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TYPOLOGICAL DIFFERENCES BETWEEN PERSUASION, SUGGESTION AND EMOTIONAL CONTAGION IN COMMUNICATIONS

ТИПОЛОГІЧНІ ВІДМІННОСТІ МІЖ ПЕРЕКОНАННЯМ, НАВІЮВАННЯМ ТА ЕМОЦІЙНИМ ЗАРАЖЕННЯМ У КОМУНІКАЦІЇ

Abstract. The article is devoted to the problem of descriptive and analytical characterization of verbal and non-verbal-communicative features of persuasion, suggestion and emotional contagion. It is emphasized that persuasion as a technology of influence, when used separately, is incompatible with either suggestion or infection. Such incompatibility is caused by both the opposition of intentions (the formation of beliefs as part of value consciousness) and technological components designed for long-term impact.

It was noted that persuasion operates in the mode of long-term internalization, which excludes the assimilation of unassimilated informational contents, and therefore is incompatible with introjection. The very fact of concession to persuasion in favor of suggestion or emotional infection indicates a lower status of the communication partner. The latter is transformed from a partner into an object of influence, that is, his psyche can be instrumentalized.

It was defined that the suggestion as a technology of influence is designed for introjection, which presupposes incomplete informational assimilation, and therefore - subsequent reactions of internal alienation of the psyche in relation to uninternalized (imposed) contents. The suggestor, unlike the subject of persuasion, does not perceive

the addressee of communication as an equal partner, and therefore does not consider it necessary to resort to the argumentative part of communication. It was defined that the suggestion can be preceded by emotional contagion, which makes the psyche more flexible, reduces the level of criticality of consciousness, which increases the effectiveness of suggestion. Therefore, these two technologies allow for consistent use. On the other hand, influence through contagion is not designed for long-term transformations.

Keywords: influence, persuasion, suggestion, emotional contagion, communications.

Анотація. Статтю присвячено побудові описової та аналітичної характеристики вербальних та невербально-комунікативних особливостей переконання, навіювання та емоційного зараження. Підкреслюється, що переконання як технологія впливу, якщо використовувати їх окремо, несумісне ні з навіюванням, ні з зараженням. Така несумісність зумовлена як протиставленням намірів (формування переконань як частини ціннісної свідомості), так і технологічними компонентами, розрахованими на довгостроковий вплив.

Зазначено, що переконання діє в режимі довгострокової інтерналізації, що виключає засвоєння незасвоєного інформаційного змісту, а отже, несумісне з інтроекцією. Сам факт поступки переконанню на користь навіювання чи емоційного зараження свідчить про нижчий статус партнера по спілкуванню. Останній перетворюється з партнера на об'єкт впливу, тобто його психіка може бути інструменталізована.

Було визначено, що навіювання як технологія впливу розраховане на інтроекцію, яка передбачає неповне інформаційне засвоєння, а отже – подальші реакції внутрішнього відчуження психіки стосовно неінтерналізованих (нав'язаних) змістів. Сугестор, на відміну від суб'єкта переконання, не сприймає

адресата комунікації як рівноправного партнера, а тому не вважає за потрібне вдаватися до аргументативної частини комунікації.

Було визначено, що навіюванню може передувати емоційне зараження, яке робить психіку більш гнучкою, знижує рівень критичності свідомості, що підвищує ефективність навіювання. Отже, ці дві технології дозволяють послідовно використовувати їх. З іншого боку, вплив через зараження не розрахований на довгострокові трансформації.

Оскільки зв'язок темпоральних ознак із суб'єктивними та інтенційними характеристиками переконання, навіювання та емоційного зараження не був широко досліджений, вищезазначене актуалізує тему цієї статті. Вторинними та третинними аспектами актуальності предмета дослідження можуть бути вербальні та невербально-комунікативні компоненти переконання, навіювання та зараження.

Ключові слова: вплив, переконання, навіювання, емоційне зараження, комунікації.

Statement of the problem. Communication between different subjects presupposes the conscious or unconscious use by the latter of certain technologies (methods, means, techniques) of influencing (influencing) each other. Such influence (influence) comes from one or another function (functions) of the mental system and most often implies one or another combination of technologies, methods, means or techniques. Regardless of the level of communication, subjects can articulate or not articulate their intentions regarding the use of psychological influence (implement it openly or latently), achieve or not achieve certain effects of influence (systemic or situational) with their influence, apply one or another influence in various modes (normalizing-therapeutic, instrumental-activity, manipulative, psycho-destructive). Nevertheless, in the repertoire of technologies, methods, ways or techniques of psychological influence, the central place is occupied by three types of influence

technologies, which are associated with three basic blocks of mental functions: cognitive, regulatory and evaluative.

Among the cognitive functions, thinking and its derivative thought processes and operations (along with sensation, perception, memory and imagination) occupy a leading position for reasons that hardly require independent voicing. In the block of regulatory mental functions, the same leading position is occupied by will and its derivative volitional processes and operations. In the block of evaluative functions, which perform the role of a tester of certain cognitive or voluntary contents for their compliance or non-compliance with the mental system, emotions are realized. There are no dividing lines between these three functions that would exclude their influence on each other. Thinking influences both the regulatory and evaluative functions, since it has meta-level capabilities both in terms of categorizing sensations/perceptions, analytical assessment of the situation (which differs from the emotional one), and value-constructing tools (organization of censorship in the form of its value and normative elements).

In turn, the structures of value consciousness formed with the participation of thinking and will can have a reverse intrapsychic influence on emotions. Emotions, in turn, are in a complex interaction with thought processes and operations, often "contaminating" their work with their presence.

Taking into account the complexity of the interactions of the cognitive, regulatory-voluntary and emotional-evaluative functions, nevertheless, one cannot completely exclude their functional differentiation, and therefore the presence of substantive features of technologies, methods, ways or techniques of mental influence (impact) derived from these functions. In the scientific literature there is, if not a consensus, then at least a stereotype that has developed in a number of sources to single out three basic technologies, methods, techniques or methods of mental influence (impact) from the catalog of technologies, methods, ways or techniques: persuasion, suggestion (suggestion) and emotional contagion. In communication, the three groups of the designated technologies of mental influence (we will further call them TPI for

the sake of simplicity) have empirical features that are revealed both through the verbal and through the non-verbal-communicative component.

Since the relationship of temporal features with the subjective and intentional characteristics of persuasion, suggestion and emotional contagion has not been widely studied, the above actualizes the subject of this article. Secondary and tertiary aspects of the relevance of the subject of the study can be verbal and non-verbal-communicative components of persuasion, suggestion and contagion as TPI.

The aim of the article is a descriptive and analytical characterization of verbal and non-verbal-communicative features of persuasion, suggestion and emotional contagion.

Statement of the main provisions. Persuasion, suggestion and infection are accompanied by certain signs of verbal and/or non-verbal behavior that make it possible to identify the intention of influence, and therefore the communicative status of the subject and object of influence. The latter is due to the fact that the choice of TPV by the subject of influence is carried out based on the status of the object of influence and his (the subject's) understanding of the intrapsychic reality of the object of influence. The image of the intrapsychic reality of the object of influence, as well as the construction of any cognitive maps, the subject of influence can build both on the basis of assumptions (hypotheses) (if the influence occurs situationally), and on the basis of any verified data (social, psychobiographical, etc.).

Thus, the conscious or unconscious choice of the intention of influence by the subject occurs on the basis of a hypothetical or probabilistic assessment of the identity of the object of influence. It is the hypothetical or probabilistic assessment of the identity of the object of influence that correlates with the choice of certain verbal-communicative or non-verbal-communicative instruments of influence. However, the author of the article puts this aspect of the study "out of brackets" in order not to complicate the subject of the study. The focus of the subject of this article will be markers of verbal and non-verbal behavior, empirical features accompanying the use

of persuasion, suggestion and emotional contagion by subjects of communication as basic TPV.

Persuasion is a technology of cultural, social, mental influence (impact), the intention of which is proof mediated by the inclusion of value, theoretical or factual reasons (values, theories or facts) in communication. Persuasion as a technology of normative influence is used only where the logical laws of sufficient reason, identity, prohibition of contradiction and excluded middle are in effect. The primary law for any belief is the law of identity, which emphasizes that each judgment in the process of reasoning must have the same definite, stable content (or "any judgment is identical to itself"). If the same judgment has the same content and meaning, then it can be true or false.

If it is true or false, then it cannot be both true and false at the same time. This is how the law of non-contradiction works. At the same time, the same judgment (provided that it is identical) can be true or false, and there is no third option. Compliance with these three laws becomes a condition for a judgment (in most cases, a series of judgments) to become a sufficient basis for other judgments, and therefore, evidence.

Evidence can be divided into three key types: value, theoretical (conceptual), and factual. The persuader can persuade with values, theories or facts, or with the proper, necessary/proven or actual/undoubtedly existing. The proper, necessary/proven or actual/undoubtedly existing are inseparably linked with each other: the actual (factual) is generalized and becomes necessary (theoretical). The theoretical (necessary), in turn, is possible only where the proper (value-significant) is.

Values form a "superstructure" for everything identical (always equal to itself and constant). Without values, therefore, there is nothing identical, and therefore nothing theoretical (conceptual or general). Moreover, without the theoretical (conceptual) there is nothing constant (stable, unchanging) in the actual, and therefore in the actual.

In this chain of belief, as most people are accustomed to thinking, "the criterion of the truth of theory is practice." In fact, the criterion of the truth of both theory and practice (facts) are values. Since it is values that ensure the identity, immutability, self-conformity of any theory (supporting the intrinsic value of laws and regularities at the level of "superstructure"), and on the other hand, the preservation (at the level of memory) of the identity and immutability of facts.

Values, theories and facts have different persuasiveness and evidence. Values have the highest evidential potential, facts have the lowest, theories are at an intermediate level of persuasiveness and evidence. This is explained by the fact that values reflect reliable (complete, total) knowledge, theories - probable knowledge, and facts - a mixture of probable and doubtful knowledge (facts can be a mixture of thoughts and opinions, that is, pseudo-facts or factoids). Fact-checking turns out to be the most difficult activity, since facts can be subordinated to different theories, and theories, in turn, depend on values and value-based knowledge.

From the point of view of the "economics of influence" (we will use this term metaphorically for now), persuasion is the most expensive in several aspects: a) communicative-technological - since it requires cumbersome evidence and thorough (time-consuming) preparation, both for mastering the value references of the addressee and for immersion in the facts and theories necessary for argumentation; b) object-influential - since the object of influence itself is recognized as significant (if not supervaluable), so that influencing it justifies the time spent indicated in point a); c) informational-ecological - since persuasion excludes introversion, and therefore any methods of force-mode, "pushing through", ignoring the argumentative feedback from the object of persuasion [15].

In general, persuasion serves the rhetoric of logos, in which intersubjective truth is important, not particular truth. The former differs from the latter in terms of conscious and voluntary internalization. The latter (particular truth) presupposes a certain one-sided (private) gain.

Persuasion is characterized by a number of verbal-communicative and non-verbal-communicative features [5; 21].

The following can be attributed to the verbal-communicative features of persuasion:

- 1) Texts of explanatory orientation;
- 2) Increase in the argumentative part of communication;
- 3) Dominance of descriptive-analytical modality in the texts of the subject of persuasion, avoidance of the use of modal operators of obligation and deontic syntactic constructions;
- 4) Preferential use of the indicative or conditional mood of verbs;
- 5) Deductive-inductive communication (values-theories-facts);
- 6) Speech constructs with the meaning of distinction and differentiation of the subject of communication and its subjects by some features;
- 7) Operation of the subject of persuasion with heuristics and modalities of the past and present.

Non-verbal communicative features of suggestion include:

- 1) Variability of the subject's gaze and facial expressions
- 2) Proxemic markers of distance regulation in combination with spatial demarcations (continuous maintenance of physical/mental/spatial-physical boundaries)
- 3) Use of objects of the physical environment to create a space of free movement adequate for free choice of communicative distance
- 4) Variability of gestures and pantomime
- 5) Variability and conventionality of clothing styling
- 6) Variable rhythm of speech with lowered intonations

Suggestion is a technology of cultural, social, mental influence (impact), the intention of which is a change in the direction of certain cognitive, voluntary or emotional processes or operations (perceptual, mnemonic, emotional, sensory-evaluative, etc.). The difference between suggestion and persuasion lies not only in the

intention (direction), but also in the tools used, as well as in the assessment of the supposed identity of the object of influence.

Suggestion is characterized by the installation, that is, by the method of influence, which involves the introduction into the consciousness of the addressee of cognitive, voluntary or emotional contents that influence the direction of his intrapsychic activity. The very use of such influence allows, firstly, the presence in the subject of influence of mental expectations of an authoritative-directive, imperative content.

The subject of suggestion has an expectation of one or another form of dependent and/or submissive behavior, and therefore, the presence in the object of influence of certain cultural, social-status, mental characteristics that predispose to dependence and/or directly indicate it. From the point of view of the author of this article, the psyche of the object of suggestive influence is usually susceptible to introduction - a mental process during which contents exogenous to the psyche can penetrate it and cause certain effects of influence.

A reliable, probabilistic or expected assessment of a particular participant in communication as susceptible to suggestion presupposes not only the presence of ideas about his dependence, but also the presence of certain time expectations in the subject of communication. Suggestion can be effective in situations of real and / or predicted time deficit.

In most cases, one presupposes the other, since: a) the dependent status of a participant in communication predisposes to an initial adjustment or interception of the initiative in communication by others, more influential and strong; b) status dependence allows for a probabilistic assessment of such a participant by other participants as mentally permeable, susceptible to suggestion; c) the probabilistic assessment of the participant as susceptible to suggestion includes an unconscious mindset of saving time and using introjection.

Natural-evolutionary and cultural dispositions are settings for dependence and dependent preference. At the same time, the choice of preferences itself is subject to

automatic logic, that is, the logic of saving time in difficult situations where one has to rely on "feelings", intuition and "inner reactions". The latter, as Damasio, Schwartz and Clore note in their works, "are necessary for adaptive behavior, especially for setting priorities between what is important and what is not so important to do or to pay attention to" [9, c.1413-1420]. D. Campbell speaks of "shortcut processes"[31, c.433-465] that eliminate the need to provide individual explanations of something. The author does not indicate that these processes coincide with suggestive ones to a certain extent, but the very context of shortened time refers specifically to them.

A number of authors [2; 6; 7; 24; 28] give examples of suggestive influence on sensory-perceptual, mnemonic, and emotional reactions. Suggestive influence can contribute to the slowing down of sensory evaluation processes depending on categorization (e.g., finding an object of a particular color in a situation of discrepancy between its sensory characteristics and verbal designation); cause an increase or decrease in sensitivity to certain stimuli depending on the attitudes and expectations of the effect (e.g., relaxation when drinking drinks supposedly containing alcohol and a decrease in sensitivity when taking drugs supposedly used to increase the resistance of soldiers in combat zones); increase mnemonic capabilities (selective effect of a placebo drug on the effect of improved memorization); increase or decrease the motor productivity of the actions performed, influence the concentration or deconcentration of attention, the quality of gustatory and other sensations; modify evaluative reactions (influence the emergence of activating or deactivating emotions)

A. Ramandini, in support of the above analysis, notes the connection between naive faith, the attitude toward uncritical perception, and suggestion. Such faith implies ignoring authentic mental functions (mental, emotional, volitional) in favor of exogenous ones. Such ignoring or suppression (autorepression) of the authentic psyche in favor of introduced mental contents presupposes a high level of ethos in the subject of suggestion (suggestor) [31, c.304-311].

The suggester (object of suggestion) usually recognizes the suggestor (subject of suggestion) as having a certain right (not in the formal legal sense) to carry out a

suggestive influence. Recognition of this right presupposes the assessment of such a subject as an authority, a bearer of this or that irrevocable knowledge or will. Trust and credibility as characteristics of such authority are accompanied by status-role markers, which make it possible to recognize it as a subject of scientific, political, legal, medical power. It is these markers that sometimes become decisive for the appearance of the suggester's reaction in the form of unconditional (naive) faith.

Suggestion is characterized by a number of verbal-communicative and non-verbal-communicative features.

The following can be attributed to the verbal-communicative features of direct suggestion:

1. Short sentences with an affirmative focus;
2. Simplification or nullification of the argumentative part of communication;
3. Use of modal operators of obligation and deontic syntactic constructions (formulas of ethos);
4. Use of the imperative mood of verbs;
5. Narrative communication (story-telling);
6. Speech constructs with the meaning of identity and identification of the suggester and the suggested by some features;
7. The suggester's operation of prognostics and modalities of the future

Non-verbal communicative features of suggestion include:

1. Direct and unblinking gaze of the suggester, facial expression mask-likeness or hypomimia.
 2. Statuary (static) positioning of the suggester's body and/or proxemic distance markers in combination with spatial transgressions (continuous violation of bodily/mental/spatial-physical boundaries due to non-ecological taxis)
 3. Use of objects of the physical environment to staticize the pose of the suggester, deliberate organization of a scarce physical space (by square footage, number of participants, lighting, etc.).
 4. Use of directive gestures and/or poses of dominance or dependence.
 5. Uniform or disciplinary-classical style of clothing
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6. Pause-slow rhythm of speech with lowered intonations

7. Imposing a force mode in communication

Emotional contagion is a technology of cultural, social, mental influence (impact), the intention of which is the transfer of an emotional state to the psyche of the addressee or the stable activation of certain emotions (feelings).

Emotional contagion accompanies suggestion and can either precede it or follow it, serving the necessary plasticization of the psyche of the addressee of the impact. In general, the experience of certain emotions (feelings) is accompanied by mental entropy, disturbances in the directed movement of the psyche, its chaotization. Unlike persuasion and suggestion, emotional contagion can be both voluntary and involuntary.

The use of contagion in an arbitrary (consciously technological) version involves the use of verbal and / or non-verbal methods of activating expected emotions. At the same time, the violation of the emotional balance of the addressee allows you to instrumentalize his psyche and achieve the effectiveness of suggestions or other cultural, social, mental influences. The arbitrary (consciously technological) version of emotional contagion bears all the signs of manipulative influence and is initially counterproductive in terms of the long-term results of the impact. The primary emotion (proto-emotion) or proto-feeling in relation to emotional contagion is the emotion/feeling of empathy and sympathy [10; 19], derived from the German term *Einfühlung*, literally translated as "living in" or "feeling into". Singer and Lamm describe empathy as the ability to transmit an experience into the environment, showing signs of activation of neural structures and physiological reactions (Singer and Lamm, 2009)[33]. Harrison notes the primary role of empathy in the spread of emotional contagion in social interactions [18].

Decety and Ickles, as well as De Waal, developed the actional perception theory of empathy as a primary emotional contagion. It is a convenient tool for explaining empathy in both the human psyche and the animal psyche [10; 35]. The actional perception theory allows us to consider empathy in the context of evolutionary theory.

Contagion in the context of this theory goes through a number of actional stages. First, 1) empathy as immersion in someone else's experience turns into 2) sympathy as positive empathy for someone else's experience, the result of 1) and 2) is 3) emotional contagion (as the effects of a "meeting" of empathes and sympathizers), the meeting is accompanied by 4) "seriation" of various behavioral models, patterns, scenarios and 5) mimicry (behavioral assimilation of those who implement imitation, the objects of imitation) [10; 19; 33, c.81-96]. The common denominator for all of the listed authors are two metaphors: the metaphor of contagion as infection (spread of infection), taken from medicine, and the metaphor of wave spread/excitement [19; 30, c.99-114; 25].

In experimental psychology, the most studied ways of spreading emotional contagion are: A) emotional contagion through facial reactions; B) emotional contagion through socio-behavioral reactions; and C) emotional contagion through physiological reactions.

A) In the first way, people unconsciously "read" the emotional states of another person by observing facial expressions and unconsciously producing their own facial reactions. Such mutual mirroring of facial expressions leads to unconscious emotional contagion. The latter occurs, firstly, due to the fact that patterns of micromovements of facial muscles mirrored by other people lead to the experience of similar emotions, as indicated by a number of researchers [1; 11; 19; 20; 26; 27]. B) The second method involves observing socio-psychological (behavioral) patterns or reactions, including verbal ones, that can create the effects of emotional contagion. Visual examples here can be, for example, emotional contagion as a reaction to reading negative comments. For example, anger, irritation, indignation in hate-speech spontaneously spread both in social networks and during interpersonal interactions in physical space. At the same time, contagion can be enhanced by non-verbal communicative components and block the perception of the subject content of communication [13; 14; 17]. Different authors state in their studies, when interacting online, people associate positive reviews or high ratings with positive emotions, and low ratings and negative reviews with negative emotions. For example, positive emotional contagion leads to positive affect,

satisfaction, and loyalty intentions; in contrast, negative emotions reflect the desire to purchase.

Thus, a deeper understanding of consumers' emotional and behavioral synchrony is of great importance for business and scientific research on consumer behavior [13; 14; 17-19; 26]. B) The third method involves the automatic activation of the autonomic nervous system when experiencing certain affective states on the part of the object of observation by the observer. In this case, we are talking about states that often do not demonstrate any external expression in either the verbal or non-verbal behavior of the object of observation.

Contagion can occur spontaneously because researchers have confirmed that during social interactions, observing another person's emotional state automatically activates the same autonomic nervous system response and neural representation of the affective state that the observer has. In emotional contagion, positive and negative emotions are associated with physiological responses. Therefore, emotional contagion during social interactions evokes affective arousal and affectively colored cognition [29-36].

Contagion is characterized by a number of verbal-communicative and non-verbal-communicative features.

The following can be attributed to the verbal-communicative features of contagion:

1. Predominance of evaluative (predicative) terms in statements. We are talking about adjectives and adverbs that mark the subjective assessment, the emotionality of the statements themselves, including obscenelect.

2. Stream structure of speech production. There is either no logical relationship between sentences, or the sentences themselves have an incomplete structure.

3. Lack of communicative intention, as well as interest in the content of communication.

4. Multidirectionality of communication and uneven transitions from one topic to another.

5. Predominance of so-called "I-messages" in the text over sentences with an impersonal construction.

6. Evaluative polarity of statements according to the model "all/nothing", "very good/very bad" and/or a combination of incompatible polar statements with each other in relation to the same objects.

7. Text construction using demolexics (vulgarisms, jargon, label words).

The following can be attributed to non-verbal communicative signs of infection:

1. Hyperkinesis, which is expressed in an increase in the number and variability of gestural, facial, pantomimic, tactic, oculomotor signals.

2. Dynamic poses, reduction of distances

3. Use of objects of the physical environment as tools of emotional activation

4. Use of artistic (demonstrative) style of clothing

5. Pause-accelerated rhythm of speech with raised intonations, often due to a decrease in the clarity of articulation

6. Imposing a force mode in communication

Conclusions. Persuasion as a technology of influence, when used separately, is incompatible with either suggestion or infection. Such incompatibility is caused by both the opposition of intentions (the formation of beliefs as part of value consciousness) and technological components designed for long-term impact.

Persuasion operates in the mode of long-term internalization, which excludes the assimilation of unassimilated informational contents, and therefore is incompatible with introjection. The very fact of concession to persuasion in favor of suggestion or emotional infection indicates a lower status of the communication partner. The latter is transformed from a partner into an object of influence, that is, his psyche can be instrumentalized.

Suggestion as a technology of influence is designed for introjection, which presupposes incomplete informational assimilation, and therefore - subsequent reactions of internal alienation of the psyche in relation to uninternalized (imposed) contents. The suggestor, unlike the subject of persuasion, does not perceive the

addressee of communication as an equal partner, and therefore does not consider it necessary to resort to the argumentative part of communication. Suggestion can be preceded by emotional contagion, which makes the psyche more flexible, reduces the level of criticality of consciousness, which increases the effectiveness of suggestion. Therefore, these two technologies allow for consistent use. On the other hand, influence through contagion is not designed for long-term transformations.

References:

1. Aldunate, N., and González-Ibáñez, R. (2017). An integrated review of emoticons in computer-mediated communication. *Front. Psychol.* 7:2061. doi: 10.3389/fpsyg.2016.02061
2. Assefi, S. L., & Garry, M. (2003). Absolut memory distortions: Alcohol placebos influence the misinformation effect. *Psychological Science*, 14, 77–80. doi:10.1111/1467-9280.01422
3. Barger, P. B., and Grandey, A. A. (2006). Service with a smile and encounter satisfaction: emotional contagion and appraisal mechanisms. *Acad. Manage. J.* 49, 1229–1238. doi: 10.5465/amj.2006.23478695
4. Campbell, D. T. (1974). Evolutionary epistemology. In P. A. Schilpp (Ed.), *The philosophy of Karl Popper* (pp. 413–63). La Salle, IL: Open Court.
5. Cheng, S. (2024). Ethical Reflections on Persuasive Technology. *Technology and Language*, 5(4), 143-157. <https://doi.org/10.48417/technolang.2024.04.10>
6. Clifasefi, S. L., Garry, M., Harper, D. N., Sharman, S. J., & Sutherland, R. (2007). Psychotropic placebos create resistance to the misinformation effect. *Psychonomic Bulletin & Review*, 14, 112–117. doi:10.3758/BF03194037
7. Colagiuri, B., Livesey, E. J., & Harris, J. A. (2010). Can expectancies produce placebo effects for implicit learning? *Psychonomic Bulletin & Review*, 18, 399–405. doi:10.3758/s13423-010-0041-1
8. Cowley, E. (2014). Consumers telling consumption stories: word-of-mouth and retrospective evaluations. *J. Bus. Res.* 67, 1522–1529. doi: 10.1016/j.jbusres.2014.01.013
9. Damasio, A. R. (1996). The somatic marker hypothesis and the possible functions of the prefrontal cortex. *Philosophical Transactions of the Royal Society of London B*, 351, 1413–20
10. Decety, J., and Ickles, W. (2009). *The social neuroscience of empathy*. Cambridge, MA: MIT Press. Available online at: 10.7551/mitpress/9780262012973.001.0001
11. Ekman, P., Levenson, R. W., and Friesen, W. V. (1983). Autonomic nervous system activity distinguishes among emotions. *Science* 221, 1208–1210. doi: 10.1126/science.6612338; Davidson, R. J.,
12. Ekman, P., Saron, C. D., Senulis, J. A., and Friesen, W. V. (1990). Approach-withdrawal and cerebral asymmetry: emotional expression and brain physiology I. *J. Pers. Soc. Psychol.* 58, 330–341. doi: 10.1037/0022-3514.58.2.330
13. Felbermayr, A., and Nanopoulos, A. (2016). The role of emotions for the perceived usefulness in online customer reviews. *J. Interact. Market.* 36, 60–76. doi: 10.1016/j.intmar.2016.05.004
14. Ferrara, E., and Yang, Z. (2015). Measuring emotional contagion in social media. *PLoS ONE* 10:e0142390. doi: 10.1371/journal.pone.0142390
15. Gass, R.H., & Seiter, J.S. (2022). *Persuasion: Social Influence and Compliance Gaining* (7th ed.). Routledge. <https://doi.org/10.4324/9781003081388>

16. Gellhorn, E. (1964). Motion and emotion: the role of proprioception in the physiology and pathology of the emotions. *Psychol. Rev.* 71, 457–572. doi: 10.1037/h0039834
 17. Goodin P, Lamp G, Hughes ME, Rossell SL, Ciorciari J. Decreased Response to Positive Facial Affect in a Depressed Cohort in the Dorsal Striatum During a Working Memory Task-A Preliminary fMRI Study. *Front Psychiatry.* 2019 Mar 5;10:60. doi: 10.3389/fpsyg.2019.00060. PMID: 30890968; PMCID: PMC6411826.
 18. Harrison, N. A., Singer, T., Rotshtein, P., Dolan, R. J., and Critchley, H. D. (2006). Pupillary contagion: central mechanisms engaged in sadness processing. *Soc. Cogn. Affect. Neurosci.* 1, 5–17. doi: 10.1093/scan/nsl006
 19. Hatfield, E., Cacioppo, J. T., and Rapson, R.L. (1994). “Emotional contagion,” in *Studies in Emotion and Social Interaction* (Cambridge: Cambridge University Press). Available online at: 10.1017/CBO9781139174138
 20. Hess, U., and Fischer, A. (2014). Emotional mimicry: why and when we mimic emotions. *Soc. Personal. Psychol. Compass* 8, 45–57. doi: 10.1111/spc3.12083
 21. Idrees AR, Kraft R, Mutter A, Baumeister H, Reichert M, Pryss R (2024) Persuasive technologies design for mental and behavioral health platforms: A scoping literature review. *PLOS Digit Health* 3(5): e0000498. <https://doi.org/10.1371/journal.pdig.0000498>
 22. Izard, C. E. (1971). *The Face of Emotion*. East Norwalk, CT: Appleton-Century-Crofts.
 23. Kramer, A. D., Guillory, J. E., and Hancock, J. T. (2014). Experimental evidence of massive-scale emotional contagion through social networks. *Proc. Nat. Acad. Sci.* 111, 8788–8790. doi: 10.1073/pnas.1320040111
 24. Lee, L., Frederick, S., & Ariely, D. (2006). Try it, you’ll like it: The influence of expectation, consumption, and revelation on preferences for beer. *Psychological Science*, 17, 1054–1058. doi:10.1111/j.1467-9280.2006.01829.x
 25. Mehrabian, A., and Russell, J. (1974). *An Approach to Environmental Psychology*. Cambridge, MA: The MIT Press.
 26. Mui, P. H., Goudbeek, M. B., Roex, C., Spierts, W., and Swerts, M. G. (2018). Smile mimicry and emotional contagion in audio-visual computer-mediated communication. *Front. Psychol.* 9:2077. doi: 10.3389/fpsyg.2018.02077
 27. Norscia, I., Zanolli, A., Gamba, M., and Palagi, E. (2020). Auditory contagious yawning is highest between friends and family members: support to the emotional bias hypothesis. *Front. Psychol.* 11:442. doi: 10.3389/fpsyg.2020.00442
 28. Parker, S., Garry, M., Einstein, G. O., & McDaniel, M. A. (2011). A sham drug improves a demanding prospective memory task. *Memory*, 19, 606–612. doi:10.1080/09658211.2011.592500
 29. Pinilla, A., Tamayo, R. M., and Neira, J. (2020). How do induced affective states bias emotional contagion to faces? A three-dimensional model. *Front. Psychol.* 11:97. doi: 10.3389/fpsyg.2020.00097
-

30. Prochazkova, E., and Kret, M. E. (2017). Connecting minds and sharing emotions through mimicry: a neurocognitive model of emotional contagion. *Neurosci. Biobehav. Rev.* 80, 99–114. doi: 10.1016/j.neubiorev.2017.05.013
31. Ramandhini, Afifha. Suggestion as The Power of The Mind. *Journal of Psychology Today*. Vol. 1 No. 4 (2023): p.304-311
32. Schwarz, N., & Clore, G. L. (1996). Feelings and phenomenal experiences. In E. T. Higgins & A. W. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 433–65). New York: Guilford
33. Singer, T., and Lamm, C. (2009). The social neuroscience of empathy. *Ann. N. Y. Acad. Sci.* 1156, 81–96. doi: 10.1111/j.1749-6632.2009.04418.x
34. Smith, L. W., and Rose, R. L. (2020). Service with a smiley face: Emotional contagion in digitally mediated relationships. *Int. J. Res. Market.* 37, 301–319. doi: 10.1016/j.ijresmar.2019.09.004
35. De Waal, F. (2010). *The age of empathy: Nature's lessons for a kinder society*. New York, NY: Broadway Books.
36. Wilcox, K., Roggeveen, A. L., & Grewal, D. (2011). Shall I tell you now or later? Assimilation and contrast in the evaluation of experiential products. *Journal of Consumer Research*, 38, 763– 773.