappings. When these corresponding attributes are activated, attributes from the source domain are mapped onto the target domain on a partial and unilateral basis; there is, therefore, a unique movement of some attributes from the source domain to the target domain.

The metaphor of machines is based on common human characteristics and has attracted the attention of linguists, especially cognitive linguists. Moreover, some scholars who support this view include Johnson (1987); Lakoff and Johnson (1999); and Kövecses (2005, 2010). From their viewpoint, individuals can also be metaphorically described in linguistic expressions as machines in both mind and body. For example, some studies suggest that the human respiratory system operates on the principle of a machine. The glottis of the body is like a sensitive valve, blocking the breath whenever people appear to feel hesitant, depressed, or anxious. This then leads to difficulty breathing so that, after the feeling of distress and anxiety is overcome, the glottis quickly opens, allowing air to pass through the throat and nose. It is from examples like this that metaphors emerged related to the human mind, breath and emotions (Fesmire, 1994).

Seeing genitals as a machine when studying metaphors and metonyms about human body parts in Spanish filmmaker Pedro Almodóvar's films, Aparisi, E. U. (2010) placed images related to the genitals in a psychoanalytic framework, highlighting metaphorical models related to the genitals such as "the penis is a weapon". Likewise, breasts are described in a similar dualistic manner. Ugly breasts are mapped to sex, seduction, and manipulation while beautiful breasts are mapped to motherhood and caring (Aparisi, 2010).

Such expressions do not always act as a metaphor; however, even in the everyday language of the present, we still unconsciously use language that scientifically suggests that the human body is a machine.

Based on the characteristics and biological structure of humans, especially in the eyes of anatomists, the human body is viewed as a complex and closely interconnected machine. Humans are made up of component apparatuses such as the nervous system, the circulatory system, the respiratory system, the digestive system, the urinary system, the genitourinary system, and so on. As a result, the metaphor "man is a machine" appears in the language.

A machine, essentially an engine, in the context of the Fourth Industrial Revolution, machines are often associated with electronic devices. Therefore, taking the idea behind the metaphor "man is a machine", it can also be assumed that we can also use the metaphor "man is an electronic device" is also common in languages. Thus, within the framework of this report, we discuss the conceptual metaphor model "Humans are electronic devices" as used in a Vietnamese online newspaper.

II. LITERATURE REVIEW

The metaphor of the human body as a machine has been around for ages. In the late 15th and early 16th centuries, a large number of concepts and discursive forms were employed which opened the door to the analysis of the mechanical body and the machine body as a motor, a steam engine, or a combustion engine (Gleyse, 2012). Indeed, the machine metaphor has succeeded in lending a large amount of knowledge and imaginative thinking when it comes to scientific studies about humans. Even nowadays, modern physiology, medicine and recent theories view the brain as a computer and the mind as software whose complexity is simplified by the use of the machine metaphor on the principles of normative anthropology (Patrzyk et al., 2017).

In the past, the human body was increasingly thought of as a mechanical system of levers (Gleyse, 2012) or as an energy producer and transformer compared to mechanical energy and thermal energy (Gleyse, 2012). Still, many saw the human engine as efficient as a mechanical engine operating on the thermal mechanism of energy consumption (Gleyse, 2012). Descartes (1989) even went so far as to compare a living organism to a driverless car which is governed entirely by functional requirements. In other words, he viewed the human body as God's machine and imagined it as some sort of machine, stating: "Everybody is a machine, and the machines made by the divine craftsman are the best" (Descartes, 1999). It is a metaphor: the human body is a machine.

Metaphorical expressions of humans as machines also appeared in other studies as well, including those by Vonnegut (2008), Pinker (2009), and Haken et al. (1993). In Pinker's words, "We have understood the body as a wonderfully complex machine, an assembly of struts, ties, springs, pulleys, levers, joints, hinges, sockets, tanks, pipes, valves, sheaths, pumps, exchangers, and filters" (Pinker, 2009, p. 22). Therefore, in both their minds and bodies, individuals can also be metaphorical machines.

By the start of the Fourth Industrial Revolution in 2011, digital technology and "smart" electronic devices became commonplace and had thus given rise to another "man as machine" metaphor: "Human beings are electronic devices" in which electronic devices are mapped onto the "human beings" domain. As a result, human body parts are figuratively considered parts of electronic devices such as chargers, batteries, touchscreens, loudspeakers, switches, screws, transmitters, setting keys, microprocessors, control buttons, and servers. At the same time, the human body is metaphorically viewed as operating like an electronic device using words such as power failure, battery drain, battery failure, worn-out battery, battery charger, short circuit, IC humidity, on-off, program, install, and log out. In Online Vietnamese articles, discourses containing metaphorical expressions referring to human beings as electronic devices are commonplace and diverse.

III. DATA COLLECTION AND RESEARCH METHODS

The study of the metaphor “Human beings are electronic devices” in online Vietnamese articles is conducted employing mixed methods including a quantitative method, a qualitative method with the emphasis being placed on discourse analysis, a statistical method and classification methods.

Data were collected from 230 articles from various fields and ranged from articles on medicine and health found on clinic websites to articles on health and entertainment found on news outlet websites as well as online articles on beauty tips and tourism, websites managed and censored by the Ministry of Information and Communications of Vietnam (MoIC), or websites of brands with copyright registration, approved by MoIC. The total amount of websites collected and surveyed stands at 28. The purpose is to diversify data sources in which “electronic devices” is used as a source domain of metaphors for human health and well-being.

Once the data was collected, conceptual metaphors are identified employing the Metaphor Identification Procedure (MIP) proposed by Pragglejaz (2007). With high applicability and widespread popularity, the MIP works as follows: first, the entire text/discourse must be read to establish a general understanding of the meaning. Second, researchers should determine the words/phrases that semantically clash in a given context. Third, words/phrases must be semantically investigated via a dictionary to identify whether or not their definitions could be comprehended in relation to other words in a given context. Fourth, if they are not, identify them as metaphors. Words/phrases that conflict are identified as metaphorically-expressed words. The discourses that contain metaphorically-expressed words are called “metaphor expressions”.

Once the metaphors are identified, they are categorized and labeled as such and the researchers then determine the set of characteristic features of the source and target domains in the conceptual mapping model, thereby determining the corresponding points that are activated in the cognitive framework. After this, researchers list the number of selected metaphors in each attribute of the source domain, establish mapping diagrams, and then explain the mechanisms for moving and copying the attributes across the source and target domains in conceptual expressions. Thus, this shows the regularity in mapping and presents a clearer understanding of the characteristics of the writer's thinking and perception. In this way, the MIP proves the intertwined trilateral relationship - language, culture and thinking - expressed in conceptual expressions.

IV. FINDINGS AND DISCUSSION

Electronic devices are those containing semiconductor devices and electronic circuits operating on the principle of automation. Investigating 230 articles, researchers collected 432 metaphors related to “Human beings are electronic devices”. According to the principle of partial and unidirectional mapping, the attribute strokes from the source domain “electronic devices” are activated and mapped onto the target domain “human beings”, thereby transferring certain properties from the source domain to the target domain.

With corpus data of 230 articles selected from Online Vietnamese articles, the conceptual model of “Human beings are electronic devices” is visualized through the mapping diagram in Table 1.

TABLE 1
THE MAPPING DIAGRAM OF “HUMAN BEINGS ARE ELECTRONIC DEVICES”

| Source Domain (Electronic Devices) | | Target Domain (Human Beings) |
|---|---|--|
| There is electricity-storage system (battery) | → | There is energy-storage system (bio-battery) |
| The phenomenon of low battery, shutting down when battery wears out. | → | The phenomenon of low battery energy, worn-out battery, shutting down when low on energy. |
| Electronic devices are formed by integrated circuits which may become short circuits as a result of getting wet | → | Brain is made up of nerve system which may demonstrate the so-called “wet IC”, or “short circuit” once it goes wrong |
| Battery/energy saving mode is available | → | Battery/energy saving mode is available to brain |
| Different devices may receive on the same or separate radio frequency | → | Two individuals may receive on the “same frequency” or “separate frequency” |
| Pressing F5 will refresh or reload the page or document window | → | “Pressing F5 ” will refresh/change himself/herself or reset command buttons |

Selected corpus data reveal that many metaphors related to “Human beings are electronic devices” appear with specific metaphorically expressed words corresponding to each attribute of the source domain. Typical metaphorically expressed words of technical and electronic terminology of the source domain are picked out and mapped onto the target domain “human beings”. The basic metaphor “Human beings are electronic devices” gives rise to the following four derivative metaphors:

A. The Conceptual Metaphor “Human Body Parts Are Electronic Device Parts”

Apart from semiconductor components and integrated circuits, electronic devices also contain numerous accessories such as batteries, chargers, automatic mode setting buttons, and clocks, among others. Concerning the conceptual

thinking that “Human beings are electronic devices”, electronic devices/parts are also transferred to human parts as, for example, body battery, chest enhancement, flat-screen television, super flat screen, screws, body clock, biological clock, server, charger, adjustment button, 24-hour reset button, switch, and so on. Overall, 150 metaphorically-expressed words for this type of metaphor were found, and the frequency of these metaphors used for “human body parts are electronic device parts” is shown in Table 2.

TABLE 2
THE CONCEPTUAL METAPHOR OF “HUMAN BODY PARTS ARE ELECTRONIC DEVICE PARTS”

| Source Domain's Attributes | Metaphorically-Expressed Words | Frequency | Source Domain's Attributes | Metaphorically-Expressed Words | Frequency |
|----------------------------|---|-----------|----------------------------|---|-----------|
| Electronic Device Parts | Pin cơ thể/Pin tình yêu (Body battery/Love battery) | 22 | Electronic Device Parts | Cục sạc (Charger) | 1 |
| | Đồng hồ cơ thể (Body clock) | 6 | | Đồng hồ sinh học (Biological clock) | 46 |
| | Máy chủ (Server) | 3 | | Nút điều chỉnh đồng hồ sinh học/nút đặt lại 24 giờ (Adjustment button, 24-hour reset button) | 5 |
| | Cặp loa/ độ loa (pair of loudspeakers, referring to the chest/ loudspeaker enhancement/ boob job) | 12 | | Màn hình phẳng/ màn hình si âu phẳng/ Ti vi màn hình phẳng (Flat screen/ super flat screen/ Flat-screen television) | 25 |
| | Công tắc/ công tắc di truyền/ công tắc gen/ công tắc thông minh/ công tắc bật-tắt ý thức (switch/ genetic switch/ gene switch/ smart switch/ on-off consciousness switch) | 25 | | Screws | 5 |
| Total | | 150 | | | |

The level of daily energy intake is based on one's body mass index. Viewing the human body as an electronic device, Vietnamese people tend to encode and consider the reservoir of human energy as a “biological battery”. A fully charged battery ensures the continuity of a person's daily activities. In case of battery drain, it needs to be fully “charged” to enable physical and mental activities. Owning an inherent “charger” in the body, one can “charge himself/herself” in many ways such as through rest and relaxation; listening to music; traveling; sleeping; enjoying delicious meals; and meeting friends to name a few. Hence, body energy is by nature a combination of energy types taken from various sources like food, mental food, and muscle and mind-relaxing activities. This means that people need both physical energy and mental energy for daily activities. For example:

- 5 lý do khiến **pin cơ thể** của bạn hoạt động ở mức thấp (antien.vn, 20/02/2021).
“5 Reasons Why Your **Body Battery** is Working at a Low Level”
- Theo đó, để có thể liên tục lan tỏa năng lượng tích cực cho đội ngũ, chính **lãnh đạo phải biết cách “sạc pin” cho mình hàng ngày** (joyuni.vn, 07/01/2022).
“Accordingly, spreading positive energy to his staff requires **the leader to know how to “charge the battery” for himself every day.**”
- Thế nên, đến hẹn lại lên, giờ này **tôi đang “sạc pin” ở Taiwan ...** Gì thì gì ì **đừng quên cục sạc của chính mình** (plo.vn, 19/10/2015).
“So, as a habit, **I'm “charging” in Taiwan** right now ... Anyway, **don't forget your own charger.**”

Like an electronic device, the human body is thought to have a “biological clock” and a “server” in the brain tasked with monitoring and controlling the circadian rhythm of the body. In fact, electronic or mechanical watches can lose or gain time compared to the actual time, which requires users to make proper adjustment. So is the case of the “biological clock” in the human body. Malfunctioning can be corrected by adjusting the circadian rhythm and relaxation time. For example:

- Các thay đổi này bắt nguồn từ các nhóm phân tử tương tác bên trong cơ thể, gọi chung là các **đồng hồ sinh học**, và **“máy chủ” tọa lạc trong bộ não** chịu trách nhiệm điều phối và quản lý chúng để đảm bảo cơ thể vận hành đồng bộ hóa (vietnamnet.vn, 06/02/2015).
“These changes stem from groups of molecules within the body known as **biological clocks**, and **“server” located in the brain** tasked with coordinating and managing them to ensure consistent operation.”
- Vì sao rối loạn lại gây mất ngủ? và **“chỉnh” lại đồng hồ cơ thể** khi bị rối loạn như thế nào? (benhvien199.vn, 27/12/2019).
“Why do disorders cause insomnia? And how to **“adjust” the body clock** when it is disordered?”
- Mỗi ngày là một cơ hội để bạn bắt đầu lại; Tôi gọi đây là **“nút đặt lại 24 giờ” của tôi** (glints.com, 16/01/2022).
“Every day is an opportunity to have a fresh start; I call this **my “24 hour reset button.”**”

The human body is considered an electronic device, a complete machine that functions through synchronization between its parts and internal devices. Based on the similarities of the partial properties of devices, the Vietnamese

interpret acupoints and meridians of the human body as a system of semiconductor components. The acupuncture points are “switches” that can be started by switching it on, activating positive energy for the body to function and children nervous systems. Moreover, the brain also functions as an individual electronic device with a consciousness switch that operates through an on-off proactive mechanism. For example:

7. 5 bộ phận trên cơ thể là “*công tắc trường sinh*”, xoa bóp mỗi ngày đẩy lùi bệnh tật (phunutoday.vn, 12/08/2022).
“5 human organs are ‘*immorality switches*’, daily massages keep illnesses away.”
8. Phát hiện “*công tắc*” *bật - tắt ý thức* trong não bộ người (plo.vn, 09/07/2014).
“Discovering *the consciousness on-off ‘switch’* in the Human Brain”

The bodily “switches” in examples 7 and 8 are metaphorical indicators for human acupoints. The hidden acupoints in the human’s shoulders, umbilicus, wrists, palms, and soles are considered “immortality switches”. When massaged, these acupoints act as yang activators that aid blood circulation and help the body stay healthy. The frontal lobe of the human brain functions like a switch, capable of turning on-off and causing humans to lose and regain consciousness. When commencing usage of electrical impulses at higher frequencies, scientists discovered a notable open-close effect of consciousness similar to the function of a switch in an electronic device.

It’s not just the human body that is considered an electronic device or a complete machine - even genetic features are considered a biological machine. Consumption of everyday produce in nutritional diets is similar to a lubricant system, capable of altering “genetic switches”. For example:

9. Thực phẩm chúng ta ăn không chỉ thay đổi các *công tắc di truyền* trong tế bào mà còn với các *công tắc di truyền* của các vi sinh vật sống trong ruột, da và niêm mạc của chúng ta (nhathuoclongchau.com.vn, 30/3/2022).
“The produce we consume does not only alter the *genetic switch* in cells, but it also alters the *genetic switch* in living organisms found in our intestine, skin, and mucous.”

The Vietnamese also tend to consider human body parts as parts of electronic devices, especially the woman’s body - a prioritized concern of men. Within the ideology of Confucianism, women’s bodies are most attractive due to their curvy features. A beautiful woman, apart from her face, skin, and natural composition, is one whose roundness of breasts is a special interest point for the opposite gender. Based on the similarities of their compositions when projecting the source domain “electronic” devices to the target domain “human beings”, the Vietnamese compare women’s breasts to “loudspeakers” or amplifiers. So, when women get breast augmentation, it is often called “enhancing loudspeakers”. For example:

10. Phụ nữ hiện đại - ngại gì “*độ loa*” (suckhoe123.vn, 19/11/2020).
“Modern Women - Why Fear ‘*Loudspeakers Enhancement*?’”
11. *Độ loa to* không còn nỗi lo ngực lép chảy xệ (suckhoe123.vn, 19/11/2020).
“*Big loudspeakers enhancement* does away with fear of drooping flat breasts.”
12. Team “*Tivi màn h nh phẳng*” đã có mặt tại Dr Hoàng Tuấn! Đôi bạn “cùng tiến” - Hai chị khách cùng nắm tay nhau đi “*độ loa*” nhà bác sĩ đây ạ (drhoangtuan.vn, 15/12/2020).
“*Flat-screen televisions*” team are now present at Dr Hoang Tuan! The “moving-forward-together” couple - Two female customers hold hands to the clinic for a “*boob job*”.

In contrast with the attractiveness of round breasts or “enhanced loudspeakers” are flat chests in smaller girls. In the same line of “humans are electronic devices”, flat chests remind Vietnamese of “flat screens” or “super flat screens”. Girls who are nicknamed “flat screen” usually express signs of self-deprecation, explained by the Confucianism ideology where beautiful women have round, attractive breasts. For example:

13. Nỗi khổ khi chị em có “*màn hình phẳng*” (vov.vn, 27/04/2016).
“Shared struggle of women with ‘*flat screens*’.”
14. Đừng chê “*tí vi màn hình phẳng*”, ngực lép vẫn có nhiều “kép” yêu! (yan.vn, 03/05/2016)
“Don’t shame ‘*flat screen televisions*’. Smaller breasts still attract men in the tenfold!”
15. Đã từ lâu, tắm biển là một khái niệm xa vời với chị vì không nở “trung” ra vòng 1 lép kẹp như *tivi “siêu phẳng*” (ngoisao.vn, 04/05/2012).
“For a long time, the concept of beaching is a foreign one for me because I have no desire to “showcase” my small breasts resembling ‘*flat-screen TVs*’.”

Also, along the lines of the human body and electronic devices duality comparison, if the full chests of women are likened to “loudspeakers” of semiconductor components, then flat chests are likened to “screws”, a mounting component which facilitates the impact point for devices and machinery. In the Vietnamese language, “screw breasts” indicate women with flat or even extremely flat chests. For example:

16. Nếu ngực bạn “*chỉ có ốc vít*”, hãy học cách gọi cảm đầy kiêu hãnh của Tăng Thanh Hà (webtretho.com, 20/04/2018).
“If your breasts are ‘only screws’, follow in the proud sex appeal of Tăng Thanh Hà.”

Evidently, the impact of Vietnam’s agriculture culture on the fertility rites beliefs of East Asia is embedded into the Vietnamese way of thinking. As a result, aesthetic criteria and beauty standards have all shifted towards roundedness, fullness, and openness, which also coincides with fertility strength and the natural gendered intuition blessed towards women.

In a nutshell, there is a similarity between the operating mechanism of electronic devices and that of human beings. In other words, the human body is a complete machine operating under the dynamics of machines.

B. Conceptual Metaphor “Human Status is Electronic Device Status”

Due to mechanical-technical problems or battery failure, an electronic device may operate poorly, malfunction or stop working completely. As metaphor derived from the concept of “Human beings are electronic devices”, the metaphor “the human status is the electronic device status” is prevalent in Online Vietnamese articles with such metaphorical tokens as *chập mạch* (short circuit), *ẩm IC* (wet IC), *chạy chậm* (slow running), *chai pin* (battery drain), *bộ nạp bị trục trặc* (charger malfunction), *pin sạc như không* (unchargeable battery), *chệch sóng* (wave deflection) or metaphorical tokens about the exhausted state of machines like *yếu pin* (low battery), *hết pin* (out of battery), *cạn pin* (battery drop), *tụt pin* (battery drain), *pin chạm đáy* (battery bottom), *hết pin giữa đường* (battery out on the way), *sập nguồn* (power failure), *tắt điện* (power off), and so on. Researchers found as many as 106 metaphorical-expressed words for the source domain metaphor “state of electronic devices” in Online Vietnamese articles. They are listed in Table 3.

TABLE 3
CONCEPTUAL METAPHOR “HUMAN STATUS ARE ELECTRONIC DEVICE STATUS”

| Source Domain's Attributes | Metaphorically-Expressed Words | Frequency | Source Domain's Attributes | Metaphorically-Expressed Words | Frequency |
|----------------------------|---|-----------|----------------------------|--|-----------|
| Electronic Device Status | Hết pin/tụt pin/sụt giảm/cạn kiệt pin/cạn pin cơ thể (Low battery/low battery/drop/battery drain/body battery) | 18 | Electronic Device Status | Cơ thể full pin (Full battery body) Healthy and dynamic | 1 |
| | Tăng mức pin cơ thể (Increase body battery level) | 02 | | Tình trạng hết pin giữa đường (Battery drain on the run) Erectile Dysfunction | 2 |
| | Giảm mức pin cơ thể (Reduce body battery level) | 02 | | Cơ thể sập nguồn/sập nguồn (Body power down/power failure) | 21 |
| | Não bộ “tắt điện” (The brain “turns off”) | 1 | | Pin sạc như không (Non-rechargeable battery) | 1 |
| | Hệ thần kinh hết pin (Nervous system out of battery) | 1 | | Quý ông/nam giới yếu pin/Quý ông hết pin (Gentleman/men with low battery/Gentleman with low battery) Decreased sexual desire/ability | 7 |
| | Não bộ bật chế độ tiết kiệm pin/điện (Brain turns on battery/power saving mode) | 2 | | Tần số chung (Common frequency) Similar interest/hobbies | 2 |
| | Cơ chế tiết kiệm pin/tiết kiệm điện (Mechanism of battery saving/power saving) | 3 | | Sự “chệch sóng” (The “incompatibility”) difference | 2 |
| | Mức pin chạm đáy (Battery level bottomed) | 2 | | Chập mạch/chập dẫy thần kinh (Short circuit/nerve short) Mental disorder | 7 |
| | Pin cơ thể chạy chậm (Body battery running slow) | 2 | | Ăm IC/chập IC (wet IC/Short IC) Mental disorder | 12 |
| | Đầy pin/sạc đầy (Full battery/fully charged) | 2 | | Đầu óc nhảy số/tư duy nảy số (Number jumping mind/number bouncing mind) Quick-witted | 2 |
| | Pin cảm xúc bị tụt cạn (Emotional battery drained) | 3 | | Rồ ga (press the gas pedal) Speed up | 1 |
| | Pin bị chai sạn (The battery is weak) | 1 | | Bộ nạp bị trục trặc (The loader is malfunctioning) | 1 |
| | Bật chế độ nhận quà (“turn on” gift receiving modes) | 4 | | Đăng xuất khỏi trái đất (Log out from earth) | 8 |
| | Bật công tắc (Turns on the switch) | 4 | | | |
| Total | | 114 | | | |

Linking the human state to the electronic device state, the Vietnamese tend to metaphorize human health problems including sexual abnormalities, as those of machines. While the biggest trouble facing electronic devices is the short-

circuiting microprocessor - the “short circuit” or “wet IC” - the nervous system really matters. In medicine, these are called forms of schizophrenia. For example:

17. Hội chứng “**chập mạch**” ở giảng đường (vnexpress.net, 14/9/2006).
“*The ‘short circuit’ syndrome on the university campus.*”
18. Bệnh tâm thần có rất nhiều thể, dạng, mức độ khác nhau... và mọi người đều có thể bị “**ấm IC**” - dẫn tới “**chập mạch**” (baophunuthudo.vn, 11/5/2012).
“Mental illness comes in many forms, types, and degrees of severity... and everyone can suffer from ‘*soaked IC*’, then ‘*short circuit*.’”
19. 8X bị “**ấm IC**” (ngoisao.vnexpress.net, 25/2/2006).
“8X generation get ‘soaked IC’ - a type of mental disorder”

As can be seen in examples 17, 18, and 19, the short-circuiting in the microchips of electronic devices are mentioned to metaphorize the abnormal mental state of a person. In fact, mental illnesses such as paranoia and mental instability have increased among Vietnamese youth who are under excessive pressure of school or work. To a certain extent, this nervous abnormality is similar to the malfunction of electronic devices. People with these illnesses are often labeled by the public as “hâm hấp” (steaming), “ấm đầu” (warm head), or “cám đê chốc vung” (pig brain in the pot). Indeed, when electronic devices short-circuit, they often get extremely hot and that heat radiates out of the case which can be felt just by touching the device.

Active electronic devices may be subject to *bị chai pin* (battery drain) or *bộ sạc bị trục trặc*, (a malfunctioning charger) all of which can end up with a non-rechargeable battery or the device becoming disconnected or turned off. Mapped onto the target domain “human”, these patterns are widely used in Online Vietnamese articles as metaphorical tokens about human health problems such as *chai pin cảm xúc* (emotional battery drain), *pin cảm xúc bị cạn* (emotional battery drop), *não bộ tắt điện* (brain power off), *cơ thể sập nguồn* (body power down). For example:

20. Làm gì khi “**pin cảm xúc**” bị cạn sau khi khỏi COVID-19 (suckhoedoisong.vn, 18/01/2022).
“What to do *with emotional battery drain* after COVID-19 recovery?”
21. Khi cơ thể cạn năng lượng, thời gian ngủ là lúc bạn “**sạc pin**” lại bản thân. Khi thiếu ngủ hoặc ngủ không đủ giấc, *cơ thể chưa kịp “full” pin* đã phải sử dụng tiếp, về lâu dài sẽ dẫn đến *pin bị chai sạn*... (nhathuolongchau.com, 18/02/2022).
“When you feel exhausted, sleep is the ultimate body recharger. A frequent lack of sleep may result in non-full body battery which, in the long term, leads to *a hardened battery*.”
22. [...] khi thiếu nước và khoáng chất, cơ thể sẽ bắt đầu mệt mỏi không rõ lý do, *não bộ “tắt điện”*, cơ thể uể oải, ngáp dãi hoặc khó tập trung (vietnamnet.vn, 16/4/2014).
“...when there is a lack of water and minerals, the body will start to feel tired for no reason, then your *brain ‘turns off’*, the body is sluggish, there is yawning and you may having difficulty concentrating.”
23. Ai trong cuộc sống cũng có những lúc *muốn “sập nguồn”, như “hết pin”*, cạn kiệt sức lực. (dantri.com.vn, 03/12/2020)
“It is likely that everyone feels like ‘*power off*’ or ‘*dead battery*’ once in a while.”

The similarity between the source domain and the target domain is also reflected in the automation of electronic devices. While smart devices are able to adjust the level of energy consumption, the human brain can automatically “turn on battery saving mode” once the body energy is drained. This function aims to keep the optic nerve active. For example:

24. Khi bạn đói, *não bộ có thể bật “chế độ tiết kiệm pin”* và giảm độ phân giải thị giác của bạn xuống (soha.vn, 03/07/2022).
“When you're hungry, your brain can *turn on ‘battery saver mode’* and lower your visual resolution.

Regarding the sex life, Vietnamese people tend to consider the male body as an electronic device whose energy level is mapped onto a man’s sexual health. Poor performance of “low battery”, “worn-out battery”, “charger malfunction” or “battery drain on the run” are metaphorically conceptualized as sexual dysfunction or reduced sexual desire in males. For example:

25. Dấu hiệu nhận biết *quý ông bị “yếu pin”* (vietnamnet.vn, 03/10/2018).
“Signs that *a gentleman has a ‘low battery’*”
26. Hiện tượng *hết pin* hay *bộ nạp bị trục trặc* là không hiếm trong sinh hoạt vợ chồng nhưng bạn đừng quá lo ngại (skhoe24h.com, 27/02/2019).
“The phenomenon of *running out of battery* or *faulty charger* is not uncommon in married life, but don't worry too much.”

The automation property of electronic devices is also projected onto the automatic “on” state. One feature of the human “device”, for example, is the “on” status of waiting for presents during holiday events, as if this is an installed program and intergrated into the human machine. For example:

27. Chị em “**bật chế độ**” nhận quà, thị trường quà tặng nhộn nhịp trước ngày 8-3 (daidoanket.vn, 07/03/2022).
“Women ‘*turn on*’ *gift receiving modes*, causing an active gifting market before the 8th of March.”

Another state of electronic devices also used by Vietnamese to project on the human target domain is starting up or shutting down devices. Vietnamese people consider human beings akin to a personal computer/laptop. When the

computer is running and commanded to shut down, this means that the user wants to exit from the computer system. When projecting this characteristic onto the target domain “humans”, “logging out” could indicate death/the sudden and surprising end of life. The command which represents these metaphorical expressions is “logging out of Earth”. For example:

28. 2 người nhảy lầu “**đăng xuất khỏi trái đất**” do cháy chung cư, nghi tự phóng hỏa? (vtg.vn, 23/03/2022)

“Are 2 people who ‘**logged out of Earth**’ jumping off their building due to apartment fires suspects of arson?”

29. Run rẩy trước những thiết kế cửa bước sai một ly là “**đăng xuất khỏi Trái đất**”. (vtc.vn, 13/04/2022).

“Trembling when faced with door designs where one step is all it takes to ‘**log out of Earth**’.”

Therefore, Vietnamese people consider the act of “logging out” of a computer similar to the end of human life.

C. Conceptual Metaphor “Human Energy Charging is Electronic Device Charging”

If the device is showing as low battery, dead battery, it needs recharging. Mapped onto the *target* domain “human”, these attributes activate such metaphorical tokens as *sạc pin cho cơ thể* (charging the body battery), *sạc pin cho não bộ* (brain charging), *sạc pin cảm xúc* (emotional battery charge), *sạc pin trái tim* (heart battery charger), *sạc pin tinh thần* (mental battery charger), *sạc pin tình dục* (sex battery charger), *nạp điện trong chuyện ấy* (sex charging), and so on. With proper use, the battery life of an electronic device can be extended. The same is true for the human body whose battery can be prolonged with proper care. Through the survey data, we found 140 metaphors of this type, shown in Table 4.

TABLE 4
THE CONCEPTUAL METAPHOR “HUMAN ENERGY CHARGING IS ELECTRONIC DEVICE CHARGING”

| Source Domain's Attributes | Metaphorically-Expressed Words | Frequency | Source Domain's Attributes | Metaphorically-Expressed Words | Frequency |
|----------------------------|---|-----------|----------------------------|---|-----------|
| Electronic Device Charging | Nạp lại pin/sạc pin/bổ sung pin cơ thể (Recharge the battery/charge the battery/replenish the body battery) | 28 | Electronic Device Charging | Sạc pin năng lượng (Energy battery charger) | 2 |
| | Sạc pin cho não bộ/não bộ được sạc (Charge your brain/brain is charged) | 5 | | Sạc pin từ bên trong (Charge the battery from the inside) | 1 |
| | Kéo dài tuổi thọ pin cơ thể (Extend body battery life) | 2 | | Nạp điện trong chuyện ấy (Recharge for sex) | 2 |
| | Hồi phục pin cơ thể (Restore body battery) | 1 | | Sạc dự phòng vào giờ giải lao (Power bank at break time) | 2 |
| | Cơ thể được sạc đầy năng lượng /Sạc đầy (The body is fully charged with energy/Fully charged the body's energy battery) | 7 | | Sạc pin cho những mối quan hệ (Charge the battery for relationships) | 2 |
| | Sạc pin cảm xúc (Emotional battery charging) | 5 | | Sạc pin tình yêu (Charge the battery of love) | 3 |
| | Sạc pin trái tim (Heart battery charger) | 3 | | Sạc năng lượng cho cục pin sinh học/Sạc lại cục pin sinh học (Charge the bio battery/ Recharge the bio battery) | 4 |
| | Sạc pin cho quan hệ tình dục/Sạc pin tình dục (Charger for sexual relation/Charge for sex) | 5 | Electronic Device Charging | Sạc pin tinh thần (Mental battery charger) | 5 |
| | Sạc pin cho cơ thể (Charge the body battery) | 13 | | Lên dây cồng tinh thần/lên giầy cồng bản thân (Wind up your spirit/wind yourself up) | 42 |
| | Tự sạc pin lại bản thân (Recharge your own battery) | 7 | | Sạc bằng những cái ôm (Charge with hugs) | 1 |
| Total | 140 | | | | |

Metaphorically conceptualized as electronic devices, the human body's battery needs charging in case of low battery. Proper charging and maintenance of the bio-battery also helps prolong the life of the body battery in the long run. For example:

30. 4 thói quen giúp *cơ thể* “**sạc pin**” tuyệt vời mỗi sáng (tienphong.vn, 20/10/2016).

“4 habits to **help the body ‘charge the battery’** wonderfully every morning”

31. Làm thế nào để *người trẻ* **kịp “sạc pin” năng lượng** cho đủ đầy sau 1 ngày dài? (vov.vn, 25/06/2021)

“How can **young people ‘charge’ their energy** fully after a long day?”

32. Ai cũng muốn có thật nhiều sức khỏe và sống trường thọ, nhưng mong muốn thì nhiều mà chẳng mấy ai hiểu được sự quan trọng của việc “**nạp lại năng lượng cho cục pin sinh học**” của mình (thesaigontimes.vn, 29/08/2008).

“Everyone wants to lead a healthy and long life. Nevertheless, not many of them understand the importance of

‘recharging their biological battery’.

33. Tập thể dục làm **cạn kiệt Pin cơ thể** của bạn tạm thời, nhưng tập thể dục thường xuyên với mức độ phù hợp sẽ mang lại kết quả **và kéo dài tuổi thọ pin của bạn** về lâu dài (garmin.com, 11/12/2020).

“Exercise **drains your body battery** temporarily, but regular exercise in the right amounts will bear fruit and **extend your battery life** in the long run.”

Charging supplies the body with both physical and mental energy. In the metaphorical expressions we found, the attribute “charge the battery” is used to conceptualize the target domain “human’s” process of charging/enhancing mental energy such as their emotions, thoughts, or relationships. For example:

34. Giống như cái cách bạn sạc đầy pin cho chiếc điện thoại của mình, **trẻ con cũng cần “sạc pin”** một chút. Chỉ cần **“sạc” bằng những cái ôm** và khoảng thời gian tĩnh lặng và được mẹ vỗ về, âu yếm. Hiện tượng này được các nhà tâm lý học nhắc đến với tên gọi **“Sạc pin cảm xúc”** và tất cả chúng ta đều cần tới nó (afamily.vn, 20/02/2017).

“Children, like your phone, **need charging** by enjoying hugs and dedication from their mothers. This phenomenon is referred to by psychologists as **‘emotional charging’** and we all need it.”

35. Có nhiều cách **“sạc pin” cho những mối quan hệ sắp “sập nguồn”**..., tìm lại **“tần số” chung** cho cả hai. (ybox.vn, 04/01/2021)

“There are several ways to **‘charge the nearly dead battery for relationships’** and find the “frequency” common to both.”

36. **“Sạc pin” cho não** thế nào đúng cách? (vietnamnet.vn, 16/4/2014)

“How to **recharge your mind** properly?”

As can be seen in the examples 34-36, *emotional battery* is quickly “charged” with cuddles and loving gestures. Once human relationship deteriorates, it needs to be charged like a low battery electronic device. This can be done by giving mutual sharing and sympathy like the way two separate electronic devices are connected via “common radio frequency”. Brain is the central nervous system controlling all human activities. Once body energy gets exhausted, the brain’s priority is shifted toward taking rest and relaxation, which is considered a way to recharge and regenerate the brain. Metaphorically, sexual satisfaction is mentioned by mapping the “charging” of electronic device battery. For example:

37. **Sạc “pin tình dục”** giúp tăng cơ hội thụ thai (hoibenh.com, 21/09/2016).

“**Charging the ‘sex battery’** increases the chances of conception.”

A mechanical watch is powered solely by a mainspring. While manual watches require winding, automatic watches need the wearers’ movement. Scanning metaphorically-expressed words, we find similarities in the way of saying “wind up your spirit” or “wind up yourself” to conceptualize the way human beings recharge with internal factors rather than external elements. For example:

38. **Sĩ tử “lên dây cót” tinh thần** ở Văn Miếu (cand.com.vn, 02/07/2009).

“Exam takers **‘wind up’ their mind** at the Temple of Literature.”

39. **“Lên dây cót” tinh thần** để trẻ đi học trở lại đầy năng lượng (dantri.com.vn, 14/05/2020).

“Back-to-school **‘winding up kids’ minds’** with full of energy.”

D. The Metaphor “Resetting/Adjusting Humans Beings Is Resetting/Fixing Electronic Devices”

Active electronic devices will inevitably suffer from technical problems that need reinstalling or renewing. The action “refresh” or F5 that free up the memory and cookies is also true in the case of human beings. In the mind of Vietnamese people, human beings are somewhat like a computer that can be “refreshed” by pressing the F5 key. Expert advice given to those who are under stress or overloaded is to **F5 lại bản thân** (F5 yourself), **F5 tâm trí** (F5 your mind), **F5 làn da** (F5 your skin), và **F5 cho phong cách** (F5 your style). These metaphors can be found 66 times, as shown in Table 5:

TABLE 5
THE CONCEPTUAL METAPHOR “RESETTING/ADJUSTING HUMANS BEINGS IS RESETTING/ FIXING ELECTRONIC DEVICES”

| Source Domain’s Attributes | Metaphorically-Expressed Words | Frequency | Source Domain’s Attributes | Metaphorically-Expressed Words | Frequency |
|----------------------------|---|-----------|----------------------------|---|-----------|
| Refresh Electronic Devices | F5 cho phong cách (F5 style) | 1 | Refresh electronic devices | F5 cho tình cảm vợ chồng (F5 husband and wife love) | 1 |
| | F5 bản thân/F5 chính mình (F5 myself) | 36 | | F5 cho sức khỏe (F5 health) | 1 |
| | F5 cho tâm trí/F5 tinh thần (F5 the mind /F5 spirit) | 3 | | F5 cho quan hệ bạn bè (F5 friendship) | 1 |
| | Nhấn nút F5 (Press the F5 key) | 3 | | F5 cho làn da (F5 skin) | 1 |
| | Ngắt kết nối (Disconnect) | 2 | | Cài đặt (Setting) | 4 |
| | Đại tu cơ thể/đại tu nhan sắc (Overhaul your body/ overhaul appearance) | 13 | | | |
| Total | | | 66 | | |

Given the similarity between electronic devices and human beings as a part of metaphorical expressions, we found that Vietnamese people tend to regard the human body as a computer/laptop. Once people lose peace of mind and motivation, they need to be renewed like the way a computer is refreshed when pressing F5 key. In this way, one can leave troubles behind and embark on a new, interesting chapter of their life. For example:

40. Sau khoảng thời gian “nghỉ xả hơi” dài, đã đến lúc teen mình cùng **F5 lại bản thân**, chuẩn bị “**rồ ga**” để hướng về mục tiêu “leo top” trong học kỳ này rồi đó (hoahoctro.tienphong.vn, 22/02/2022).

“After a long “relaxation”, it's time us, teenagers, to **F5 ourselves**, readily **press the gas pedal** to ‘climb to the top’ this semester.”

41. 04 bước **F5 tâm trí** - làm mới bản thân (menstay.com, 24/02/2022).

“4 steps to **F5 your mind** - renew yourself.”

42. **F5 tinh thần** khi cuộc sống qu ánh ần ch ần (vnexpress.net, 26/8/2019).

“**F5 your mind** when life gets dull.”

In the above examples, the action F5 yourself means activating yourself, while the action “press the gas pedal” in vehicles on the run symbolizes the acceleration toward realizing objectives.

In some cases, pressing the F5 key does not work. Broken or out-of-track operating systems on electronic devices sometime need resetting. As for the bio-clock in human body, like electronic devices, it also requires resetting in order to run as beforehand. For example:

43. “**Cài đặt lại**” **đồng hồ sinh học** của cơ thể bạn (vinmec.com, 23/11/2022).

“Resetting’ **your internal biological clock**.”

As such, the similarities between the source domains and target domains in 43 in the property of being able to reinstall and refresh the operating system. When people are “reinstalled”, the mental state will bring fresh and strong energy.

V. CONCLUSION

By examining the cross-domain mapping, the movement of attributes between the “source” and “target” domains, and the hierarchy in the conceptual metaphor “human beings are electronic devices” in online Vietnamese articles, we can see that the conceptual linking between “electronic devices” and “human beings” stems from background knowledge acquired from real-life experience of exploring the primary structure and operating mechanism of electronic equipment. The formation and mapping of the metaphor with the target domain “human beings” proves the similarity of the author’s mind in conceptualizing “human beings” as an “electronic device” with a full set of spare parts, an operating mechanism, a warranty mechanism, a refresh feature, and other. With the source domain “electronic devices” and the target domain “human beings”, the variability of the metaphor and the domination of the context of the times, material civilization and industrial civilization over conceptual thinking amongst the native community are affirmed.

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Nguyen Thi Bich Hanh, who received a doctorate in Linguistic in 2015 from Vietnam Academy of Social Science, is currently the Head of Linguistic Studies in the Graduate Academy of Social Sciences at Vietnam Academy of Social Science. Her main relevant fields are Cognitive Linguistics, Semantics and Pragmatics. She has published three monographs on Cognitive Linguistics, written a variety of scientific journal articles both domestically and internationally in relation to her fields of research, and was head of two ministerial research topics on conceptual metaphors.



Le Vien Lan Huong, who received a doctorate in Linguistic in July, 2023 from Vietnam Academy of Social Science, is currently a lecturer of English at Vietnam Military Medical University. She has written multiple scientific papers published domestically and internationally in the field of research.



Nguyen Kim Cuong received his Medical doctorate in 2017 from Hanoi Medical University. He has held positions as the Deputy Head of the Intensive Care Unit, Head of Tuberculosis Department, and Lecturer of Tuberculosis Studies at Hanoi Medical University. Today, he is the Vice Director of the Vietnam Lung Hospital. He has had multiple articles and scientific work published in international and domestic newspapers, and received the Ho Chi Minh award for Science and Technology in 2022. His field of specialty and research is clinical tuberculosis, respiratory-related illnesses, and medicine-resistant tuberculosis.



Tran Huy Sang, who received a Linguistic Doctorate in 2020, is currently the Deputy Head of Foreign Languages Department, Vietnam Military Medical University. He has had multiple newspaper articles and scientific works published in the field of Linguistics.



Ngô Thị Tuyet, who received a Masters in Linguistics in 2015 is currently a Vietnamese language lecturer at Vietnam Military Medical University. She has had multiple newspaper articles and scientific works in the field of Linguistic studies published in domestic journals.