LUAN CAVALHERA CAMACHO

CONSCIOUSNESS AND INTENTIONALITY ON PHILOSOPHY OF MIND:

AN INTRODUCTION TO THE JOHN SEARLE'S PHILOSOPHY

LAVRAS - MG
2023

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Dissertation submitted to Universidade Federal de Lavras, as part of the requirements of the Postgraduate Program in Philosophy, area of concentration in Themes of Contemporary Philosophy, to obtain a Master's degree.

Ph.D. Emanuele Tredanaro
Supervisor

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Apresentamos a tradução para o inglês da versão final da dissertação intitulada **“CONSCIÊNCIA E INTENCIONALIDADE NA FILOSOFIA ANALÍTICA:** UMA INTRODUÇÃO A FILOSOFIA DE SEARLE**”** defendida por Luan Cavalhera Camacho sob a orientação do docente Emanuele Tredanaro, no dia 16 de maio de 2023, no Programa de Pós-graduação em Filosofia na Universidade Federal de Lavras.

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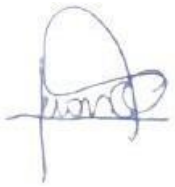

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LUAN CAVALHERA CAMACHO

CONSCIOUSNESS AND INTENTIONALITY ON THE PHILOSOPHY OF MIND: UMA INTRODUÇÃO À FILOSOFIA DE JOHN SEARLE
CONSCIENCE ET INTENTIONNALITÉ DANS LA PHILOSOPHIE ANALYTIQUE: UNE INTRODUCTION À LA PHILOSOPHIE DE JOHN SEARLE

Dissertation submitted to Universidade Federal de Lavras, as part of the requirements of the Postgraduate Program in Philosophy, area of concentration in Themes of Contemporary Philosophy, to obtain a Master's degree.

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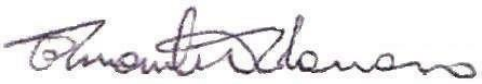

Ph.D. Emanuele Tredanaro

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“To those who keep the magic alive. You know who you are.”

Mage, the Ascension

ABSTRACT

Biological naturalism is the thesis that provides a solution for the mind-body problem and define what are the concepts of the mind, mental states and will. In this research it is shown the main point of views of philosophy of mind: property duaslism, anoumalous monism, materialism, and central contributions with each view with the double purpose: set the main problems of each point of view and shown the principle elements of each view that inspire the endeavor of Searle to develop your own view – also designated nonreductive physicalism. On this way, biological naturalism holds the view that mental phenomena are high-level product of the lower-level neurobiological processes in the brain. Once that are caused by those neurobiological processes, they can't be reduced to their own physical causes, because mental phenomena had intrinsecal characteristics who are not be able to be understoods in a objective way, such as subjectivity, qualitative characteristics for perceive the world and intentionality. Counsciousness are the foreground of the mind and it is in counsciousness that mental phenomena and intentional states are performed. Mental phenomena corresponds to toughts, feelings, sensations that individuals had and its can be conscious or not – respectively, as a wish to drink coffe or a stomach iche. Intentional states are components of mental phenomena and they are who connect the mental phenomena with the state of affairs in the world. In the jargon of common sense, intentional states can be designed as the own will and they represents our own beliefs, desires, wants, dares, wishes and volitions about a state of thing in the world. In one hand intentional states are composed by a psychological mode – if it express a belief, desire, want, and so on – and a representative content – the state of thing in the world that the intentional state are directed or about. Intentional states can be performed through speech acts, perceptual experiences or deliberative actions. When an intentional state had a representative content express in the world, it is had a direction of fit and conditions of satisfaction, when had not, the intentional state becomes only a mental representation. Last, but not least, intentional states always had a synergy with a background – that includes capacites, skills, assumptions and pressupositions – and a network with other intentional states – that may be from the other individuals or institutions.

Keywords: Biological Naturalism. Mind-Body Problem. Intentionality. Nonredutive Physicalism. Consciousness.

RÉSUMÉ

La conception du naturalisme biologique de John Searle cherche à promouvoir une solution au problème corps-esprit et à définir la nature en ce qui concerne l'esprit, les états mentaux et la liberté. Nous cherchons à présenter dans cette recherche les principales approches de la philosophie de l'esprit : dualisme de propriété, monisme anormal, matérialisme, ainsi que leurs principales contributions à la philosophie de l'esprit avec un double objectif de mettre en évidence les principaux problèmes qui impliquent les points de vue de chaque approche dans les discussions sur la philosophie de l'esprit et établit les éléments qui ont inspiré Searle pour développer le naturalisme biologique, qui peut également être défini comme un physicalisme non réducteur. Le naturalisme biologique défend ainsi l'idée selon laquelle l'esprit est un produit au niveau macro des propriétés au niveau micro du cerveau – propriétés neurophysiologiques et synapses neuronales. Une fois causée par les propriétés du cerveau, elle ne peut être réduite aux causes qui les ont provoquées car elle possède des caractéristiques intrinsèques qui ne peuvent pas être saisies objectivement, comme une ontologie à la première personne, des caractéristiques qualitatives de perception du monde et d'intentionnalité. La conscience est l'arrière-plan de l'esprit et c'est en elle que se produisent les états mentaux et intentionnels. Les états mentaux correspondent aux pensées, aux sentiments, aux sensations que nous éprouvons et ceux-ci peuvent être conscients ou non – un mal de ventre est un état mental non conscient et le désir de boire du café est un état mental conscient, par exemple. Les états intentionnels sont des composants des états mentaux et ce sont eux qui relient les états mentaux aux états de choses qui existent dans le monde. Dans le jargon du bon sens, les états intentionnels peuvent être caractérisés comme la liberté de l'individu et ils représentent nos croyances, nos attentes et nos désirs concernant les états de choses qui existent dans le monde. En effet, les états intentionnels sont composés d'un mode intentionnel qui définira la forme de l'état intentionnel – qu'il s'agisse d'une croyance, d'un désir, d'une volonté – et d'un contenu intentionnel qui définira quel état de choses dans le monde correspond à l'état intentionnel. est dirigé vers. Les états intentionnels peuvent être réalisés à travers des actes de langage, des expériences perceptuelles et des actions délibératives et lorsqu'ils ont un contenu intentionnel bien défini, ils ont une direction d'ajustement et des conditions de satisfaction, lorsqu'ils n'en ont pas, ils sont considérés comme une représentation d'une représentation. Enfin et surtout, les états intentionnels sont toujours accompagnés d'un contexte d'autres capacités non intentionnelles – aptitudes, capacités, culture locale et régionale – et d'un réseau d'états intentionnels d'autres agents – qui peuvent être des individus ou des institutions.

Mots-clés: Naturalisme biologique. Problème corps-esprit. Intentionnalité. Physicalisme non réducteur. Conscience.

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SUMÁRIO

INTRODUCTION

Philosophy of mind is an area of Analytical Philosophy that arose partly due to a new elaboration of Descartes' thought proposed by Gilbert Ryle and partly due to the strictly particular view of the Vienna Circle on Wittgenstein's conception of Logic and Philosophy of Language in the Tratactus Logico-Philosophicus. The conception of the Vienna Circle gave rise to the main problems of Analytical Philosophy that permeated philosophical discussions on Philosophy of Language, Philosophy of Mind and Philosophy of Science. This general view ended up almost excluding the metaphysical viewpoint from discussions of analytic philosophy for decades. From Gilbert Ryle's approach to Descartes' Philosophy, the main problems involving the Philosophy of Mind were taken up again, among them the mind-body problem, the problem of first-person ontology and the problem of intentionality as components that launch intentional states towards states of things in the world.

From these two conceptions, three different approaches were developed in the Philosophy of Mind. These approaches were antagonistic with the purpose of formulating the best answers to the problems raised by Ryle. These problems, in general, were part of the history of philosophy and were incorporated under the point of view of the Philosophy of Mind, which had the purpose of excluding metaphysical language and finding objective answers to such problems in the sense that these answers corresponded to reality. These approaches emerged simultaneously and constituted the horizon of stars of the entire Philosophy of Mind throughout the 20th century.

The first of these, in general terms, is called property dualism and has the point of view that the brain is made up of physical and mental properties, mental properties are not part of the universe of physical properties and have intrinsic characteristics such as subjectivity, a propensity for rationality and logical-mathematical reasoning. There are two versions of property dualism, one called epiphenomenalism which admits that mental property is in a relationship of epiphany – above – physical property and interactionism which admits that, despite mental and physical properties being in distinct universes, mental property has a causal relationship with physical properties, but is irreducible to its own physical causes.

The second is called anomalous monism and has a point of view very similar to the dualism of properties that the same substance – the brain – gave rise to two distinct properties – one physical and the other mental – and that the mental property is irreducible to the physical property. From this conception, mental events will be analyzed, which will be

rationalized ways of acting in the world, in which they will be called propositional attitudes and will always be in a context that involves the association of mental events as beliefs, desires and intentions of the individual who rationalizes their actions in the world.

The third is called materialism and has generated several distinct theories about the mind – such as behaviorism, identity theory, functionalism, etc. It defends the point of view that mental property should be abandoned from the discussion of Philosophy because it does not correspond to reality and, therefore, philosophy should approach the problem of the mind by reducing it to its own physical causes. In this context, materialism defends the point of view that the mind is a relationship of disposition of behavior that eventually generates a response according to a stimulus coming from the external environment. The distinct theories that branched off from materialism will seek to reduce the concept of mind to its physical causes, a characteristic that will promote a reductionism under the concept of mind in which it will be associated with behavior, neuronal synapses or some artifact capable of processing information and, consequently, possessing cognitive capacity.

It is in this context that Searle develops his own approach called biological naturalism. In developing his theory of the mind, he attacks central elements of the three previous approaches: regarding property dualism, Searle asks whether mental property is really in a relationship above physical property and, therefore, in different universes; regarding materialism, he questions whether the conception of mind should really be excluded from the discussion of philosophy of mind because it does not correspond to reality; and, more specifically regarding functionalist theory, Searle criticizes the hypothesis that any organism can possess a mind and mental states as long as it has a functional activity capable of processing information. He also seeks to promote a synthesis between property dualism and functionalism, which he himself calls non-reducible physicalism. In his theoretical conception, the mind is a macro characteristic of the brain that arises from its micro properties – the neuronal synapses generated by neurons – once it emerges from the brain, the mind cannot be reduced to it because it possesses intrinsic characteristics that cannot be explained by purely physical terms – such as subjectivity and intentionality or freedom. Therefore, mental states arise in consciousness – which is the foreground of the mind – and may or may not be intended in the world; we have mental states that have no intentionality – such as a headache or a stomachache –, mental states that have components of intentional states and, consequently, launch our mental states towards states of affairs in the physical world and mental states that have no correspondence with the physical world, thus being representations without correspondence with reality – as in the case of delusions, hallucinations or

convictions derived from beliefs.

Thus, we sought, during the research of this dissertation, to analyze the main aspects of Searle's Philosophy of Mind, as well as its historical contextualization in the philosophical discussion of Analytical Philosophy in the 20th century, from the point of view of three elementary problems for the Philosophy of Mind, namely: (i) the mind-body problem, which arises from the impossibility of communication between mind and body; this impossibility is derived from the theoretical conception that mental property is in a relationship above physical property and, consequently, above the physical world; (ii) the ontological problem of how to define the mind, mental states and our intentionality to cast our mental states into the world in purely objective terms without, however, falling into a form of causal reductionism and (iii) the epistemological problem of how to define such conceptions in an objective way if the elements that constitute the conception of mind in themselves have a first-person ontology, that is, if these elements can only be described subjectively and not by reducing them to their own causes.

We divide the approach of our research into three chapters that promote an analytical research on the historical contextualization of the main elements that triggered John Searle's biological naturalism approach; a presentation on the definition of biological naturalism, as well as its definition on the mind, consciousness, mental states and intentionality and what is the relationship between intentional states with the components of individuals' mental states.

In **Chapter 1**, we present the main aspects of each of the four main approaches to the star horizon of the Philosophy of Mind – property dualism, anomalous monism, materialism and physicalism. Regarding property dualism, we present an overview of epiphenomenalism and interactionism; the problem of qualitative phenomena – qualia –, the conception of first-person ontology from the perspective of what it is like to be in the point of view of another organism and intentionality as an ontological element of intentional states. Regarding anomalous monism, we made a brief presentation about the propositional attitudes that rationalize our mental events towards the world and condition our way of acting in the world rationally according to our beliefs, desires and volitions. Regarding materialism, we address methodological and logical behaviorism, which, respectively, defend the point of view that the mind is a relationship between mental events and behavioral dispositions that can eventually present themselves as responses to stimuli coming from the external environment. The main difference between both conceptions is that while methodological behaviorism analyzes appropriate behavior, logical behaviorism analyzes the appropriate way to communicate verbally or in writing. We also present the main aspects of Ryle's behaviorist

conception, especially the conception of categorical error. Still in relation to materialism, we present two versions of the theory of identity - of type and of occurrences -, eliminative materialism, functionalism, psychofunctionalism and pan-psychism. Both identity theories defend the view that all mental phenomena have corresponding neuronal synapses, the type identity theory states that this relationship is on a one-to-one scale and the occurrence identity theory states that there are regions in the brain that carry out mental states. Eliminative materialism argues that philosophy of mind should be abandoned and the mind should be analyzed in empirical terms through neuroscience. Functionalism and psychofunctionalism, in general, defend the point of view that any system, which has a functional activity and information processing capacity, is capable of having a mind and performing mental states. Finally, panpsychism is a final functionalist approach that promotes a combination of elements of property dualism and functionalism – similar to the proposal presented by Searle.

In **Chapter 2** we approach biological naturalism, its general definition and what is the distinction between the theory and the approaches presented in **Chapter 1**, under the prism of the three guiding problems of our research – the (i) mind-body, (ii) ontological and (iii) epistemological problems. We present the general definition (ii) of biological naturalism that interprets the mind as a macro biological phenomenon derived from micro-level properties of the brain – the neuronal synapses. Having done this, we make a distinction between consciousness and cognition with the aim of demonstrating that information processing, consciousness and subjectivity are distinct things and we briefly present general rules for systems – inorganic organisms – to have minds. We then define what the mind, consciousness and mental phenomena are and present the mind-body problem from the point of view of biological naturalism, as well as the main problems involving the mind-body problem in relation to materialism, physicalism and property dualism. We also discussed the difficulty of (iii) defining the mind objectively due to its first-person ontology and the fact that its properties are intrinsic when addressing the fallacy of ambiguity. We explain why biological naturalism should not be interpreted as a form of property dualism, but rather as a combination of physicalism and the property dualism called non-reducible physicalism. The structural aspects of consciousness were also presented and we presented the principle of mental causation that explains how the mind, consciousness and mental states can, at the same time, be a phenomenon irreducible to their physical causes and caused by their physical causes.

In **Chapter 3** we address the problem of intentionality in the Philosophy of Mind, which is a component of mental phenomena that promotes freedom and rationalization to

mental phenomena and casts mental states as states of affairs in the world. Again, the three main guiding problems of our research served as a guiding thread to construct the argument about the conception of intentionality. We present a general definition of intentional states, which are composed of intentional modes and an intentional content that is directed to states of affairs in the world, and we characterize these intentional states as a component that promotes movement to intentional states in relation to the world through directions of fit and truth conditions and conditions of satisfaction. We present a distinction between intentionality-with-a-t and intensionality-with-s, intentionality-with-a-t is the intrinsic characteristic of the brain to represent states of things in the world through mental phenomena and intensionality-with-s are representations that don't have a state of affairs in the world to do correspondence between the mental phenomena that represent it and the state of affairs in the world. The three forms in which intentional states appear were also presented: speech acts, perceptual experiences and deliberate actions. How meaning and semantic values are presented in intentional states. What is the causal relationship between the brain's promotion of intentional states toward the state of affairs of the world and how a background of capabilities and a network of other intentional states relate to the intentional states of a given individual.

Finally, due to lack of time, we prefer to exclude some essential aspects that help in the understanding of John Searle's Philosophy of Mind. Among these aspects are included the conception of intentional nonexistence of Aristotle and medieval Scholasticism, the conception of causality of David Hume, the conception of ontological commitment in Quine and some elements of Frege's philosophy, mainly his discussion on Sense and Reference.

CHAPTER 1

1. WHAT IS THIS THING CALLED PHILOSOPHY OF MIND?

> More than any other, we are creatures of the cities. I have said before that cities are living things. They are. They beat and pulse like living minds – the streets mappingthe neurons, the folds in the brain, and riders and pedestrians hurry like impulses from one place to the next. And the older a city becomes, the madder it grows. They are our places. (SKEMP, 2000, p. 19)

1.1. Presentation

The main objective of this chapter is to conduct an analytical investigation of the concept of mind and to outline the mind-body problem in the history of philosophy. To this end, we provide a general overview of the main dualist, monist and materialist currents that approach the theory of mind with the purpose of presenting the main problems of the philosophy of mind.

For substance dualism, the theory of mind is divided into two substances, namely res cogitans – thinking substance – and res extensa – extended substance. These substances are incommunicable, the first being immaterial, indivisible and immortal and the second material, divisible and mortal. All other conceptions below appropriate, to a greater or lesser degree, elements of Cartesian dualism.

In property dualism, generally speaking, there is a single substance that is divided into two properties, one physical and one mental. Mental property is defined as the mind, which has unique characteristics such as subjectivity, intellect and understanding and is not related to physical property. All forms of dualism, in general, claim the view that the mind has no causal relationship with the body. In this sense, it arises from the physical property – of the brain – but is not capable of producing any effect on it. Another part of these theories is developed in an attempt to reconcile the causal interaction between the mind and the body. In addition, there is also the conception of anomalous monism, a theory that lies between dualism and materialism and states that, like dualism, the two properties – physical and mental – arise from a single substance – the brain.

Materialism is contrary to the conception of dualism and is derived from anomalous monism. This conception suggests that the concept of mind – along with that of subjectivity – should be abandoned because it has no correlation with reality and, consequently, cannot be explained in an observable way. Therefore, instead of talking about mental states, we talk

about mental processes that are derived from the stimulus and behavior corresponding to that stimulus. Therefore, when carrying out an analysis of an individual's mind, it is necessary, first of all, to analyze their behavior. Part of materialism also claims that it is possible to simulate a mind in any artifact capable of simulating mental processes and interpreting input data according to a functional economy. Furthermore, the mind-body problem is explained through a causal relationship, sometimes between stimulus, disposition to behavior, and response, and other times the causal relationship occurs between input data, processing states, and output data.

We thought about exploring in this first chapter the main dualist, monist and materialist elements that serve as reflection for John Searle to construct his approach to biological naturalism. We were more concerned with presenting the mind-body problem and the problem of carrying out actions – intentionality – from the perspective of each approach. On the one hand, how do forms of dualism and substance monism approach the problem of subjectivity and what is the ontological element of the mind? On the other hand, we present how materialist theories exclude the problem of subjectivity and what are the ontological elements that exclude mental states. These are the central questions that will be investigated by Searle's philosophy of mind – the subject of later chapters.

1.2. Cartesian dualism and the ancient dilemma between thinking and existing

Cartesian dualism is the philosophical approach that builds a horizon of stars in the universe of the philosophy of mind, this horizon of stars is used as a background for analytical philosophy on which the entire core of its discussions will be built. In this way, we will demonstrate in this segment the main aspects of the conception of Cartesian dualism, such as its development, which arises from the division between *res cogitans* – thinking substance – and *res extensa* – extended substance (CHURCHLAND, 2004, p. 20-1) and the ghost in a machine approach, derived from the notion of thinking substance as an isolated product of extended substance, as if our soul controlled our body but was not part of the physical world. (DE OLIVEIRA, 2021, p. 30-2) In this context, the main problems of this conception are: the mind-body problem, which considers both substances to be irreconcilable; the idea of a form of logical-mathematical knowledge that is innate to *res cogitans* and the conception of a private subjective self – ego – inherent to the individual. (CHURCHLAND, 2004, p. 20-4)

The Cartesian conception of the mind is implicitly disseminated in his works, especially in “Discourse on the Method”, “Metaphysical Meditations”, “The Passions of the

Soul" and "Man". In these works, Descartes delimits the nature and distinction between the substances *res cogitans* and *res extensa*, how the first substance is easier to find than the second and how both substances are related. In pursuit of the objectives of finding indubitable truths that serve as foundations for knowledge and of demonstrating that the Cartesian self – ego – is easier to know than the extension itself – matter –, Descartes uses methodical doubt as a method, which consists of accepting as false everything that, eventually, has any sign of appearance with the aim of finding clear and distinct evidence:

> [...] and from that time I was convinced of the necessity of undertaking once in my life to rid myself of all the opinions I had adopted, and of commencing anew the work of building from the foundation, if I desired to establish a firm and abiding superstructure in the sciences. (DESCARTES, 1951b, p. 79)

The purpose of establishing methodic doubt is to achieve the maxim of the Cartesian cogito, I am, I exist, and, consequently, to distinguish *res cogitans* – thinking substance – from *res extensa* – extended substance. This epokhé in reverse consists in a serie of arguments, among them: (i) to affirm that the senses are not a reliable source of transmitting knowledge; (ii) that life – extended substance – is an illusion and we are living in a lucid dream; and (iii) that there is an evil genius who deceives us about our own sensible reality – extended substance. (DESCARTES, 1951b, p. 79-84)

The first part of his argument is summarized by stating (i) that our senses do not always convey reality to us. For example, we can see a tower from afar and it seems small, and the closer we get to it, we realize that its size is larger than when we saw it from a distance. Furthermore, his argument is based on the idea that (ii) the world we live in is an illusion and, in fact, we are dreaming while we sleep. The purpose of the world being interpreted as an illusion – or a lucid dream – derives from the subsequent argumentation of the distinction between *res cogitans* – thinking substance – and *res extensa* – extensive substance – which we will address in the following pages. A dream is a representation of reality – extensive substance – and, however absurd the dream may be, it is based on forms existing in the material world. Therefore, it is difficult to deduce whether we are actually living experiences or whether the experiences we live are illusions of a dream. Descartes then establishes that geometry and arithmetic have the same nature as the thinking substance, because regardless of whether we are dreaming or awake, geometric forms and mathematical expressions will always be the same. Using his own words as justification:

> [...] for whether I am awake or dreaming, it remains true that two and three make five, and that a square has but four sides; nor does it seem possible that truths so apparent can ever fall under a suspicion of falsity [or incertitude]. (DESCARTES, 1951b, p. 82)

This definition is intentional in order to later establish the ontological principles of extended substance. In this sense, geometry and arithmetic configure the extension and movement of things that can be captured by the senses. The definition guarantees the possibility of the thinking substance – *res cogitans* – knowing the extended substance – *res extensa* – without needing to access the material world through the senses, since the extension and movement of objects exist through mathematical representations and these representations have the same nature as the thinking substance. (COTTINGHAN, 1999, p. 28-31)

Descartes (1951) establishes that there are two types of reality, an objective reality and a formal reality. Objective reality is the application of the forms of ideas in the physical world – *res extensa* –, according to this conception, what exists in the world can only be conceived because it exists, even before being perceived by the senses, as a geometric or logical – mathematical form, in the case of mathematics and language. Formal reality is, therefore, a reality transcending the forms of what exists in the physical world, that which is established as true and undeniable as form and apprehended by our thinking substance – res cogitans. Objective reality, when conceived by our act of representation, is, therefore, the formulation of the form plus the content of that which is captured by the understanding – pure intellection. (RODRIGUES, 2013, pp. 1-12)

The wax argument is used to illustrate this distinction between formal and objective realities. To do this, he uses as an example a piece of wax that has just been removed from a beehive. This piece will have color, shape, odor, size, and sound, that is, all the characteristics that a body can have. But when it is brought close to fire, it loses all its characteristics and dissolves into a liquid. If this happens, will the same wax remain after being modified by heat? Everything that can be apprehended through the senses, that is, taste, sound, size, color, and shape, will disappear. However, the idea of wax will remain the same. The diluted wax is part of the formal idea of wax that can be apprehended by the understanding - pure intellection - its shapeless mass due to heat characterizes the extended substance, matter, and the possible forms that can be made from the shapeless piece of wax are conceived through the imagination. In other words, the idea of wax configures the formal reality of the object wax, while wax as an object configures objective reality because it is the application of the

idea of wax – formal reality – in the physical world – *res extensa*. (DESCARTES, 1951b, pp. 90-4)

The last argument (iii) is divided into two hypotheses, both of which have in common the purpose of casting doubt on even the indubitable truths that can be found in geometry and mathematics. The first hypothesis suggests that God is capable of deceiving us at any moment about our thoughts, perceptions, or actions. However, such a conception is fallacious, because if God is perfect — eternally good and eternally righteous — it is impossible for his nature to possess attributes contrary to his essence. Furthermore, God plays a fundamental role in the ontological plane of his dualism as a divine or infinite substance — *res divina* — a substance that generates the other two substances — *res cogitans* and *res extensa* — which are found, in turn, after undertaking the process of methodical doubt. If God is incapable of deceiving us due to his own nature, this does not mean that an evil genius cannot do so, since a cunning and deceitful genius does not have the same nature as God. (DESCARTES, 1951b, pp. 85-7)

Therefore, if (iii) an evil demon were capable of deceiving us about our entire sensible reality, including the truths obtained through mathematics, which have the same nature as our thinking substance. This evil demon would do its utmost to deceive us about what we observe, do or build, about what we think or conclude to be true. Is it possible for such an evil genius to deceive us about our own existence? That is, could he deceive us to the point that we no longer exist?

> Far from it; I assuredly existed, since I was persuaded. But there is I know not what being, who is possessed at once of the highest power and deepest cunning, who is constantly employing all his ingenuity in deceiving me. Doubtless, then, I exist, since I am deceived; and let him deceive me as he may, he can never bring it about that I am nothing, so long as I shall conscious that I am something. So that it must, in fine, be maintained, all things being maturely and carefully considered, that is proposition (pronunciatium) I am, I exist, is necessarily true each time it is expressed by me, or conceived in my mind. (DESCARTES, 1951b, p. 86)

We then find "I am, I exist" as the first certainty capable of being used as a solid foundation for the development of science and the affirmation of the thinking substance – I am – as the first clear and distinct truth in relation to the extensive substance – I exist. In the conception of Adão José Peixoto (2012): "This Cogito ist pure tought, a *res cogitans* (thinking thing), and the world is a *res extensa* (material thing), always susceptible to doubt."[1] (PEIXOTO, 2012, p. 44) To affirm this means to admit that first we are as spirit – *res*

[1] In original: "Esse Cogito é puro pensamento, uma *res cogitans* (coisa pensante), e o mundo é *res extensa* (coisa material), sempre suscetível à dúvida."[1] (PEIXOTO, 2012, p. 44)

cogitans or thinking substance – and only later do we exist in a material world – *res extensa* or extended substance. It is important to emphasize that, in the Cartesian conception, spirit has the same meaning as soul, mind or thought. Here we also conclude the process of methodic doubt. (COTTINGHAN, 1999, p. 34-6)

1.2.1. The body divided in two substances or ghost in a machine

Descartes defines that the world is ontologically constituted by two distinct substances. A thinking substance – *res cogitans* – of an immaterial nature and which has the capacity to move, feel and think, and an extensive substance – *res extensa* – of a material nature and which has the purpose of being limited by figures and filling a form in space. These substances are divided by degree of importance so that the thinking substance does not depend on the extensive substance to exist, but not vice versa. (ALVES, 2009, p. 26-7) Both substances are incommunicable, they are not related because they are on different planes and both were generated by a first cause, the divine substance – God. (DESCARTES, 1973b, 103-8)

This means that we first possess a spirit – a thinking substance – which has an innate propensity for understanding, logical-mathematical thought and common sense. Only then can we exist as a body – an extended substance –, it must be limited by figures and fill a form in space. The sole purpose of our body is to be commanded by our spirit and only human beings are endowed with a thinking substance – spirit. We are constituted by a thinking substance, this substance is immaterial because its essence is thought, indivisible because there is no way to divide it and immortal because it is not part of the material world. It possesses free will, understanding, movement, feeling and imagination. We are also constituted by an extended substance, this substance is material because its essence is extension, divisible because we can lose limbs and organs or our body can undergo changes and mortal because our body gets sick, ages and dies. It possesses extension – that is, depth, size and width –, shape and duration:

> [...]for, although that cause may not transmit into my idea anything of its actual or formal reality, we ought not on this account to imagine that it is less real; but we ought to consider that [as every idea is a work of the mind], its nature is such as of itself to demand no other formal reality than that which it borrows from our consciousness, of which it is but a mode [that is, a manner or way of thinking]. (DESCARTES, 1951b, p. 101)

It is easier to know our spirit – *res cogitans* – than our body – *res extensa* – and this is because our spirit is immortal and indivisible while our body is mortal and divisible. We can lose a limb or die, however, it is impossible to divide our spirit into two parts, to the point of becoming two individuals. Thus, we can say that it is my spirit that moves my physical body and when we feel some bodily pain it is our spirit that feels it. There is also the possibility of our spirit feeling a region of our body where it no longer exists, as is the case with phantom limbs – in which the subject continues to feel the presence of the affected region even after its removal. (COTTINGHAN, 1999, p. 26)

There is no interaction between the thinking substance and the extended substance, as they have completely different natures. This means that the thinking substance is not a physical property, that is, that it is on a completely different plane from the extended substance. In this sense, body and spirit would be incommunicable because they are made up of different substances. (COTTINGHAN, 1999, p. 26-7) But how can I move my arm – *res cogitans* – towards my car keys if the one directing this command is my spirit – *res extensa*?

The body is interpreted from a purely mechanistic perspective; it was created as a representation of our soul and its organs are gears whose sole purpose is to imitate the basic functions of the material world. Our body would be a kind of biological machine, something very similar to a clock, which also has gears to simulate the passage of time. Both need to be recharged to continue working; for example, the fact that the clock stops working does not mean that time does too, only that some gear is damaged. Similarly, if we lose a limb or die, this does not mean that our soul will lose it or that it will be extinguished:

> To avoid this error, let us note that death is never due to the absence of the soul but only to the decay of some principal part of the body. And let us recognize that the body of a living man differs from the body of a dead man in just the same way that a watch or other automaton (i.e. self-moving machine) when it is wound up and contains within itself the physical source of the movements for which it is designed, together with everything else needed for its operation differs from the same watch or machine when it is broken and the source of its movement has stopped working. (DESCARTES, 2010, p. 2)

Thus, the relationship between body and spirit is the same as that between a ghost and a machine in a relationship in which the soul inhabits the body and governs it. But how is this relationship possible if both substances, res cogitans and res extensa, are incommunicable? This question traces what we commonly call the mind-body problem. The Cartesian answer to this problem is simple, mystical, and exceedingly problematic: “Descartes tried to offer a solution to these problems. He spoke of the existence of a special organ, located just below

the head, the pineal gland."[2] (TEIXEIRA, 2016, p. 21) And it is capable of commanding and feeling the body through animal spirits, a substance whose nature is divided between both substances – *res cogitans* and *res extensa*. Animal spirits, in turn, act as transmitters of sensation and movement between the body and the soul. Therefore, if the body suffers any damage, it is the animal spirits that transmit the sensation of pain from the body to the spirit. In the same way, for the spirit to govern the body and perform actions on it, such as walking or picking up an object, it uses the animal spirits as transmitters of these desires in the body. (Descartes, 2009, p. 129-34)

1.2.2. The difference between pure intellection and imagination or the notion of subjectivity

The argument from knowledge consists of the idea that knowledge has the same nature as the thinking substance and that, because of this, both have the same nature – immaterial, immortal and indivisible. There is a distinction between imagination and our pure intellection. When we imagine a geometric figure with thousands of sides, for example, we are not able to imagine all of these sides, but through pure intellection we are able to represent these sides through thought. The faculty of knowing, presented by Descartes as pure intellection, is a gift equally distributed among all men and one of the unique capacities that distinguishes human beings from other animals in the world:

> But if I desire to think of a chiliogon, I indeed rightly conceive that it is a figure composed of a thousand sides, as easily as I conceive that a triangle is a figure composed of only three sides; but I cannot imagine the thousand sides of a chiliogon as I do the three sides of a triangle, nor, so to speak, view them as present [with the eyes of my mind]. (DESCARTES, 1951b, p. 127-8)

In this sense, observing an object through the senses and having an understanding of the same object that is observed are distinct situations and both can exist independently of each other. In other words, the purely conceptual representation of a given object exists as a thought and is independent of the act of physical interaction between subject and object. Even if this object never actually exists, its purely conceptual representation exists and is capable of being represented by understanding. Thus, when I perceive something through the senses, it is through memory that the data reaches my imagination:

[2] In original: "Descartes tentou oferecer uma solução para esses problemas. Ele falava da existência de um órgão especial, localizado logo abaixo da cabeça, a glândula pineal." (TEIXEIRA, 2016, p. 21)

> [...]so that, this mode of thinking differs from pure intellection only in this respect, that the mind in conceiving turns in some way upon itself and considers some one of the ideas it possesses within itself; but in imagining it turns towards the body, and contemplates in it some object conformed to the idea which it either ot itself conceived or apprehended by sense. (DESCARTES, 1951b, p. 128)

When I feel my body, the sensations I feel present themselves to my thoughts simultaneously. The ideas that I represent through my senses are caused in me by agents that are outside my pure intellection; they are not genuinely derived from my mind, and I have ideas that are representations in themselves and have the same nature as my mind. The propensity for logical-mathematical thought is part of these ideas, and genuine feelings constitute these representations. Therefore, when we access some idea represented by the senses through imagination, we can represent these ideas in themselves through memory and pure intellection in our mind. In the same way, when our body feels some pain, it is our mind that represents it. It may also be that our mind feels something that is not represented in our body, returning to the case of phantom limbs. (DESCARTES, 1973b, p. 128-9)

Finally, the conception of subjectivism in Cartesian dualism derives from this same assumption that we have a private self that is inaccessible to the physical world, which is capable of constructing original representations through pure intellection or imagination. These representations can be private and have the same nature as the spirit, as is the case with the propensity for logical-mathematical thought and feelings, or they can be representations of external objects that I know through the senses. Everything that we think, feel or know are experiences that are private to my spirit, whether this representation in itself or of some state of affairs external to my spirit. (CHURCHLAND, 2004, p. 21)

1.3. Property dualism, qualia states and intentionality

The concept of substance dualism fell into disuse due to its mystical approach that mixes theological and metaphysical elements in order to define a theory of the mind. In contrast, this same tradition left essential problems that were addressed by later generations and, consequently, are used in the philosophy of mind as the constellation Ursa Minor is used to find the north. These problems, which have already been addressed previously, are: (i) the notion of innate knowledge derived from the premise that logical-mathematical knowledge is a property of the spirit, (ii) the notion of subjectivity that arose with the idea of the thinking substance, that is, that there is an internal "I" that has thoughts and feelings inaccessible to the

physical plane – extended substance – and (iii) the mind-body problem, which arises when Descartes admits that both substances – extended and thinking – are incommunicable.

From these problems, there were three antagonistic philosophical currents in the philosophy of mind from which numerous approaches to the mind derive, one of which is materialist in nature and aims to eliminate the concept of mind from discussions because there is not a single physical phenomenon that is capable of corresponding to this concept and, consequently, there is no means of empirically proving the existence of the mind, or, in the words of Teixeira (2016): "The inaccessibility of mental phenomena makes them essentially subjective or private"[3] (TEIXEIRA, 2016, p. 17) The strong point of this exclusion is that some apparently insoluble problems, such as the mind-body problem, cease to have a purpose in the philosophy of mind and are discarded. However, the weak point of this current is the fact that, by eliminating the conception of mind, the conception of subjectivity elaborated by dualism is simultaneously eliminated. (CHURCHLAND, 2004, p. 36-7)

A second philosophical school of thought – which has also generated several approaches – is known as property dualism and its main characteristic is that it maintains a conception of the mind similar to that of Cartesian dualism. In all its versions, property dualism fits the contemporary materialist view that there is only one substance in the world – matter. This same substance has two distinct properties: one physical and one mental. (CHURCHLAND, 2004, p. 24) The expression property dualism appears mainly in analytical philosophy through Frank Jackson, Thomas Nagel and Tim Crane, this second current is also known as dual aspect theories, although it is also possible to identify the same elements of property dualism in 19th century positivist conceptions of psychology.

In general terms, the property dualist emphasizes the weak point of materialist currents: they are incapable of explaining the conception of subjectivity due to the fact that they eliminate the concept of mind – thinking substance – from discussions and, consequently, all problems and notions elaborated from this concept of mind must also be excluded. In effect, the property dualist will admit that the brain – matter – is composed of two properties: one physical and one mental. These properties, despite arising from the same substance, are distinct and irreducible, in a sense in which the mental property cannot be defined only by the physical properties that constitute it, that is, the mental property cannot be reduced to its own physical causes – the brain. This fragment taken from the book "*Psicología desde un punto de vista empírico*" by Franz Brentano (1935) is able to illustrate in the best

[3] In original: "A inacessibilidade dos fenômenos mentais torna-os essencialmente subjetivos ou privados" (TEIXEIRA, 2016, p. 17)

possible way the central feature of property dualism:

> We find physical and psychic properties united in the same group. Only physical states can be caused by physical states and psychic states by psychic states, but there are also cases in which physical states have psychic consequences and psychic states have physical consequences.[4] (BRENTANO, 1935, p. 21-2)

For the property dualist, mental states emerge from the brain after it reaches some level of complexity and, despite the brain being the causative element in this relationship, mental states are not capable of being explained by resorting exclusively to their causative element – the brain –, because they are in a supervenience relationship, that is, in a state above physical descriptions. (CHURCHLAND, 2004, p. 24-5) Still using Brentano's book (1935) as an example, the author manages to define this characteristic of mental states arising from the brain by describing the point of view of another researcher, who was his contemporary. Note that mental states are defined by the author as feelings, desires and representations and that the attribute of representations only arises as a mental state for man due to his evolution in relation to other animals.:

> Meyer comes to believe that lower animals only have feelings and appetites, without representations, and that the life of higher animals and men also begins with a mere feeling and desire, while representation comes when evolution is at its worst.[5] (BRENTANO, 1935, p. 66-7)

In this context, there are two variations of property dualism, a weak one and a strong one that promotes a solution to the main problems generated by the first version of the theory. The simplest version is called epiphenomenalism and it consists of stating that mental states appear in the brain at the moment the brain reaches a certain level of complexity. When these mental properties emerge from the brain, they are no longer capable of being measured by the physical properties of the brain, since, as previously stated, these mental properties will always be above the physical properties, as if they had a supervenient relationship with matter. (CHURCHLAND, 2004, p. 24-5) Because of this, physical states are capable of causing mental states, that is, the brain can cause mental states, but mental property is not

[4] In original: Encontramos propiedades físicas y psíquicas unidas en un mismo grupo. No sólo pueden los estados físicos haber sido provocados por estados físicos y los estados psíquicos por psíquicos, sino que también hay casos en que los estados físicos tienen consecuencias psíquicas y los estados psíquicos tiene consecuencias físicas. (BRENTANO, 1935, p. 21-2)

[5] In original: Meyer llega a creer que los animales inferiores tienen sólo sentimientos y apetitos, sin representaciones, y que la vida de los animales superiores y del hombre comienza también con un mero sentir y apetecer, mientras que el representar sobreviene cuando está másvadelantada la evolución. (BRENTANO, 1935, p. 66-7)

capable of causing physical effects, and this is because mental property does not interact with the physical properties of the brain, despite having been produced by the same physical cause – the brain –, as Robinson states: "Epiphenomenalism is the view that mental events are caused by physical events in the brain, but have no effects upon any physical events." (ROBINSON, 2019, p. 1)

The weak version has some critical problems that have led to the abandonment of this view. The first, and most obvious, is that our actions are caused by mental states, by intentions that exist, first and foremost, in our mind. How then can we explain the movements of my body, if they are, most of the time, caused by mental states in my consciousness? The second is that it questions the effective function of mental states in the dualist theory of the mind, that is, they are incapable of producing physical states, so why bother trying to find their definition and their causes? (CHURCHLAND, 2004, p. 25-6)

The strong version of this approach is interactionism, which will also claim that mental states emerge through the brain when it reaches some level of complexity and that once mental states emerge from the brain, they are irreducible to the very phenomena that create them. (CHURCHLAND, 2004, p. 26) According to Robinson (2020), the fundamental difference between this version and the first is that mental states have an influence on the brain, that is, mental states are capable of generating behavior:

> Interactionism is the view that mind and body – or mental events and physical events – causally influence each other. That this is so is one of our common-sense beliefs, because it appears to be a feature of everyday experience. (ROBINSON, 2020, n.p.)

Even with this strong version, the theory of property dualism has serious problems. The main one is that if mental states are products of the brain, why, after they have been generated, can they no longer be explained by their physical causes? What is the explanation for this irreducibility of mental properties? How does this emergence of mental properties happen? Is the emergence of mental states some kind of chemical reaction or a kind of neuronal evolution? Finally, the theory does not explain very well exactly what degree of complexity the brain must reach for mental states to emerge. (CHURCHLAND, 2004, p. 27-9)

The strong point behind the entire property dualism approach is precisely the attempt to develop a theory about subjectivity, despite the fact that this attempt comes up against the impossibility of constructing empirical evidence. Indirectly, this approach also leaves room

for characterizing knowledge as a mental property. The weak point is its positivist potential, because it establishes a hierarchical scale of species that are capable of developing mental states, in addition to placing man at the top of this evolutionary scale, as a prominent figure. (CHURCHLAND, 2004, p. 29-30)

Once all the main characteristics of property dualism have been defined, as well as the main problems that this theory triggers in the philosophy of mind, we will analyze in greater detail its main names in the tradition of analytical philosophy. We will present in a clear and succinct way the (i) knowledge argument created by Frank Jackson in his text "Epiphenomenal Qualia" (1982), the definition of what is (ii) the subjective aspect of experience created by Thomas Nagel in his text "What is it to be a bat?" (1974) and (iii) the relationship between intentionality and mental states developed by Tim Crane in "Intentionality as the mark of the mental" (1998) and "Intentionalism" (2007).

1.3.1. Epiphenomenalism: qualia as an ontological element of consciousness

Frank Jackson's text brings us a reflection on the classical property dualism that admits that there must be some other property capable of explaining consciousness, in addition to the physical property. He clearly dialogues against the materialist conception that was in vogue in the discussions of the time. This conception states that there is a component called qualia or qualitative phenomenon that is present in every mental state, this component has no correspondence with the physical world. They arise from physical properties in the brain, but have no effect on their physical causes. (FAGUNDES: 2015) This in the sense that, if there is a mind, there must also be some physical correspondent in our brain capable of generating it:

> I do not mean these sketchy remarks to constitute a definition of 'physical information', and of the correlative notions of physical property, process, and so on, but to indicate what I have in mind here. It is well known that there are problems with giving a precise definition of these notions, and so of the thesis of Physicalism that all (correct) information is physical information. (JACKSON, 1982, p. 127)

In general, qualia are components of mental states generated by our neurons and are associated with our consciousness, our feelings and our sensations, in the words of Ana Maria Guimarães Jorge: "(...) are associated with the phenomenology of colors, sounds, flavors, aromas and tactile sensations that enrich our experiences."[6] (JORGE, 2007, p. 55) They are

[6] In original: "(...) estão associados à fenomenologia das cores, sons, sabores, aromas e sensações táteis que enriquecem nossas experiências." (JORGE, 2007, p. 55)

considered fruits of our evolution and although qualia were generated by our brain, they have no influence on the physical world. Or, in Jackson's words: “Now the epiphenomenalist allows that qualia are effects of what goes on in the brain. Qualia cause nothing physical but are caused by something physical.” (JACKSON, 1982, p. 134)

Jackson (1982) develops what he himself calls the knowledge argument for qualia and his general objective is to demonstrate that knowledge about a set of facts in the world is not enough to form first-person knowledge. (FAGUNDES, 2015, 171) To develop it, the author creates two characters – Fred and Mary – who are analyzed according to their ability to identify colors. The first character is Fred, who has an exceptional ability to catalog colors. He has such a keen vision for this that he can observe hues that ordinary people cannot see. In the example, someone shows Fred a batch of ripe tomatoes and he is able to classify them into two groups, which, for the general public, are classified into a single group. Even if Fred is blindfolded and someone mixes the tomatoes again, when the blindfold is removed, he will be able to reclassify the tomatoes into the same two groups. (JACKSON, 1982, 128-9)

Fred has an extraordinary ability to catalog colors. He is able to see two colors in the same proportion that we can distinguish blue from yellow, for example. He even hypothetically develops a vocabulary to distinguish colors, using the words “red1” and “red2” in order to teach them to other people. However, he is never able to make other people notice the difference and comes to the conclusion that the rest of the world only sees one type of red:

> And his discriminatory behaviour bears this out: he sorts red, from red, tomatoes with the greatest of ease in a wide variety of viewing circumstances. Moreover, an investigation of the physiological basis of Fred's exceptional ability reveals that Fred's optical system is able to separate out two groups of wave-lengths in the red spectrum as sharply as we are able to sort out yellow from blue. (JACKSON, 1982, p. 128-9)

The questions raised by Jackson in his work are: (i) what kind of mental and visual experiences does his character have when he sees “red1” and “red2”? (ii) How can he distinguish and communicate these new colors? There is no physical information about Fred’s brain that can answer this question, that is, there is no differentiation in his brain or optical structure in relation to other individuals that makes him have such a perception of the world. It is impossible to know Fred’s experience with colors, because it is something strictly particular to him. We can know about his behavior, the physiological structure of his brain or his cornea, but that does not mean that we are able to know about Fred’s subjective experiences. This is because, in the words of the author himself: “Fred and the new colour(s)

are of course essentially rhetorical devices." (JACKSON, 1982, p. 130)

In his second version of the knowledge argument, he creates the character Mary. She is a scientist specializing in neurophysiology who, hypothetically, is doing research on colors and is locked in a black and white room, in a way in which the only experiences she has throughout her life are in these colors. As an expert, she knows everything about the physiological processes that involve the brain and the interpretation of colors in a way that she is able to describe in neurophysiological terms every relationship that exists in relation to the ability of human beings to perceive colors:

> She discovers, for example, just which wave-length combinations from the sky stimulate the retina, and exactly how this produces via the central nervous system the contraction of the vocal chords and expulsion of air from the lungs that results in the uttering of the sentence "The sky is blue". (JACKSON, 1982, p. 130)

The question Jackson asks this time is what will happen when Mary leaves the black and white room and, for the first time, experiences color? The answer to this question states that Mary will learn something new when she leaves the room and comes into contact with the other colors, because there is something beyond the purely physical descriptions that inform what happens in our brain or in our vision when we perceive colors, this something beyond is the objective experience that we have when we come into contact with colors. This objective experience that we have of our inner self in contact with the senses or with its own emotions, the property dualist will call qualia or qualitative phenomena. (JACKSON, 1982, p. 130)

1.3.2. What is it like to be in another organism's point of view? Or "what is it like to be a bat"?

Thomas Nagel, in his text "What is to be a bat", specifically addresses the mind-body problem from the point of view of establishing what mental phenomena are. Which, for Jackson, are characterized as qualia or qualitative phenomena. Both have many elements in common, the most notable element between them being the rejection of a reductionism of the mind and the attempt to find a non-physical element to understand mental phenomena. Nagel will centralize his argument from the perspective of subjectivity. From the fact that beings have unique points of view in relation to other beings or, in other words, a first-person ontology. Therefore, it is impossible for an individual, whoever he may be, to place himself

from the point of view of another individual, being possible at most to assume and describe what the other thinks, feels or the reasons that guide his actions:

> Conscious experience is a widespread phenomenon. It occurs at many levels of animal life, though we cannot be sure of its presence in the simpler organisms, and it is very difficult to say in general what provides evidence of it. [...] No doubt it occurs in countless forms totally unimaginable to us, on other planets in other solar systems throughout the universe. But no matter how the form may vary, the fact that an organism has conscious experience at all means, basically, that there is something it is like to be that organism. There may be further implications about the form of the experience; there may even (though I doubt it) be implications about the behavior of the organism. But fundamentally an organism has conscious mental states if and only if there is something that it is like to be that organism something it is like for the organism. (NAGEL, 1974, p. 436)

In this sense, Nagel (1974) is also an epiphenomenalist and admits that, contrary to materialist conceptions that claim that all experience of consciousness in organisms is reduced to behavior, the experience of consciousness occurs at different levels in animal life and that it is difficult to find empirical evidence about this experience of consciousness. This aspect of the experience of consciousness that does not have empirical evidence is defined as subjectivity – in the sense of a first-person ontology –, an aspect that is excluded from the materialist analysis of the mind. According to Paulo Abrantes (2005): "(...) the expression "what is it like to be X" (...) to refer to the experience of an individual (X), possessor (...) of a phenomenal consciousness that is also particular."[7] (ABRANTES, 2005, p. 225) It is impossible to reduce the subjective character of the mind to its physical causes and this means that there is an element of the phenomenon of the mind that is non-physical – subjectivity. (NAGEL, 1974, p. 436)

The author then constructs an analogy to exemplify the distinction between objectivity and subjectivity and vehemently relates subjectivity to the concept of point of view. This analogy is taken to its ultimate conclusion and constructed on the hypothesis: is it possible to be from a bat's point of view? What is it like to be a bat? Is it possible for a person to interpret the world as a bat interprets it? And Nagel uses the bat animal for two characteristics in particular: (i) it is a living being that does not have the same needs as humans, that is, it has opposite needs to exist and survive and (ii) the senses with which bats perceive the world are completely different from the ones we perceive it with. (NAGEL, 1974, p. 436-7)

The subjective experience of a bat is the understanding of being like a bat or, in other words, having the point of view of a bat. Bats are blind and perceive the world through sonar

[7] In original: "(...) a expressão "what is it like to be X" (...) para referir-se à experiência de um indivíduo (X), possuidor (...) de uma consciência fenomênica também particular." (ABRANTES, 2005, p. 225)

waves that they release in their grunts, these sonar waves bounce off objects in the environment and return to their sonars, this process is called echolocation. Thus, the bat's perception is completely different from the perception we have of the world and it has subjective experiences that we humans are not even capable of imagining. This creates an insurmountable barrier to having a notion of what it is like to be a bat. We humans are incapable of knowing what it is like for a bat to be a bat, at most we are capable of schematizing explanations of how bats live; how they relate to the environment and to other bats and how they perceive the world. But we are definitely unable to put ourselves in the bat's point of view because we have a completely different perception from that of bats and because the relationships that are important to bats have no meaning for us and vice versa. (NAGEL, 1974, p. 438)

We perceive the world through sight and hearing, and we mostly use sight to perceive the world, while bats use echoes that reach objects in the world and are captured by their sonar. We desire working days, we boil the food we eat and we use beds to sleep, while for bats this makes no sense at all. Their objects of desire are completely different from ours and even if we manage, somehow, to communicate with a bat, make it understand and be understood and present our world to it and it presents its world to us, this barrier will still be insurmountable because humans and bats have completely opposite desires and habits: from the bats' point of view, the essential thing is to suck blood, eat fruit and sleep hanging upside down, while for us the ideal is to have a working day and sleep comfortably in a bed:

> Our own experience provides the basic material for our imagination, whose range is therefore limited. It will not help to try to imagine that one has webbing on one's arms, which enables one to fly around at dusk and dawn catching insects in one's mouth; that one has very poor vision, and perceives the surrounding world by a system of reflected high-frequency sound signals; and that one spends the day hanging upside down by one's feet in an attic. In so far as I can imagine this (which is not very far), it tells me only what it would be like for me to behave as a bat behaves. But that is not the question. I want to know what it is like for a bat to be a bat. Yet if I try to imagine this, I am restricted to the resources of my own mind, and those resources are inadequate to the task. (NAGEL, 1974, p. 439)

Nagel (1974) demonstrates that it is impossible to put oneself in the point of view of another being and that, at most, it is possible to elaborate a conceptual scheme about how their behavior and beliefs work and describe them in neurophysiological terms of what we believe them to be. We believe that bats have their own version of feelings, but their subjective character, that is, the experience they have of these feelings is inaccessible to us, because it is on a plane beyond the physical plane. We can only interpret and conceive what it

is like to be for us, our language can only describe the subjective character of the experience of people like us and we cannot deny that bats have unique experiences with the same degree of complexity as our own experiences. When reflecting on what it is like to be a bat for us, we conclude that there are characteristics of others or of other species that are incapable of being understood by us and this is because we do not have a language structure for this:

> Scientific descriptions, such as those made in the field of neurophysiology, adopt a third-person point of view and, by aiming for objectivity, discard the subjective aspects of any form of experience.[8] (ABRANTES, 2005, p. 228)

The central issue here is that a point of view can only be assimilated by another when there is someone similar enough to be able to interpret it. In this sense, subjective experiences are not exactly private to their own possessor, but it is necessary to have an understanding of how facts relate to each other and only subjective experience can bring us closer to the point of view of others. Likewise, a complete lack of experience can mean that it is never possible to access the point of view of what it is like to be a bat. (NAGEL, 1974, 440-1)

We use our mind – the act of representing – to refer to objects outside of it. This means that there is an inner world of our thoughts and an outer world of objects that are referred to and represented in our mind. What we describe is everything that makes sense to us, but what we describe is only capable of making sense from the point of view of those who share our culture and our language. The further the subject is from these two factors, the further away he or she will be from understanding the meaning of what is represented. What we seek to elucidate here is that the subjective character that lives inside our minds – in the sense of a first-person ontology – can only be captured through the point of view that we have or that others are capable of perceiving. (NAGEL, 1974, p. 442)

But what is the nature of this inner world – inhabited by subjectivity – in which we represent things? How can we access the essence of this inner world and not just construct a conceptual scheme of it? And how can we access this subjective character in the case of beings – or subjects – who perceive the world in a way completely opposite to ours? These questions take us back to the old dilemma of the mind-body problem, whether mental states are capable of being reduced to their physical causes or whether they are beyond their physical causes. (NAGEL, 1974, p. 442-3)

[8] In original: “As descrições científicas, como as feitas no campo da neurofisiologia, adotam o ponto de vista de terceira pessoa e, por almejarem uma objetividade, descartam os aspectos subjetivos de qualquer forma de experiência.” (ABRANTES, 2005, p. 228)

1.3.3. Intentionality as an ontological element of mental phenomena

Tim Crane (1998) will investigate the conception of intentionality as the ontological element of consciousness and mental states. In his investigation he will be inspired by the work of Franz Brentano (1935) on the conception of intentionality and will relate Brentano's (1935) point of view to intentionalist philosophers - more specifically property dualists, existentialism and Edmund Husserl's phenomenology - and critics of this conception, which he will call non-intentionalists - the materialist point of view in general. But, what is consciousness and mental states for Tim Crane (1998)?

The first basic definition of mental states is that they always have something as an object. An object of thought, in turn, is always about what that thought is about. Thus, thoughts only exist if they are about something or of something, that is, if they have an object. A mental state is always associated with beliefs, desires, will, feelings or knowledge. However, not all mental states are thoughts; there are also mental events that occur in our consciousness and are not objects of thought, such as sensations, emotions and perceptual experiences. In general, intentionalism, also known as representation theory, defends the point of view that mental phenomena are characterized by being intentional or, better said, having a representational content. Furthermore, the conscious character of mental states always has an entirely intentional nature. (CRANE, 2007, p. 5-6)

Crane's (1998) general objective is not to describe the theory of intentionality as a form of psychologism. (NIEL, 2018, p. 211) The author wonders what the general reason is for intentionalists to defend the view that intentionality is the ontological element of mental states? To this end, he analyzes in his article counterexamples of Brentano's theory, states that there is a strong form and a weak form of the conception of intentionality and has as a starting point to focus on the weak form of the conception of intentionality because, if it is false, then the second form will also be false. (CRANE, 1998, p. 1-2)

Intentionalism is based on Franz Brentano's (1935) theory of intentional non-existence. Intentionality in its weak form consists of Brentano's (1935) theory of intentional non-existence. Broadly speaking, this conception arises from the mind-body problem. Brentano (1935), like Descartes (1973), admits that there are two distinct properties, one physical and the other psychic, and that these properties are incommunicable. The problem in question arises from the fact that a physical cause can only have another physical cause as an effect. Brentano suggests that there are cases in which a psychic cause can generate physical events and vice versa:

> We find physical and psychic properties united in the same group. Only physical states can be caused by physical states and psychic states by psychic states, but there are also cases in which physical states have psychic consequences and psychic states have physical consequences.[9] (BRENTANO, 1935, p. 21-2)

The argument of the mind-body problem according to Franz Brentano's (1935) point of view of the intentional non-existence is divided into three parts: (i) the first involves intentional movement and consists of stating that when I move some limb – physical – of my body, it is my consciousness – psychic – that executes the movement; (ii) when we feel some physical pain, it is my consciousness – psychic – that feels this sensation; and (iii) there are people who have lost some limb of the body – physical – and still feel it in their consciousness – psychic –, this phenomenon is called phantom limbs. In the first part (i) it is a (a) psychic cause, that is, my consciousness, that generates an effect on a physical cause, the intentional movement; in the second part (ii) it is (b) a physical cause, the pain that generates the effect on a psychic cause; and in the third part (iii) it is a psychic cause – memory – that generates an effect on another psychic cause.

There are, therefore, perceptual experiences that originate in our consciousness – (i) and (iii) – perceptual experiences that originate in the sense organs – (ii). The perceptual experiences that have our consciousness as their origin are characterized as mental phenomena – the perceptions of our inner self. These internal perceptual experiences – (i) and (iii) – that originate in our consciousness are the starting point for Brentano (1935) to develop his conception of intentional non-existence in which we individuals possess an inner self – consciousness – that has thoughts – internal perceptual experiences – as representations or has representations – external perceptual experiences – as its origin. (BRENTANO, 1935, p. 64) It is under this aspect of Franz Brentano's (1935) philosophy that Tim Crane (1998) states that mental states are “about something” – internal perceptual experiences – or “of something” – external perceptual experiences. (CRANE, 1998, p. 3)

Through our internal perceptions we can represent the sensations apprehended by our sense organs. We cannot actually know their nature, only the phenomenon, that is, that which appears and is captured by the sense organs and thus represent them as physical phenomena in our consciousness. This is precisely why Franz Brentano (1935) promotes the distinction between the act of representing that which is represented and defines consciousness as the act

[9] In original: “Encontramos propiedades físicas y psíquicas unidas en un mismo grupo. No sólo pueden los estados físicos haber sido provocados por estados físicos y los estados psíquicos por psíquicos, sino que también hay casos en que los estados físicos tienen consecuencias psíquicas y los estados psíquicos tiene consecuencias físicas.” (BRENTANO, 1935, p. 21-2)

of representing and the objects of thought as representations. In other words, the original element of consciousness is the act of representing and it is through this that we represent sensations, feelings and judgments. (BRENTANO, 1935, p. 65)

In this context, Brentano (1935) states that psychic phenomena are either representations or have a representation as their starting point. In this statement, he also implicitly admits that the act of representing is another element that is part of the nature of psychic phenomena. Starting from the point of view that a representation is everything that appears in our consciousness. Here Brentano (1935) establishes a categorical relationship in which abstract thought, feelings, expectations, beliefs and desires are interpreted as representations, while physical phenomena are those that have as their starting point a representation of a physical phenomenon of a sensation obtained by the sense organs:

> Every representation, through sensation or fantasy, offers an example of a psychic phenomenon, understanding here by representation, in what is represented, without representing.[10] (BRENTANO, 1935, p. 21-2)

This relationship is used to develop a hierarchical relationship in which psychic – internal – phenomena are more important than physical phenomena because internal phenomena, that is, feelings, desires and emotions, judgments and will, are genuine representations, while external phenomena are secondary because they have physical phenomena as their starting point. In other words, internal phenomena are genuinely captured by our internal perception, while external phenomena are first captured by our senses and only later appear in our consciousness as representations. At this point, he returns to the example of (ii) pain to emphasize that our internal perception occurs unitarily and in a chained manner, while our external perception occurs all at the same time, and this means that we are unable to distinguish pain or identify a specific color. (BRENTANO, 1935, p. 28-31)

With this, we arrive at yet another ontological element: physical phenomena have extension or form, while psychic phenomena are those that do not have extension and form in space-time and, in effect, our consciousness – our act of representation – does not have extension. It is at this point that we finally arrive at the Aristotelian – and medieval – view of intentional nonexistence. Brentano (1935) implicitly returns a third time to the argument of (ii) pain, recalling the issue of (iii) phantom limbs, that is, that there are cases in which we represent an extension that does not exist in our body. Both the act of representation and

[10] In original: "Toda representación, mediante sensación o fantasía, ofrece un ejemplo de fenómeno psíquico, entendiendo yo aquí por representación, no lo que és representado, sino e lacto de representar." (BRENTANO, 1935, p. 21-2)

intentional nonexistence are, respectively, mental phenomena and intentional acts. The difference is that in the discussion of contemporary philosophy, the part involving the theory of internal perception is rejected as a whole:

> The idea that sensations are objects is associated with the sense-datum theory of perception, which is not a popular view in contemporary philosophy. These days it is widely agreed that perception does not involve the mind directing itself upon internal, mental objects—sense-data. But this agreement does not derive from a general rejection of the directedness, or intentionality, of perception. (CRANE, 1998, p. 4)

Some philosophers of analytic philosophy, such as Jackson (1974) and Nagel (1982), defend the view that perception has non-intentional properties – that is, that perception may not be directed to events outside the mind – these non-intentional properties are called qualia. Qualia are not objects directed to sensation, but a non-physical characteristic of mental states, thus, qualia are characteristics of mental states themselves. If intentionality is the ontological element of consciousness and mental states consist of being "of something" or "about something" and "going towards something", how can we explain qualia states or first-person ontology? That is, there are qualitative phenomena that are not intentional and configure our forms of perception. This form of perception cannot be directed to events outside of consciousness, that is, it is our intentionality that makes us go towards that which is perceived, but that which is perceived by our perception is "of something" or "about something" and these characteristics in themselves are qualia states and, therefore, are not intentional. Qualia are not "towards our perception" - "towards something" -, they are intrinsic characteristics of our perception and exist independently of our desire or our will to go towards what is perceived. (CRANE, 1998, p. 9-10)

Furthermore, consciousness from the point of view of a first-person ontology, that is, an inner self that has beliefs, desires, will, judgments and feelings, also does not seem to be always "directed towards something", because not all the elements that constitute consciousness from the point of view of a first-person ontology direct it towards what is perceived. What directs us towards something that we perceive are our desires and our will, but properties such as feelings and beliefs in themselves exist independently of them being directed towards something. When we feel anxious or believe that it will rain the next day, these mental states do not direct us towards something, they exist independently of our desires or our will in relation to our perception. When we refer to the relation in which mental states have to represent a belief or a feeling in our consciousness, we are talking about the

phenomenal character of that mental state and its relation to the representational content – that which the mental state represents. Using Nagel's (1974) jargon, representational content consists of “what it is like to be anxious” or “what it is like to believe that tomorrow will rain”. This phenomenal character of mental states and consciousness are in a supervenient relation with the objective world, that is, they are in a relation above the objective world and, therefore, are not capable of being experienced by people other than the people who have those mental states. (CRANE, 2007, p. 9-15)

Thus, the representation of the content that is the object of the phenomenal content is not the experience, but the proposition - sentences, statements, among others. As we have already said, the experience itself is restricted to the individual who has the mental state of “what it is like to be anxious”, for example, because the phenomenal character of that state is in a supervenient relationship and is not part of the objective world. The most that the individual who has it can do is talk about the subjective experience that he or she has. But what about in the case in which (ii) we feel physical pain, is the object of the mental state that generates that pain in our consciousness the region of the body itself or the representational content that the phenomenal character of that experience represents? That is, if we take as a starting point that mental states and consciousness are in a supervenient relationship with the objective world, is it possible for two individuals to have the same pain? That the pain in the elbow that one individual has is the same as that which a second individual has? (CRANE, 2007, p. 9-15)

The weak intentionalist will defend the Brentanian point of view by stating that the mental state of (ii) pain that is felt has as its representational content the bodily region where the pain originates and that the pain manifests itself in a disordered way in relation to the original representations – beliefs, desires, feelings, judgments and will – but is represented by them in our act of representing. But in relation to (iii) amputees who feel their phantom limbs or people who have hypoalgia, a disease in which the individual who has it has the physical damage related to pain, but does not feel the pain because the structure of the central nervous system is damaged and cannot transmit the pain to the brain? In the case of (iii) phantom limbs, the entire process of sensation of the limb that is amputated happens in consciousness and the phenomenal character of the representational content is not the region where the limb that no longer exists is felt. In cases of hypoalgia there is no representational content and, therefore, there is no subjective experience, only the objective experience of the damage that is taken by the body.

The strong intentionalist will therefore defend the view that the character of the

subjective experience is identical to the representational content of the mental state and not to the objective experience of taking physical harm. And the weak intentionalist will defend that both the objective and subjective experiences share intentionality and, therefore, are part of the phenomenal character of the mental state. The difference between both views is that, for the strong intentionalist, the objective experience of physical harm, that is, the non-representational phenomenal properties, supervenes on the experience of having the representational content - the proposition - as the subjective experience of the mental state, whereas for the weak intentionalist the objective experience of pain is a form of awareness of our own body that is united with the phenomenal character of the subjective experience of feeling pain and, therefore, the very representational content of the subjective experience:

> But I do not need to dwell on the arguments for mental objects here, since the defence of intentionalism does not need to appeal to them. Intentionalism about bodily sensations can be defended instead by appealing to a perceptual account of bodily sensations, such as that of D.M. Armstrong, or the kind more recently defended by Michael Martin. On this account, bodily sensation is a form of perceptual awareness of one's body. It is by experiencing bodily sensations that we come to be aware of the state of our body, and of events happening within it. The qualities of which we are aware of in bodily sensation—the sensory qualities of hurting, feeling cold or warm and so on—are predicated in these experiences of parts of the body. When one feels a pain, one normally feels it to be in a part of one's body; and even when a pain is felt where there is no body-part in which to feel it—as in the case of phantom limb pains—what subjects feel is that their body extends further than it actually does. They do not feel as if their pain exists in mid-air, a few inches from where they have lost their limb. (CRANE, 1998, p. 6- 7)

But what about feelings that do not have a representation outside the physical body, as is the case with (iii) phantom limbs or feelings such as depression and anxiety in which the causes are all in the representational content that is taken as the phenomenal character of the mental state? The biggest problem for both forms of intentionalism is that feeling anxious and explaining propositionally the reason – representational content – for acting anxious are distinct situations. The intentionalist, in general, argues that the cause itself, that is, the feeling, is the object of the phenomenal character of the representational content, but it is impossible to be anxious without this having a particular cause that is explained by a reason – propositions. Even if the individual feels anxious and cannot explain the reason for being anxious, he or she can still describe the symptoms of what it is like to feel anxious. Materialists, for example, will argue that this cause is represented by the verbal description of the sensation – proposition – of anxiety or the behavior manifested when feeling anxious. (CRANE, 1998, p. 10-2)

Again, these purely subjective mental phenomena must possess non-physical

characteristics called qualia. In this logic, qualia are always associated with mental states such as “the act of feeling pain”, “the act of seeing red1 and red2”, “the act of believing that it will rain tomorrow” or “the act of being anxious”. All these mental acts have their respective qualia in the phenomenon of the mind, so that there is a “pain-qualia”, a “seeing-red1 qualia”, a “belief-that-it-will-rain-tomorrow qualia” and an “anxiety-qualia”. (CRANE, 1998, 16-7)

We can also refer to Quine's criterion of identity in relation to the problem of Intentionality. Quine's conception seeks to clarify the ontological commitment, by aiming to reduce all logical sentences to existential propositions. (GUILHERMINO, 2018, p. 108) De acordo com Décio Krause (2017): “(...) a certain discourse reveals ontological commitment”[11] (KRAUSE, 2017, p. 56) In the sense that the objective existence of states of affairs in the world can be described in an appropriate quantificational language. These quantifiers – such as the quantifier “exists” – must be interpreted as fictitious – we will address this aspect indirectly in **3.3.2.1. Extensional, intensional-with-s and intentional-with-a-t propositions**. (KRAUSE, 2017, p. 56-7)

The biggest problem is to establish a correspondence with reality in proper names and general terms – which for Searle will be directed towards the extensionality of intentional contents, giving rise to intensionality-with-s. In traditional logical analysis, these terms must denote extensionally a state of affairs in the world, that is, the term must have correspondence with reality. Thus, when we create a proposition “Socrates is tall”, the predicate of the proposition must affirm things in relation to an agent that previously exists in the world. The biggest problem is to existentially reference which Socrates the author of the proposition refers to, in the sense that several Socrates may eventually correspond to the characteristics of the referred proposition. Therefore, we can infer that there are variables to replace the subject of the proposition in question, which commits us to a set of individuals denoted as Socrates who may correspond to these characteristics. If the proposition is true, it expresses a logical commitment to the set of individuals who may represent the subject of the proposition. If not, the proposition would allude to fictional discourse and would not commit to objective reality. (KRAUSE, 2017, 58-9)

Another materialist criticism of qualia states is a variation of the possible worlds argument proposed by Saul Kripke. The original argument, developed by Hilary Putnam, aims to ensure the extensionality of properties of a given set, which is defined by similarity and not by its intrinsic characteristics. In the possible worlds argument, the possibility of a twin planet

[11] In original: “(...) um determinado discurso, revela comprometimento ontológico” (KRAUSE, 2017, p. 56)

Earth is considered, which, in appearance, has the same properties as ours, but its physical constitutions at a micro level are not the same. On the planet we live on, for example, we have water that is composed of the elements H20 – at a micro level –, while on the twin Earth the same property at a macro level, which looks like water, is composed of other elements that are completely unknown on our planet Earth, suppose XYZ. The question – which provides the conclusion presented at the beginning of the paragraph – posed by Putnam is: is it possible to establish that the property found on the twin Earth is called water? (SEARLE, 1995, p. 283-5)

In the version of the possible worlds argument proposed by Saul Krikpe, the author replaces the example of water with the example of inverted qualia states – or inverted qualitative phenomena –, these are different ways of expressing the same example. (MENDONÇA, 2015, p. 263) The argument boils down to presenting another possible world in which qualia are associated with other types of sensations and emotions. In this way, the same "pain-qualia" from our world is associated with another emotion like the "happiness-qualia" in this other possible world. According to this argument, nothing in a qualia connects it to a particular type of sensation or emotion, because without an external reference, the qualitative phenomenon ceases to be objectively identified. (CRANE, 1998, p. 9-10)

While the non-intentionalist tries to reject the existence of qualia mental states and the possibility of inverting these qualia mental states, the intentionalist will argue that it is possible to present different paths for the same emotion and its relationship with the subject who feels it. But the core of this entire investigation is to define what is the primary element of mental states, which for non-intentionalists is summarized in qualia and for intentionalists in intentionality:

> My original question was: what would you have to believe about intentionality in order to believe that it is the mark of the mental? The way I have approached this question is to try and specify the sense in which something is 'given' to the mind in sensation and emotion, just as something is given to the mind in thought and experience. The heart of the view is inspired by Brentano's phrase that in the idea, something is conceived; I say that in the sensation, something is felt, in the emotion, something is apprehended—and so on. (CRANE, 1998, p. 11)

Finally, the intentionalist approach is mistaken when it states that intentionality is the ontological element of the mind, and this is because there are other non-physical elements that compose it and that do not have intentionality, these elements are qualia states and a first-person ontology. But this does not imply admitting that intentionality is not an ontological element of the mind, only that not all mental states are "towards something". Therefore, for the strong intentionalist, intentionality, qualia states and a first-person ontology are the components that configure the

ontological existence of the mind. Intentionality, in turn, is a relationship between the mental state and an intentional content as an object, that is, a representational content plus the intention to direct oneself to that object that is considered as representational content. Representational contents are always "of something" – original representations – or "about something" – representations of representations. (CRANE, 1998, p. 17)

1.4. Anomalous Monism, Causation and Intentionality

Anomalous monism is a conception of philosophy of mind that permeates between the other two general conceptions of philosophy of mind – dualism and materialism. Its point of view admits that there is only one substance in the world – matter – and from this substance two distinct properties are generated, one physical – neuronal synapses and the central nervous system – and the other mental – mental events, mental states and conscious states. There is a central difference between anomalous monists: the followers of dualism defend the point of view that everything is essentially mental and the followers of materialism defend the point of view that everything is essentially physical. (SEARLE, 1998, p. 153, 2004, p. 69)

In property dualism, the influence of anomalous monism is clear in its own core conception, which apparently defends the same central point of view that there is a single substance that generates two distinct properties, one physical and the other mental. The core of the discussions of property dualists involves whether or not mental properties have causal relationships with physical properties. In behaviorism, the mind is reduced to mental processes and behavior is understood as a reflection of the mind; the brain, in turn, has a disposition for behavior that can be triggered by stimuli from the external world that activate mental processes and behavior as a response; reducing mental properties to their physical causes. Functionalism will use a perspective very similar to behaviorism: the disposition for behavior will be replaced by functional activity, stimulus by input data and responses by output data; the difference is that any system will be capable of having a mind and mental states will not be reduced to the physical properties of the brain, because if the system is capable of reproducing a functional activity, therefore, it is capable of having a mind and, consequently, having mental states.

This conception will therefore be diluted, to a greater or lesser extent, among most conceptions of Philosophy of Mind, just as Cartesian substance dualism and its legacy in the History of Philosophy were. What we would like to discuss in this section in relation to anomalous monism, specifically, is its relationship with causation and intentionality. How do

mental states cause actions in the world? Are these actions rational? How do I intend to perform some effect in the world, such as opening my refrigerator or buying peanut butter at the market? For this, we will use the text Action, reaction and causes by Donald Davidson. (1963).

1.4.1. Causation and intentionality from the point of view of the experience of acting

Donald Davidson (1963) pursues the purpose of arguing that there is an ordinary causal explanation or rationalization that involves any action of an individual. This ordinary causal explanation or first reason is described by the author as explanatory rationalizations. Since the action is caused by an ordinary causal explanation, it realizes an intention in the world. In the words of Diana Patrícia Couto (2017): "The goal is no longer to know whether reasons cause actions, but to explain how this causal relationship occurs. This question immediately takes us to the realm of mental causality."[12]. (COUTO, 2017, p. 62) To this end, the author infers that reason organizes an action when the agent rationalizes this action, that is, when the agent thinks about the consequences, characteristics and aspects that will drive the rationalized action. When rationalizing an action, the individual needs a pro-attitude in order to direct himself towards the state of affairs of his action. And first reasons, such as: believing, knowing, desiring, perceiving, reporting or remembering – what Searle will describe as intentional modality, psychological mode or illocutionary force of an intentional state, we will address this in the course of chapter **3. Intentionality, Network and Background**. Pro-attitude is responsible for reporting the belief of an action in itself, while a first reason is the reason why the individual performs an action. (DAVIDSON, 1963, p. 685-6)

I walk to work with an umbrella because it is cloudy and, at the same time, a military police officer stops me thinking it is a gun. The act of realizing that it is cloudy causes the action of walking to work with an umbrella. When I perform this action, I do not rationalize whether there are military police officers who will be patrolling; the intention of my action is to protect myself from the rain. The description of the action and rationalization of its purpose in itself through sentences does not perform the action itself, in the sense of "I rationalize that I will walk to work with an umbrella in my hands because I want to protect myself from the rain on this cloudy day". However, the rationalization itself is a form of completion of my

[12] In original: "O objetivo já não é saber se razões causam ações, mas explicar de que forma esta relação causal ocorre. Esta questão remete-nos de imediato para o âmbito da causalidade mental". (COUTO, 2017, p. 62)

goal of wanting to protect myself from the rain, which can be achieved by walking to work with an umbrella. The first action of walking to work with an umbrella provides, in the background, the quasi-intentional character of being able to perform the same action and being stopped by the military police officer because he thinks the umbrella is a gun. For the same action we have two effects: one intentional, which is interpreted as a primary reason – going to work with an umbrella because the day is cloudy – and the other quasi-intentional – being stopped by the military police because he thought the umbrella was a weapon. (DAVIDSON, 1963, p. 686-7)

What we would like to infer, in the words of Davidson (1963), is that: "A primary reason consists of a belief and an attitude, but it is generally otiose to mention both." (DAVIDSON, 1963, p. 688) The primary reasons for an action are used to explain the purpose or rationalization in relation to the question: why did you do that? In the case of the example, if the military police officer mistakes the umbrella for the gun and stops me for a stop, the primary reason for my action is: "I am heading to work with an umbrella because the day is cloudy and I do not intend to get wet if it happens to rain". A primary reason for an action provides a context for the effect of carrying out the action and its result implies an intention, a desire or a want in relation to the rationalization of the action:

> To know a primary reason why someone acted as he did is to know an intention with which the action was done. If I turn left at the fork because I want to get to Katmandu, my intention in turning left is to get to Katmandu. But to know the intention is not necessarily to know the primary reason in full detail. If James goes to church with the intention of pleasing his mother, then he must have some pro attitude toward pleasing his mother, but it needs more information to tell whether his reason is that he enjoys pleasing his mother, or thinks it right, his duty, or an obligation. The expression 'the intention with which James went to church' has the outward form of a description, but in fact it is syneategorematic and cannot be taken to refer to an entity, state, disposition, or event. Its function in context is to generate new descriptions of actions in terms of their reasons; thus 'James went to church with the intention of pleasing his mother' yields a new, and fuller, description of the action described in 'James went to church'. (DAVIDSON, 1963, p. 689-90)

A deliberate action by an individual occurs according to certain coherent characteristics of the individual who rationalizes it. The coherence of this rationalization implies a first reason for the purpose of the action that will be performed – as in the example of going to work with an umbrella on a cloudy day. In this way, there is an irreducibility in the rationalization of a deliberate action: the point of view of the individual who rationalizes his action before performing it – which configures a first-person ontology. We will address the issue directed to the problem of consciousness in **2.4.2. the irreducibility of**

consciousness. (DAVIDSON, 1963, p. 690-1)

Rationalizations of an action manifest themselves as a causal explanation in relation to the performance of the deliberate action itself. The individual who performs the action considers, according to his set of beliefs and expectations that the action itself – such as going to work with an umbrella – that the performance of his action will have a certain effect – protecting himself from the rain. Therefore, when we rationalize an action, we have a subjective point of view that refers to a familiar state of affairs. The relationship between the point of view and the state of affairs encompasses the beliefs and expectations regarding the action itself. When explaining the rationalization of the action, we standardize that way of acting through familiarization, but the causes and effects are separate in themselves, in the sense that the rationalization of an action is not its cause; an action is always a cause in itself. What we do when we explain an action according to its rationalization is to place it in the context of its causes and demonstrate a possible regularity between what was rationalized and the expected effect. It is in this regularity that we find the standardization of action – taking an umbrella to work on rainy days, for example. (DAVIDSON, 1963, p. 691-2)

If, for example, the referee of a football match fills and empties his lungs towards the whistle to signal an offside. His intention to signal that the attacker who was thrown in had only one more opposing player between him and the line of the ball explains his action of blowing the whistle to signal the offside. Standardization by familiarity consists in the fact that in all cases in which a player is thrown in and has only one more opposing player between him and the line of the ball, it will be characterized as an offside. Therefore, whenever this event occurs he will be willing to intentionally perform the action of blowing the whistle to signal the offside. (DAVIDSON, 1963, p. 692-3)

We can conclude that – regarding causes and intentionality of a deliberate action – deliberate actions are constituted by rationalizations and primary reasons. Rationalizations are organized as ordinary causal explanations of the action itself. Even if an action is rationalized according to an intention, there may be quasi-intentional events. Once the action is rationalized, it manifests itself according to a point of view and a familiar pattern of state of affairs that have become a regularity for the individual who rationalizes the action. This familiar pattern is then assigned to the world by means of a meaning and the individual who signifies it will have a disposition to intend for that rationalization of his action.

1.5. Philosophical behaviorism

Philosophical behaviorism is a philosophical approach that became popular in the 1940s and 1950s. There were three main influences that gave rise to this conception. First, a reaction against dualism due to the lack of objectivity in its theory. If there is a mental property that cannot be described in physical terms, how can we explain that something non-physical has some causal relationship with the brain? How can we explain mental states such as consciousness and subjectivity? For these philosophers, these problems should be abandoned because they do not correspond to the physical property – brain. (CHURCHLAND, 2004, p. 43-4)

Philosophical behaviorism adopted the point of view of logical positivism in two aspects – which are, respectively, the second and third influences. From this philosophical current, behaviorism was inspired by the general conception that an observable sentence has meaning if, and only if, it is followed by one or more observable sentences. For a sentence to have meaning, it must have some correspondence with the physical world. In fact, and what makes it the third influence, is that a large part of philosophical problems become pseudo-problems because they do not have a semantic meaning. It is worth noting that the criterion for a problem to have semantic meaning is that it has a representation in the physical world. Therefore, a large part of the problems addressed in philosophy of mind are pseudo-problems from the behaviorist's point of view and should be abandoned, because these problems cannot be explained in purely empirical terms. (CHURCHLAND, 2004, p. 49)

There are two forms of philosophical behaviorism: methodological and logical. What both have in common is that they reject the concept that organisms have mental states in their theory. For this concept, mental processes are observable through behavior. Therefore, behavior, in this concept, is the primary element of mental processes or, in other words, it is behavior that establishes the relationship between mental processes and the physical world. In its methodological form, it is the behavior of the subject itself that is analyzed as corresponding to mental processes, and in its logical form, it is the sentences created by the subject that are analyzed as corresponding to mental processes, and all behavior is capable of being described through objective statements. (ALVES, 2009, p. 38)

Thus, beliefs, desires, sensations and emotions do not constitute mental states and, therefore, do not constitute the act of representation. Instead, they are mental processes that are identified through patterns of behavior. In this context, the discussion between mind and body has semantic meaning, because talking about the relationship between mind and body is, ultimately, talking about patterns of behavior.

Consequently, philosophical behaviorism ignores the existence of subjectivity – in the

sense of a first-person ontology – because it considers it an obscure object of research, since the definition does not correspond to the physical world. Instead, the relationships between the subject and the world occur through stimuli and responses. Behaviorists do not seek to understand the internal constitution of the mind or what its ontological element is. This does not mean that they deny the existence of a mind, only that this definition is not necessary to understand mental processes and their relationship with behavior. Another aspect that is ignored is the view of qualia as an ontological element of the mind. By simple logic, mental processes and thought for behaviorists can be described in purely objective terms – behavior:

> The nature of the behaviorist's program.—This leads us to the point where argument should be made constructive. It is possible to write a psychology, to define it as Pillsbury does (as the "science of behavior "), and never go back upon the definition: never to use the terms consciousness, mental states, mind, content, will, imagery, and the like. [...] It can be done in terms of stimulus and response, in terms of habit formation, habit integration, and the like. (WATSON, 1914, p. 9)

For the methodological behaviorist, it is through the observation of behavior that we can identify mental processes. This behavior is analyzed through the relationships of stimuli that reach the subject and the responses that he provides to the environment in which he is inserted. From this relationship, the behaviorist believes that he has found a method to transform psychology into an empirical science. In other words, in the behaviorist method, mental processes are behaviors:

> On this view, after having determined our animal's ability to learn, the simplicity or complexity of its methods of learning, the effect of past habit upon present response, the range of stimuli to which it ordinarily responds, the widened range to which it can respond under experimental conditions – in more general terms, its various problems and its various ways of solving them – we should still feel that the task is unfinished and that the results are worthless, until we can interpret them by analogy in the light of consciousness. Although we have solved our problem we feel uneasy and unrestful because of our definition of psychology: we feel forced to say something about the possible mental processes of our animal. (WATSON, 1913, p. 1)

For the behaviorist, the mind does not cease to exist, only the characteristics that cannot be explained in a behavioral way. It simply does not play a predominant role in his theory and is analyzed through the responses – behavior – that are obtained through certain stimuli. In a possible analogy, it is as if the minds of individuals were catalysts that reacted through responses according to the data of information – impulses, information, perceptions, etc. – that enter these individuals. The more a given stimulus is presented to a given individual, the faster a response – behavior – will develop for this stimulus and the faster he

will be able to solve certain problems. (UZAI, 2016, p. 37-8)

Behaviorism initially emerged from animal testing by researchers Pavlov, Skinner, and Watson. Pavlov was the pioneer in animal experiments, and his experiment is popularly known as Pavlov's dog. Its main objective is to analyze canine behavior through the salivary glands. It was observed in the laboratory that dogs salivated when they were deprived of food, and Pavlov attributed the status of an unconditioned stimulus to food, while salivation was the response to the stimulus. In addition to this stimulus, there were other stimuli considered neutral by Pavlov. He introduced the ringing of a bell as a neutral stimulus. His objective was to relate the unconditioned and neutral stimuli. To do this, he always rang the bell before feeding the dogs, so that this sequence of actions occurred countless times. At the end of the experiment, it was found that the bell had ceased to be a neutral stimulus and had become conditioned for the dog, because due to constant exposure to the stimuli, the dog would salivate just at the ringing of the bell, even if there was no food for him in the sequence of actions. (NEVES, KRÜGER, e FRISON, 2021, 462-4)

Behavior according to these experiments is interpreted as reactions to environmental events – which can eventually be conditioned. Intelligence is also interpreted through this analogy of stimulus and response, since it can be explained through the relationship between the information someone receives and the responses that this same individual is able to grasp and emit:

> The psychology which I should attempt to build up would take as a starting point, first, the observable fact that organisms, man and animal alike, do adjust themselves to their environment by means of hereditary and habit equipments. These adjustments may be very adequate or they may be so inadequate that the organism barely maintains its existence; secondly, that certain stimuli lead the organisms to make the responses. In a system of psychology completely worked out, given the response the stimuli can be predicted; given the stimuli the response can be predicted. (WATSON, 1913, p. 3-4)

Mental states are hypothetical reactions to a given behavior. The difference between methodological and logical behaviorism is due to the fact that, in the first, mental states are always classified as a relationship between stimulus and response, and in the second, mental states are propensities to behavior that occur through logical sentences – linguistic entities. (CHURCHLAND, 2004, p. 37-8)

In this sense, a proposition expresses a necessary truth and for each proposition expressed in a psychological explanation there must be a corresponding description of behavior with which it maintains a logical and necessary connection. Furthermore, the same

mental process can be attributed to numerous behaviors and for an organism to possess a certain mental state, it must present the behaviors associated with that mental state. And, a mental state does not necessarily imply a response derived from a certain stimulus, but a disposition to behave and carry out a certain response through behavior. (ALVES, 2009, p. 34-5)

The concept of disposition is the key element of the logical behaviorist approach. In general, the behaviorist conception states that if an individual has a given mental state, he or she has a disposition to behave according to that mental state, in the words of Vitória de Oliveira (2021): "(...)when we describe mental states, we are actually using dispositional descriptions"[13]. (DE OLIVEIRA, 2021, p.18) Thus, each time we expose him or her to the stimuli of this mental state, the individual may undergo a disposition. (ALVES, 2009, p. 35-6)

Thus, we know that an individual has a sensation of pain, for example, just by observing their behavior, and the same interpretation is valid if the individual has other emotions, beliefs or desires that the individual may eventually behave. If the individual's behavioral actions – responses – fit the definition of "pain" or "being anxious", then this implies that the individual has the stimulus "pain" or "anxiety". This means that mental states are sets of behaviors that characterize that particular state. (ALVES, 2009, p. 35-6)

The biggest problem with this conception is that there are no precise criteria to define what is the set of necessary behaviors that identify a mental state, in what order they should occur, whether someone needs to have all the behaviors in the set or which behaviors are indispensable to define a mental state. Furthermore, there are questions that depend exclusively on the use of subjectivity, for example, is it possible for two people to feel the same pain?

1.5.1. Ryle's "proto-functionalism"

Gilbert Ryle is an author who brings Cartesian elements to behaviorist theory. He admits that there are two dissonant elements that constitute man – the body and the mind – and that both elements are governed by unique and non-complementary laws. Every man has a body that is subject to the laws of biology and physics and has a mind that is not in the physical world and is not governed by the same laws that bodies are governed by. We can then admit that bodies have public processes that can be observed and minds have private

[13] In original: "(...) quando descrevemos estados mentais, estamos usando, na verdade, descrições disposicionais" (DE OLIVEIRA, 2021, p.18)

processes, which are not accessible to the general public, unless they are enunciated through language. We refer here to the old Cartesian metaphor of the ghost in a machine, as if the mind were a manifestation that governed the physical body:

> It is customary to express this bifurcation of his two lives and of his two worlds by saying that the things and events which belong to the physical world, including his own body, are external, while the workings of his own mind are internal. This antithesis of outer and inner is of course meant to be construed as a metaphor, since minds, not being in space, could not be described as being spatially inside anything else, or as having things going on spatially inside themselves. (RYLE, 2009, pg. 2)

The problem, typically behaviorist, pointed out by Ryle in Cartesian theory is that there are no physical or biological means to describe what goes on in the inner life of an individual, that is, in his mind. It is known that both elements – body and mind – exist and correlate in some way, but it is not known precisely how these elements relate. This way of correlating body and mind cannot be described exactly by subjectivity or by empirical means. But it is a fact that both elements exist and the characteristic that accentuates this fact is that physical existence is situated in time and space while mental existence is only situated in time. (RYLE, 2009 p. 2-3)

Thus, we can say that material objects are situated in a public field, common to all, while mental objects are situated in a private universe, which is inaccessible to others and there is no other way, other than communication, to access these mental objects. Therefore, if I feel anxious or sad, it is necessary for me to communicate so that another individual has access to the mental process that I have. Now, when I feel pain that comes from a cut or a fracture, it is notoriously public that my feeling of pain exists:

> What sort of knowledge can be secured of the workings of a mind? On the one side, according to the official theory, a person has direct knowledge of the best imaginable kind of the workings of his own mind. Mental states and processes are (or are normally) conscious states and processes, and the consciousness which irradiates them can engender no illusions and leaves the door open for no doubts. (RYLE, 2009, pg. 4)

Thus, it can be stated that mental objects are derived from material objects that are situated in the physical world. We receive stimuli through our sensory data from things that happen in the physical world and, through these stimuli, we create mental states from the stimuli that are captured by the physical world. These mental states can be translated as private processes of a certain behavior. These private processes can become a disposition for a response that is manifested through speech or feelings in general, such as anxiety, pain or

happiness. Intelligence is one such characteristic that can be described through these private processes. (RYLE, 2009, p. 22)

Regarding logical behaviorism, Ryle addresses the category mistake type. This type of category mistake interprets mental states as if they represent a logical or categorical statement as if a mental state belonged intrinsically to a logical statement. However, there are mental states that represent more than one logical type, they represent entities or systems:

> [...] Ryle orbits the first type of interpretation and in order to clarify how the categorization of terms works, he suggests that in order to understand which category something belongs to we must ask in which propositions, true or false, and in which positions the said expression can enter without generating an absurdity. Therefore, a categorical error is a type of absurdity resulting from the attribution of expressions to different categories to which they actually belong.[14] (DE OLIVEIRA, 2021, p. 24-5)

There are very didactic illustrations in which category mistakes can be perceived. For example, someone who has never visited a university and someone else introduces him to it, then shows him the structure of the university: the buildings, the library, the different departments. This person, in turn, asks: "But where is the university? I have seen the members who live there, the different buildings, but I cannot see where this so-called university is." The error lies in not interpreting the concept of university as an entity or set that encompasses the buildings, the library and the different departments that are located there. In this case, the university would be the whole represented:

> The theoretically interesting category-mistakes are those made by people who are perfectly competent to apply concepts, at least in the situations with which they are familiar, but are still liable in their abstract thinking to allocate those concepts to logical types to which they do not belong. An instance of a mistake of this sort would be the following story. (RYLE, 2009, pg. 6)

Ryle's central aim is to demonstrate that the category mistake is part of the theory of dualism, so that the representation of a mind is derived from a family of category errors expressed through logical or categorical statements. This can be compared to René Descartes' old analogy of a ghost in a machine, in which the conception of the mind is imprisoned in a biological body that, in turn, is interpreted as a machine – like a clock. The representations of a person's private life cannot be summarized only in biological terms, but must also be on another abstract plane, which is inhabited by

[14] In original: [...] Ryle orbita o primeiro tipo de interpretação e a fim de clarificar como funciona a categorização dos termos, ele sugere que para entendermos a que categoria algo pertence devemos perguntar em que proposições, verdadeiras ou falsas, e em que posições a referida expressão pode entrar sem gerar um absurdo. Sendo assim, um erro categorial é um tipo de absurdo resultante de uma atribuição de expressões a categorias diferentes às quais elas realmente pertencem. (DE OLIVEIRA, 2021, p. 24-5)

the mind. (DE OLIVEIRA, 2021, p. 28-9)

Logical statements are not constructed to signify physical processes; they are subjective and private representations of physical processes. There is a duality between intelligent behavior and the mechanical behavior developed by our body. Thus, if someone voluntarily moves their arm, the one who sends the command for this action is my intelligent behavior, but the one who executes the action is the mechanical behavior of the body. The same goes for when I think about stating something:

> [...] so, while some movements of human tongues and limbs are the effects of mechanical causes, others must be the effects of non-mechanical causes, i.e. some issue from movements of particles of matter, others from workings of the mind. (RYLE, 2009, p. 9)

What differentiates this duality between mind and body are the categories that represent what exists in the physical world. The mind is a process that differs from the body in that it represents logical and categorical statements. These mental processes have cause and effect within the mind, while bodies have their own cause and effect processes that execute the acts represented by mental processes through bodily movements. But how can mental processes influence and be influenced by physical processes? How can a mental process generate a disposition that intends and executes the movement of some part of my body, such as the movement of my arm or the movement of my tongue? (RYLE, 2009, p. 10)

Dualism is a plausible answer to this question, where there are mental processes that are in themselves like spectral machines and physical processes that exist in biological form such as the gears of a watch or the engine of a motorcycle. Some of these physical processes are governed by the mental processes and this relationship happens through intention and disposition. (RYLE, 2009, p. 11-2)

Likewise, each of these processes is governed by unique and exclusive laws and interacts with each other through intention and disposition. There are, therefore, two types of behavior: intelligent behavior that is carried out by mental processes and is manifested through intention or disposition for physical behavior, and physical behavior that is non-intelligent forms of behavior such as involuntary movements of the body. (RYLE, 2009, p. 12)

1.6. Reductionist Materialism or Type Identity Theory

Reductionist materialism, also known as the mind-brain identity theory, defends the view that: "(...) mental states are identical to brain states"[15]. (TEXEIRA: 2016) By identifying a mental state – such as beliefs, desires or volitions – it is possible to know its corresponding brain state. Therefore, there is a one-to-one relationship between mental states and brain states such that for every mental state there is a brain state. (ALVES, 1999a, p. 46)

This means that if we were able to project our brain's cerebral relationships onto a monitor and see the neural relationships that involve our brain activity, it would then be possible to identify each mental state that corresponds to the neurophysiological state expressed in the brain activity – neuronal synapses. Thus, when an individual is in pain, for example, it is possible to identify exactly which part of the brain is functioning when that mental state is generated – in this case, the mental state of pain:

> I shall consider those functionalist theories of mind that can be understood as identity theses in the tradition of claims that pain is a brain state. That is, the kinds of functionalism I shall discuss claim that there are functional states and that each mental state is identical to a functional state (or that there are functional properties and that each mental property is identical to a functional property). (BLOCK, 1978, p. 261)

Researchers of type identity theory, such as Smart (1959), are called chauvinists, and this is because they defend the point of view that only artifacts like the human brain can cause mental states. However, this is not a consensus; some of these theorists also defend the possibility that other artifacts are capable of causing mental states, as long as they are similar to those of the human brain. (ALVES, 1999a, p. 47)

The type identity theory is subject to the same criticisms as behaviorism. The first criticism in common is that the type identity theory also ignores the subjective nature of consciousness when it addresses general characteristics of mental states. It is not subject to criticism regarding the causal relationship between mental states and behavior because, unlike behaviorist theory, the type identity theory promotes this relationship between mental states and brain states – neuronal synapses – and admits that the brain is the causal engine of behavior:

> One way of expressing this point is that, according to functionalism, physicalism is a chauvinist theory: it withholds mental properties from systems that in fact have them. In saying mental states are brain states, for example, physicalists unfairly exclude those poor brainless creatures who nontheless have minds. (BLOCK, 1978, p. 265)

[15] In original: "(...) estados mentais são idênticos a estados cerebrais". (TEXEIRA: 2016)

The second criticism is based on the fact that it is possible to find behaviors associated with the characterization of a given mental state without actually having it. An individual may have the same brain state in circumstances of different mental activities, such as when an individual twists his ankle and instead of feeling pain, feels a tickling or tingling sensation. The mental state of pain does not correspond to the corresponding brain state on a one-to-one scale – because it activates different sensations simultaneously and not just one. Thus, the neurophysiological state presented by brain activity is pain, while the mental state – tickling or tingling – manifested by consciousness is averse to the brain state that was activated – pain. This second criticism undermines the hypothesis that there is a one-to-one relationship between neuronal states and mental states:

> If all my mental states are the result of the chemical relations of my brain, as the materialist claims, then I must assume that the thought "mental states = brain states" is also the result of these chemical reactions. This means that if in the next few seconds the chemical basis of my brain changes, I could start to hold the opposite point of view. Materialism thus becomes a thesis that is at the very least self-contradictory![16] (TEXEIRA, 2016, p. 26)

The main counterargument of opponents of the type identity theory is based on Leibniz's law. This law demonstrates that two substances are identical if, and only if, they have exactly the same properties. To show that a one-to-one relationship between mental states and neurophysiological states is not possible, it is enough to present a mental state that can exist in more than one neurophysiological state relationship. For example, neurophysiological states understood here as the exchange of substances between neurons have a place in the brain, unlike mental states that do not have a place in the brain, that is, do not have a correspondence with the physical world. Therefore, mental states such as beliefs, desires and volitions do not have exactly the same properties as neurophysiological states. (ALVES, 1999a, p. 48-9)

The second counterargument is that our beliefs, desires and volitions can be compared by means of qualitative phenomena – qualia. Pains can be intense or mild and a belief can be true or false. Identity theorists defend themselves against these accusations by admitting that Leibniz's laws only apply to objects that are necessarily identical. (ALVES, 1999a, p. 50)

It is worth remembering that the reductionist materialist viewpoint brings the idea that

[16] In original: Se todos os meus estados mentais são resultados das relações químicas do meu cérebro, como quer o materialista, então devo supor que o pensamento "estados mentais = estados cerebrais" também é resultado dessas reações químicas. Isto significa que, se nos próximos segundos a base química de meu cérebro mudar, eu poderia passar a sustentar o ponto de vista oposto. O materialismo torna-se, assim, uma tese no mínimo autocontraditória! (TEXEIRA, 2016, p. 26)

each brain state is associated with a mental state. What is known is that neurophysiological states are in the brain and that the brain has a finite number of neurons. Therefore, the number of neurophysiological states, understood as neuron relationships, is limited. If brain activity carried out by neurophysiological states is associated with a mental state on a one-to-one scale, then the number of mental states is also finite. (ALVES, 1999a, p. 50-1)

1.6.1. Smart, mental states, bodily sensations and their relationship with brain states

Suppose an individual has a qualitative phenomenon – qualia – of pain or of seeing a yellow-orange stain on the wall. When the individual reports this experience to another individual, what makes the listener understand the sensation of pain or the perceptual experience of seeing the stain? How does the memory occur in my mind when I think of a pain or a yellow-orange stain that I once saw on the wall? The answer that Smart (1959) seeks to avoid posing these questions so that the development of the approach implies a dualism of property and, consequently, correlates the mental states captured by bodily sensations to phenomena irreducible to the physical world. The purpose of this exclusion is relatively simple: if these qualitative phenomena – qualia – are not captured objectively by our bodily perceptions, then they must be excluded as concepts of the approach. (SMART, 1959, 141-2)

Science can provide us with a view of the brain, through biology, in which it can be understood as a system capable of performing electrochemical functions. In this way, all the functions of the brain can be understood; we feel pain or perform movements through our central nervous system; we can distinguish colors through our perceptive apparatus that involves the cerebral cortex, the retina, and photoreceptor cells that capture light waves in electrochemical impulses. But how can we explain the phenomenon of consciousness and the mind? If we open the skull of an organism in order to analyze its organs and their structural relationships, we can find all the structures related to the function of performing movements, feeling pain, or seeing the state of affairs in the world, but there is no organ or set of organs in this system responsible for the function of the mind and consciousness. (SMART, 1959, p. 142)

When we perform an objective description of mental states in the structure of the brain, we find brain states – neuronal synapses – that correspond to the realization of these mental states on a one-to-one scale, but we do not find brain states capable of reproducing qualitative phenomena or the subjectivity of an individual in question, as is the case with property dualism – mental states are not above or above brain activity. Mental states,

consciousness and the mind, in turn, are concepts that have been left out of materialist discussions as a whole. In this sense, the entire brain structure can be interpreted as pendulums in a relationship between the percipient and that which is perceived. Except for the sensations derived from perception because they are subjective. It is worth remembering that that which is perceived is perceived by means of electrochemical waves that are captured by our sense organs and these electrochemical waves, in turn, need to receive stimuli from the external state of affairs to continue being perceived as a mental state, as in a pendulum that always goes back and forth:

> That everything should be explicable in terms of physics (together of course with descriptions of the ways in which the parts are put together-roughly, biology is to physics as radio-engineering is to electromagnetism) except the occurrence of sensations seems to me to be frankly unbelievable. Such sensations would be "nomological danglers," to use Feigl's expression. It is not often realized how odd would be the laws whereby these nomological danglers would dangle. It is sometimes asked, "Why can't there be psycho- physical laws which are of a novel sort, just as the laws of electricity and magnetism were novelties from the standpoint of Newtonian mechanics?" (SMART, 1959, p. 142-3)

The problem in describing bodily sensations and neuronal synapses is that the brain structure is made up of billions and billions of neurons, so how can we describe a smell sensation and associate it with its corresponding neuronal synapse? In addition to the figurative analogy of a pendulum. An individual is made up of a cluster of electrochemical particles, but this does not involve mental states – such as bodily sensations and perceptual experiences. What materialism admits as true is that there are forms of behavior expressed by behavioral dispositions – as mentioned in **1.5. Philosophical behaviorism** – to claim "there is a yellow-orange stain on the wall" or "I have a pain in my elbow". These claims represent, in turn, the objective way of identifying states of affairs in the world. Therefore, when someone infers: "I have a pain in my elbow", this person is referring to an objective phenomenon in the physical world – the elbow itself – or when they infer: "I am happy" it is part of a behavior about the disposition of one's own happiness. (SMART, 1959, p. 143-4)

When we replace the example of an individual's claims to "feel pain" or "be happy" from the previous paragraph with the behaviorist theory for the property dualism theory, this person is able to claim that we have qualitative phenomena – qualia – when claiming that "he is happy" and when this person claims that "he feels pain" he does more than admit to a behavior in which he already has a disposition to behave, this person has the qualitative phenomenon of "suffering". These qualitative phenomena are correlated with neuronal synapses at a level above or above neuronal synapses – as described in **1.3. Property**

Dualism, Qualia States and Intentionality. (SMART, 1959, p. 144)

From the point of view of identity theory, the mental states corresponding to both sensations – pain and happiness – are not behavioral dispositions or qualitative phenomena, they are physically associated with brain states – neuronal synapses. A memory of these mental states is a description of a mental state that occurs as a brain process – involving the synapse of the sensation of pain and the synapse of activation of the memory. And the sensation itself is a neuronal synapse:

> Remarks on identity. When I say that a sensation is a brain process or that lightning is an electric discharge, I am using "is" in the sense of strict identity. (Just as in the-in this case necessary-proposition "7 is identical with the smallest prime number greater than 5.") When I say that a sensation is a brain process or that lightning is an electric discharge I do not mean just that the sensation is somehow spatially or temporally continuous with the brain process or that the lightning is just spatially or temporally continuous with the discharge. (SMART, 1959, p. 145)

Neither sensation nor memory are in an epiphanic relationship with the brain or interact and do not have physical causes, as the dualist claims, and they are also not associated from a logical point of view, like a pendulum from the pain-state to the pain-memory-state – the activation of the brain structure can happen in this way, but mental states cannot. When we refer to memory as a brain process and sensations as corresponding to neuronal synapses, we are referring to both being identical and not to them having logical proximity. (SMART, 1959, p. 145)

1.6.1.1. The application of identity theory to the experience of perceiving

Imagine that an individual wakes up in the morning and looks at the sky from his bedroom window, he observes a bright yellow-orange sphere and denotes it as the morning star, the next day, this same individual wakes up at dusk and looks at the sky and observes another bright yellow-orange sphere and denotes it as the evening star. But the identity of both bright yellow-orange spheres perceived by this individual is not the same, and it can be said that the morning star and the evening star are not objectively the same state of affairs. (SMART, 1959, p. 146)

This individual who objectively observes the bright yellow-orange spheres, observes two objective phenomena in themselves, the celestial body that occupies a place in space and the light emitted by the same celestial bodies. However, these bright yellow-orange spheres are not in fact stars, but rather two specific planets – Mars and Venus – and the action that

sunlight has on them. This implies that the second phenomenon is a mistake, because planets do not emit light, they only refract the sunlight that hits them and this refraction reflects its spectrum in the sky so that normal observers can see them. (SMART, 1959, p. 146-7)

When we call an observable phenomenon public, it is not always interpreted exclusively by the data of the senses, but depends on the prior knowledge of the observers. When reporting this event, we are not reporting a mental process, but an objective event that can be accessed by any other individual with normal capacities to perceive the same state of affairs. Therefore, a normal observer is one who is able, under normal circumstances, to identify that the bright sphere in the sky has a yellow-orange coloration:

> First of all, let me introduce the concept of a normal percipient. One person is more a normal percipient than another if he can make color discriminations that the other cannot. For example, if A can pick a lettuce leaf out of a heap of cabbage leaves, whereas B cannot though he can pick a lettuce leaf out of a heap of beetroot leaves, then A is more normal than B. (I am assuming that A and B are not given time to distinguish the leaves by their slight difference in shape, and so forth.) From the concept of "more normal than" it is easy to see how we can introduce the concept of "normal." (SMART, 1959, p. 148-9)

Now, how is it possible to identify properties of an object that can be identified by brain processes, if the phenomenal properties are not possessed by brain processes? The fact is that brain processes and the experience of observing it itself are correlated on a one-to-one scale with neuronal synapses, in the sense that there is a neuronal synapse that corresponds to the experience of observing yellow, another neuronal synapse that corresponds to the experience of observing orange, a third neuronal synapse that corresponds to the experience of observing spheres and a fourth neuronal synapse that reminds me that the yellow-orange sphere that I observe is not a star, but a planet, therefore it does not have its own light, but reflects the light of the sun on the sky of planet Earth. All these neuronal synapses activated together make me identify the observed object. (SMART, 1959, p. 150-1)

1.6.2. Occurrence identity theory

The weak version of the identity theory is known as the occurrence identity theory. It attempts to fix the problems of the type identity theory discussed in the previous pages. The difference between the two theories is that while the type identity theory claims that mental states have corresponding brain states – neuronal synapses – in a one-to-one relationship, the occurrence identity theory associates: “(...) that to each occurrence of a mental event, there

corresponded an occurrence of a brain event."[17]. (VINCENTINI, 2001, 227) So an occurrence is a particular element of a given object. (ALVES, 1999a, p. 52)

Pain, for example, is a type of mental state; each type of pain in particular, such as a headache or elbow pain, is a type of occurrence of this mental state. Thus, the mental state of pain can be identified with several brain states simultaneously, depending on the circumstances of the pain in question. There is no one-to-one relationship, that is, a mental state can be correlated with several brain states at different times, situations or occasions, as long as the mental state has occurrences of the same type. Thus, there is only a margin of probability in which an individual's mental state is found by observing their corresponding neurophysiological state:

> For mental state token a can be type identical to b with respect to one theory and to c with respect to another, even though b is not type identical to c on either theory. It makes no more sense to suppose that a is type identical to two nontype identical states than to suppose pain is identical to two nonidentical states. (BLOCK, 1978, p. 276)

Thus, someone can have the mental state of pain and that mental state can have the identical type that corresponds to the physical state of a headache, for example, and the same mental state of pain can also be attributed to another physical state, such as elbow pain. The mental state of pain is the same, but the physical state is not a one-to-one equivalence, but rather is a state correlated to two or more different types of physical states, which can be the physical state of headache or the physical state of elbow pain. In other words, the physical states – the neuronal synapses – are correlated to a corresponding region that generates the mental state of pain, and that region interacts with the central nervous system to transmit the mental state in question. (ALVES, 1999a, p. 52)

The biggest problem with this theory is that if distinct physical states can be identified with the same mental state, how can we explain that two different brain states can result in the same type of mental state? Why and how are distinct brain states associated with the same mental state? (ALVES, 1999a, p. 52-3)

1.7. Eliminative Materialism

Eliminative materialism or eliminativism, unlike identity theory which aims to reduce

[17] In original: "(...) que a cada ocorrência de evento mental, correspondia uma ocorrência de evento cerebral". (VINCENTINI, 2001, 227)

mental states to brain states on a one-to-one scale, seeks to exclude any possibility regarding mental states, such as beliefs, desires and volitions. Its theorists believe that this exclusion can transform folk psychology into a truly scientific area of knowledge:

> [...] we can affirm that what sustains the claims of this school of thought is its conviction about the possibility of eliminating our everyday language (called folk psychology) used to describe subjective mental phenomena. What is proposed, then, is the replacement of this type of language by another type more aligned with a scientific vision.[18] (PEREIRA, 2015, p. 45)

In effect, they seek to eliminate the metaphysical concepts of popular psychology, which make the understanding of mental states nebulous because these concepts do not correspond to the physical world. In their view, it is with the development of neuroscience and finding new vocabularies for their discoveries that a better understanding of the human brain will be possible. (ALVES, 1999a, p. 54)

Authors such as Paul Churchland (1981) argue that if neuroscience is widely developed, it will no longer be necessary to talk about subjectivity or mental states, because the relationship between mental and brain states has proven fruitless and without empirical basis. Why not replace this metaphysical language about consciousness with the neuroscience research program? Man will be treated as a biological being in which the brain is the artifact equivalent to the driving engine:

> Eliminative materialism is the thesis that our common-sense conception of psychological phenomena constitutes a radically false theory, a theory so fundamentally defective that both the principles and the ontology of that theory will eventually be displaced, rather than smoothly reduced, by completed neuroscience. Our mutual understanding and even our introspection may then be reconstituted within the conceptual framework of completed neuroscience, a theory we may expect to be more powerful by far than the common-sense psychology it displaces, and more substantially integrated within physical science generally. (CHURCHLAND, 1981, p. 67)

However, they make exceptions to make some milder reductions and preserve some elements referring to mental states and maintain part of the language; if it is not possible to preserve this metaphysical language, the vocabulary referring to a given mental state should be excluded. (ALVES, 1999a, p. 55) They are inspired by the progress of other areas of knowledge such as biology or physics. Until the 19th century, physicists believed that ether

[18] In original: [...] podemos afirmar que o que sustenta as pretensões dessa corrente de pensamento é a sua convicção sobre a possibilidade de eliminação da nossa linguagem cotidiana (chamada de psicologia popular = folk psychology) utilizada para descrever fenômenos mentais subjetivos. O que se propõe, então, é a substituição desse tipo de linguagem por outro tipo mais alinhado com uma visão científica. (PEREIRA, 2015, p. 45)

was the element that filled the space between the stars in the firmament. This conception was derived from metaphysics. However, discoveries at the beginning of the 20th century demonstrated that the term void was more appropriate to describe the space that lies between the stars, satellites and planets. The example used by Churchland (1981) in Materialism Eliminative and Propositional Attitudes is specifically about the evolution of physics in the 17th and 18th centuries in a research reality in which the pseudoscience of alchemy prevailed. (CHURCHLAND, 1981, p. 78-81)

This approach has problems that seem obvious, the first of which is the exclusion of metaphysical concepts – mental states such as desires, beliefs and volitions – from popular psychology, and the exclusion of discussion involving progress in the creation of scientific concepts. Another common problem with this conception is that theoretical concepts are completely distinct from reality, in the sense that language itself is an artificial creation to explain phenomena that exist in the world. (ALVES, 1999a, p. 55-6)

1.7.1. Folk psychology and propositional attitudes

Churchland (1981) considers that folk psychology consists of research on consciousness, mental states, qualitative phenomena, subjectivity, behavioral dispositions, stimulus, response, intentionality, input data, functional activity, output data and other topics addressed by the Philosophy of Mind. Therefore, what is the purpose of discussing what the mind is, what mental states or qualitative phenomena are – qualia –, what is the relationship between mental states and beliefs, desires and volitions or what an ontology of subjectivity is if these topics cannot be described empirically. (CHURCHLAND, 1981, p. 67-8)

All this discussion about popular psychology will associate mental states – or functional activity or behavioral disposition, depending on the approach of the theory – as intentional states associated with beliefs, desires, intentions, perceptions, etc. All these concepts can be transcribed to a common sense approach and figure explanations and predictions about human behavior as a form of understanding. This association implies that the semantics of our vocabulary is associated with linguistic entities that act in the background of our mind. Of course, this association will be made differently in each approach, but in general it is as if our behavior were justified by logical plausibility. (CHURCHLAND, 1981, p. 68-9)

The general idea is that there is a specific function for each form of behavior associated with a Background – the concept of Background will be addressed in **3.8.**

Intentional Network and Background – and popular psychology itself, from this association arise explanations, understandings and predictions that constitute individual behavior. From this conjunction between both and the theory of popular psychology arise internal states or mental states. Through this conjunction it is possible to know the structure of the mind of any organism and it is not necessary to analyze the mind itself. Therefore, any living organism that reproduces a behavior is capable of possessing mental states and, most importantly, one cannot generalize the behavior of individuals through their own case. (CHURCHLAND, 1981, p. 69)

Subjective judgments – not in the sense of a first-person ontology – do not have a special place in psychology. A subjective judgment consists, therefore, in acquiring a habit of someone's mental states and reproducing them – as responses or outputs, depending on the approach – and the process of reproducing the habit is part of a larger approach of a structured theory – be it behaviorist, functionalist, dualist, or biological naturalist. This response is wrapped up in beliefs, desires, perceptions, intentions, among others:

> On the present view, an introspective judgment is just an instance of an acquired habit of conceptual response to one's internal states, and the integrity of any particular response is always contingent on the integrity of the acquired conceptual framework (theory) in which the response is framed. Accordingly, one's introspective certainty that one's mind is the seat of beliefs and desires may be as badly misplaced as was the classical man's visual certainty that the star-flecked sphere of the heavens turns daily. (CHURCHLAND, 1981, p. 70)

These responses, therefore, are interpreted as propositional attitudes and, in turn, consist of linguistic entities that have the purpose of rationalizing a behavior internalized by habit. Propositional attitudes are part of the structure of the concept of mental states in which each approach will use it according to specific conceptualizations. These propositional attitudes are described as linguistic entities and demonstrate behaviors that involve intentionality, such as: "x believes that p", "x desires p", "x fears p", "x is happy that p". These sentences are partial components of a given intentional state. (CHURCHLAND, 1981, p. 70)

Finally, part of the research community defends the point of view that with this theoretical structure, popular psychology will be absorbed by neuroscience and, consequently, prove in empirical terms that the mind, consciousness and mental states are irreducible to brain states – neuronal synapses – of the brain structure. This irreducibility for the dualist – as we discussed in **1.3. Property Dualism, qualia states and intentionality** – of property consists in demonstrating that the mind is in a relationship of epiphany with the brain

structure and for the functionalist – as we will discuss in **1.8. Functionalism** – consists in admitting that if the mind is irreducible to its own physical causes, then any system capable of having a functional activity and performing outputs whenever an input is triggered in its functional activity. (CHURCHLAND, 1981, p. 71-2)

1.8. Functionalism

Functionalism is an approach to the philosophy of mind that emerged from behaviorism and identity theory. There are several models of functionalism and what they all have in common is a reduction in the importance of the brain in relation to the realization of mental states. For the functionalist, what really defines mental states are the sets of causal relationships between: input data – stimuli from the external environment on the body –, other mental states – information processing – and output data – behavior. (ALVES, 1999b, p. 31)

The functionalist believes that the brain is not essential for mental states to be manifested, but merely a means – a catalyst – for this to happen. The crucial point in his theory is the functions that the brain performs, which will also be defined as its functional activity, that is, the processing that the brain performs to manifest mental states when it receives a stimulus from the external environment through an input data. Thus, any physical system that has a functional activity isomorphic to the brain is capable of manifesting mental states. (ALVES, 1999b, p. 32-3)

The general characteristic for any physical system to perform mental states is that it has a processing capacity – functional activity – analogous to the human brain. The important thing is that the physical system is capable of performing the same functions that the brain performs or, in the words of Max Rogério Vicentini (2001): "(...) of identifying human mental states with the functional structure of a system"[19]. (VICENTINI, 2001, p. 227) The physical composition of the system is not relevant to the manifestation of mental states. Thus, both a human being and computer hardware can manifest mental states, as long as the hardware has software similar to the brain's processing. (ALVES, 1999b, p. 32-3)

The essential element for the manifestation of mental states is the causal relationships between the input data and the output data of the system in which they occur. Any system that has a functional activity – processing – capable of presenting the correct causal relationships will be able to realize mental states and possess them. The brain, in turn, becomes a means, a

[19] In original: "(...) de identificar os estados mentais humanos com a estrutura funcional de um sistema". (VICENTINI, 2001, p. 227)

processor capable of manifesting mental states and is no longer a main element for the manifestation of such states, because any other physical system that has the same processing capacity is also capable of manifesting mental states:

> Functionalists have tended to treat the mental-state terms in a functional characterization of a mental state quite differently from the input and output terms. Thus in the simplest Turing-machine version of the theory (Putnam, 196 7; Block & Fodor, 1972), mental states are identified with the total Turing-machine states, which are themselves implicitly defined by a machine table that explicitly mentions inputs and outputs, described nonmentalistically. (BLOCK, 1978, p. 263)

From a functionalist point of view, what matters is that the physical system is able to perform functions. (VICENTINI: 2001) Its physical composition, that is, whether the physical system is the brain or state-of-the-art computer hardware, is irrelevant to the manifestation of mental states. If a piece of hardware has software capable of simulating a functional activity – processing capacity – of the brain, then we have a physical system capable of manifesting mental states. Remember that mental states in this conception always occur through causal relationships between input data, mental states and output data that are performed in the physical system. A physical system that is able to perform the correct functions of a mental state will also be able to perform and possess that mental state – such as the mental state of anxiety, for example. Any object that is able to perform certain functions is capable of manifesting mental states and, therefore, possessing a functional activity of the mind. (ALVES, 1999b, p. 31-2)

The functionalist approach expands and promotes changes in the behaviorist point of view. While the behaviorist defends the point of view that it is possible to define mental states only through input data from the environment – stimuli –, behavioral dispositions and behavioral outputs – response. The functionalist defends the point of view that there is a functional activity in which the mental state in question is always associated in causal terms. (VICENTINI: 2001) In other words, mental states do not have behavior as an ontological element, as the behaviorist believes, mental states are related to the input data to the point that they can cause behavior as well as be caused by behavior:

> One characterization of functionalism that is probably vague enough to be accepted by most functionalists is: each type of mental state is a state consisting of a disposition to act in certain ways and to have certain mental states, given certain sensory inputs and certain mental states. So put, functionalism can be seen as a new incarnation of behaviorism. Behaviorism identifies mental states with dispositions to act in certain ways in certain input situations. [...] Functionalism replaces behaviorism's "sensory inputs" with "sensory inputs and mental states"; and functionalism replaces behaviorism's "disposition to act" with "disposition to act and

have certain mental states. (BLOCK, 1978, p. 262)

Philosophers of this approach also believe that they have solved the mind-body problem, since the brain is interpreted as a catalyst through which information is processed through input data and mental states are realized. In this sense, any physical system can have mental states, as long as it has a physical structure analogous to the brain. (ALVES, 1999b, p. 32)

The mind is characterized as a mechanical system capable of processing information through a functional activity that follows logical norms and manipulates symbols. The physical constitution of this system is not important; what is essential is its ability to process functions in order to manifest mental states. (VICENTINI: 2001) Thus, the manifestation of intelligence for the functionalist consists of adequate information processing. This information processing will always involve the analysis of the causal relationships between input data, a functional activity, and output data from a given system. The Turing machine is a clear example of how the conception of intelligence is approached within the functionalist approach. (ALVES, 1999b, p. 34)

1.8.1. General aspects of the Turing machine

To better understand the main aspects of functionalism, it is necessary to have a general understanding of what a Turing Machine is, more specifically, what its definition is and how it works. A Turing Machine is a processing unit that can be applied to any mechanical function. This mechanical function ranges from the simplest, such as a turnstile in a football stadium, to extremely complex functions such as the information processing of a computer CPU. (TURING, 1950, p. 436-7)

The general conception of the Turing machine is that it consists of a black box, that is, a finite transducer (initial state S^1 ... Sn; input data I^1 ... Im and perform output data O^1 ... O_p) capable of performing processing states through a standard configuration on a tape. The processing states constitute a series of specific events and conditions that the machine must perform. Thus, if the machine is in state S and receives the input data I, it emits the output data O_k and after it processes this information, the tape with the standard configuration returns to the initial state S^1:

> For functionalists, the mind is considered a black box, being approached only in terms of informational inputs and the functional activity that converts them into

output information.[20](VICENTINI, 2001, p. 227)

As discussed previously, in the functionalist conception, any artifact capable of processing information through input data and output data is capable of possessing intelligence and, therefore, simulating the characteristics of the brain. In the case of machines, this intelligence is characterized by functional activity; the more complex the standard configuration of the functional activity, the more complex its capacity for intelligence. (BLOCK, 1978, 266-7)

The intelligence capacity of a Turing machine is defined by its ability to compute recursive functions and to control its input data in an appropriate way. In the standard configuration expressed on the tape, the output data is considered as two components. Therefore, a symbol – S^1 – is printed on a tape, the tape moves to the processing state that will correspond to the input data – I. The tape must move both horizontally and vertically, in a cross shape. The power of a Turing machine in relation to its computational capacity, in this context, is represented by the size of the tape in question:

> Machine functionalists generally consider the machine in question as a probabilistic automaton–a machine whose table specifies conditionals of the following form: if the machine is in S_a and receives l_b, it has a probability $_{p1}$ of emitting O_1; $_{p2}$ of emitting O_2 ... $_{Pk}$ of emitting O_k; r_1 of going into S_1; r_2 of going into S_2 ... r_n of going into S_n. (BLOCK, 1978, p. 267)

Let's use a simple example to make the mental abstraction that corresponds to the configuration of the processing states on the tape more solid. Let's suppose a turnstile in a football stadium. Since the turnstile is stopped, it remains in S_a. When a fan decides to insert a ticket to watch the match, the turnstile is automatically conditioned to the processing state that will correspond to the input data I. The fan, in turn, will pass through the turnstile, which will activate the processing state corresponding to S^1, which in turn generates the output data O_k to activate the turnstile. When the action of the output data O_k – passing through the turnstile – is completed, the turnstile will activate the processing state S^2 and return to the initial configuration S_a. In a more illustrative model of this example in **Table 1.1**:

[20] In original: Para os funcionalistas, a mente é considerada uma caixa-preta, sendo abordada apenas em termos das entradas informacionais ou *inputs* e da atividade funcional que os converte em informações de saída ou *output*. (VICENTINI, 2001, p. 227)

Table 1.1 – Example of processing states of a turnstile

S_a	I	S^1	S^2
Turnstile at rest	Ticket entry	Activate the ratchet O_k	Returns to the S_a condition
	Functional activity		

Source: own authorship.

For the functionalist, intelligence is equivalent to processing states. If some kind of artifact is capable of possessing processing states, then it possesses mental states. Its intelligence varies according to the power of its capacity. This implies admitting that a football stadium turnstile possesses the intelligence of two mental states, respectively, the mental state of "turnstile at rest" and the mental state of "activating the turnstile". A computer CPU, which has a functional activity infinitely superior to a turnstile, in turn, possesses as many mental states as the possibilities of its processing states. (TURING, 1950, p. 437)

When we mention the term intelligence here, we are not referring to intentionality in general, but rather to cognition. Under no circumstances does S^1 imply the intention to activate the turnstile and S^2 imply the intention of the turnstile at rest, but in conditions of possibility, these conditions of possibility are realized or not according to the input data I that will trigger its functional activity. Of course, when we refer to complex processing systems, such as artificial intelligences, the amount of stimuli In and its functional activity will have as many variables as its complexity.

1.8.1.1. The Turing Test and the Imitation Game

Researcher Alan Turing pursued the goal of demonstrating whether or not machines are capable of thinking. Because of this, he developed a problem that he himself called the imitation game and is also known as the Turing machine. The problem is divided into two parts. The first part consists of a game played by three people: (a) a man, (b) a woman and (c) an interrogator. The second part of the game replaces (a) the man with a machine. The central objective of the game is for (c) the interrogator to formulate questions that will be answered by participants (a) and (b) until he discovers which player is (a) the man and which player is (b) the woman – or which player is (b) the woman and which player is (a) the machine. In the second case, there is a demonstration where the possibility of machines being capable of

thinking is considered. (TURING, 1950, p. 433-4)

All participants in the game – both in the first and second parts – are in rooms isolated from each other as (c) the interrogator does not maintain visual contact with the other two parties (a) and (b). In order for communication between all participants to be possible, they use a Turing machine in which they communicate by means of a keyboard and printed cards with the questions and answers that go to the other room. The role of (c) the interrogator, as expressed above, is to formulate questions to find out which participant is which. The objective of (a) – whether in the stage where (a) is a man or in the stage where (a) is a machine – is to try to deceive (c) the interrogator, while the objective of (b) the woman is to try to help (c) the interrogator:

> The new form of the problem can be described in terms of a game which we call the 'imitation game." It is played with three people, a man (A), a woman (B), and an interrogator (C) who may be of either sex. The interrogator stays in a room apart front the other two. The object of the game for the interrogator is to determine which of the other two is the man and which is the woman. He knows them by labels X and Y, and at the end of the game he says either "X is A and Y is B" or "X is B and Y is A." The interrogator is allowed to put questions to A and B thus:
> C: Will X please tell me the length of his or her hair?
> Now suppose X is actually A, then A must answer. It is A's object in the game to try and cause C to make the wrong identification. His answer might therefore be:
> “My hair is shingled, and the longest strands are about nine inches long.” (TURING, 1950, p. 433-4)

The central objective of the imitation game problem or Turing test, as mentioned earlier, is to test the intelligence capacity of (a) the man or the machine. Remember that when we speak of intelligence here we are not referring to subjectivity or intentionality in general, but rather to cognition or, from the functionalist's point of view, the capacity to store information. The problem is called the imitation game because the objective of the second part of the game is for (a) the machine to replace the man and imitate his behavior. If (a) the machine can replicate his behavior to the point of convincing the man in the question and answer game, using its storage capacity to answer the questions, then it has the capacity for intelligence:

> We can say that for these authors a machine can be considered a thinking being if, in a specific situation, it adequately performs the behavior that would be expected of a normal human being in that same situation.[21] (VICENTINI, 2001, p. 227)

[21] In original: Podemos dizer que para esses autores uma máquina poderá ser considerada um ser pensante se, numa situação específica, desempenhar adequadamente o comportamento que se esperaria de um ser humano normal naquela mesma situação. (VICENTINI, 2001, p. 227)

It is important to emphasize here that Turing machines are intended by the individuals who operate them. The individuals who operate them have fixed rulebooks about the correct way to operate the mechanisms of the machines. The intelligence capacity of a machine is divided into (i) storage, (ii) executive unit, and (iii) control. Without the individuals who intend their actions, they are not capable of performing their intelligence capacity. (TURING, 1950, p. 435)

The (i) storage is what corresponds to data storage, at the time the text was written it was analogous to the storage of calculators and scientific calculators. (ii) executive unit corresponds to information processing, these are the individual operations that involve calculation. These individual operations that occur in (ii) executive unit are like a rulebook, that is, they vary according to the functionality of the machine in question. Thus, a scientific calculator will have one configuration of individual operations and a turnstile in a football stadium will have another configuration. The storage information is fragmented into smaller blocks and, for each block, numbers are assigned to part of this storage where several blocks of information are stored. This information may not necessarily be stored in a certain language, it can be decoded by numbers. (iii) control will capture the instructions to be followed in the order of positions in which the blocks of information are stored. (TURING, 1950, p. 436-7)

1.8.2. Psychofunctionalism and the Ramsey equation

Psychofunctionalism is a sub-approach of functionalism that seeks to associate the Ramsey sentence with a psychological theory. In general terms, the mental states of a psychological theory can be described in terms of the Ramsey equation. Mental states are defined as functional states that are realized through functional activity that decodes the Ramsey sentences corresponding to the respective mental states. Therefore, if an individual has a mental state of pain, there will be a correlative Ramsey function of pain in the psychological theory. The main difference between functionalism and psychofunctionalism is that while functionalism makes an analysis and states that for computer systems to be intelligent, they must necessarily have input data, a functional activity, and output data, psychofunctionalism will admit that there are corresponding neuronal signals for the input data and the output data, and the brain structure corresponds to a computer system that performs a functional activity. Therefore, if there is an equation that transposes mental states into programming language, there is the possibility of simulating human behavior in robots

and through Artificial Intelligence. (BLOCK, 1978, p. 268-9)

A “Ramsey correlation function” has several forms that describe different psychological modes – one for pain, one for fear, one for happiness, and so on. Its pure aspectual form – without its corresponding psychological mode – consists of: $T(p, S^1 \ldots S_n, I^l \ldots I^k, O^l \ldots O_m)$. In this sense, T corresponds to the psychological mode – not in the sense of intentional mode, as we will see in chapter **3. Intentionality Network and Background** – which will analyze the mental variable represented by S. The psychological condition in which the system finds itself is represented by p in the function. The central idea is to always reformulate T to analyze the corresponding mental variable, therefore, if S represents “being hungry”, then T develops a psychological mode of anorexia, if S represents “stress due to workload”, T develops a psychological mode of burnout, and so on. I represents the functional activity performed by the system – or brain in the case of living organisms – when processing the mental states S and, in turn, O represents the output data that were processed by the functional activity of I according to mental variables S. Remember that mental variables are analogous to mental states for this sub-approach:

> […] where p designates an ideal or representative person; $S^1 \ldots S_n$ are terms for mental states, $I^1 \ldots I_k$ for inputs, and $O^1 \ldots O_m$ for outputs. T may contain generalizations such as p's being in such and such states and receiving such and such inputs causes p's ernitting such and such outputs and going into such and such states. (BLOCK, 1978, p. 269-70)

The central idea is to replace S with mental variables that have existential quantifiers in each variable – such as being anxious, being hungry, being distressed. Therefore, these mental variables can be formulated as a property of abstract operation and such operation forms an expression that can be identified as “x such that x is F”, replacing the formal language, “being hungry is such that being hungry is being anorexic”. We also have the expression that represents the state of consciousness at p in the expression, which is: λyFx. Therefore, if we replace S with x and p with y we use the Ramsey correlative function: $\lambda yFx[T(y, x^1 \ldots x_n, I^l \ldots I^k, O^l \ldots O_m)$ & y is in xj], with the aim of representing the example with a statement. We will then have: (λy) being in anorexia and the (Fx) hunger function correspond in [(T) folk psychology ((y) have anorexia, (x^1) mental variable of being hungry … (x_n) mental state of not eating, (I^l) functional activity of affirming the variable of not eating … (I^k) functional activity of correlating not eating as something positive, (O^l) anorexic weight loss response … hair loss response (O_m)) & (y) anorexia is the (xj) sum of mental

states]. It is clear that these logical expressions become overly complex, which we seek not to highlight so that the explanation does not become confusing. In the case of living organisms, the S mentioned in the theory represents mental states rather than mental variables and is replaced by λ by δ in the function. (BLOCK, 1978, p. 270)

1.8.2.1. Functional equivalence for living organisms and systems

Functional equivalence involves establishing a symbiotic association between living organisms and systems capable of processing information through functional activity. From this point of view, each system – which may be machines or living organisms – has functions equivalent to their corresponding mental variables. For this functional equivalence to be possible, it is necessary to relativize the concepts of the functionalist approach and associate them with corresponding mental states. Therefore, the characteristics represented in the "Ramsey correlative function" are equivalent to input data, information processing, functional activity and output data in an association with machines and to neuronal synapses, brain structure, cognitive capacity and behavioral responses in an association with living organisms. (BLOCK, 1978, p. 271-2)

The distinction between functionalism and psychofunctionalism occurs for two reasons: the first associates Ramsey's correlative function with popular psychology and interprets input data, information processing, functional activity and output data in a simplistic way, while the second associates the same equation with scientific psychological theory and interprets the same concepts of the approach with the aim of developing a theoretical conceptual scheme on how the causal relationship between mental states, perceptual experiences and deliberative actions occurs within living organisms and machines. For this, the psychofunctionalist develops software with the aim of simulating such causal relationships:

> [...] Psychofunctionalism and Functionalism are theory relative. That is, we are told not what pain *is*, but, rather, what pain is *with respect to this or that theory*. But Psychofunctionalism can be defined as the doctrine that mental states are constituted by causal relations among whatever psychological events, states, processes, and other entities-as well as inputs and outputs- actually obtain in us in whatever ways those entities are actually causally related to one another. Therefore, if current theories of psychological processes are correct in adverting to storage mechanisms, list searchers, item comparators, and so forth, Psychofunctionalism will identify mental states with causal structures that involve storage, comparing, and searching processes as well as inputs, outputs, and other mental states. (BLOCK, 1978, p. 274)

In order to achieve functional equivalence, it is not necessary to relativize the theory. At this point, we can distinguish Weak Artificial Intelligence from Strong Artificial Intelligence. In the conception of Weak Artificial Intelligence, the descriptions of input data, information processing, functional activity, and output data are behaviorally equivalent if, and only if, they have the same input data for any output data. If x and y are weakly equivalent, then the simulation of the Ramsey correlative function is weak. In the conception of Strong Artificial Intelligence, x and y are correspondents for a branch of science if, and only if, both are weakly equivalent and the branch of science dominates the processes that mediate the input data and output data for the same process. If x and y are strongly equivalent, then the simulation of the Ramsey correlative function is strong. (BLOCK, 1978, p. 274) Or, in the words of Gustavo Coelho de Oliveira (2020):

> [...] Strong AI is the thesis that, for cognition or mental states in digital minds, it would be enough to implement the correct algorithms or, in other words, to establish thought, only the appropriate program would be necessary, by itself, running on suitable hardware. On the other hand, Weak AI is the conception that computational models can contribute to the understanding of human intellect through simulation, and not through the actual implementation of the mind.[22] (OLIVEIRA, 2020, p. 6)

A functional equivalence is not an evident relative theory. In order to achieve a functional equivalence, it is necessary that both systems are equivalent, have no common output data and share the same sequence of input data and not just that they share the aspect of having transducers in a black box. The functionalist defends the point of view that only conscious mental states can imply functional equivalence and the psychofunctionalist defends the point of view that the same causal relations can be realized in unconscious mental states. (BLOCK, 1978, p. 275)

1.8.3. Homunculus heads invade the Chinese population

Ned Block's (1976) homunculus-headed robot and Chinese population arguments constitute a critique of the possibility of simulating mental states and consciousness in systems that lack consciousness. Both arguments use the Turing machine as their target and aim to correlate processing states with mental states in a one-to-one relationship and neural

[22] In original: "[...] IA Forte é a tese de que, para a cognição ou estados mentais em mentes digitais, bastaria a implementação dos algoritmos corretos ou, em outras palavras, para se estabelecer o pensamento, seria necessário apenas o programa apropriado, por si mesmo, rodando em um hardware adequado. Por outro lado, IA Fraca é a concepção de que os modelos computacionais podem contribuir na compreensão do intelecto humano através da simulação, e não da efetivação propriamente dita da mente." (OLIVEIRA, 2020, p. 6)

synapses as corresponding to the input and output data of the neural system:

> A classic thought experiment to argue that there are dimensions of the mind, such as consciousness, that functionalism fails to capture is that of the 'people of China'. Without going into the details of how this system is conceived, the conclusion of the argument rests on the fact that we would not attribute mentality to this system even if it rigorously satisfies the conditions imposed by the functionalist. The experiment reinforces our intuition that no matter how similar two systems may be in their functional organization, one of them may have phenomenal experience, not consciousness, and the other may not.[23] (ABRANTES, 2005, p. 230)

The first version of the argument uses as a metaphorical example the construction of a homunculus-headed robot. This robot has physical aspects analogous to the human body, but its internal physiology is completely different from ours, composed of other elements – such as XYZ. The elements corresponding to the neurons of this robot are connected by a bank of lights in its head, which is hollow. In this region there is a button structure configured in such a way that there is a very simple function that triggers the output data. There is a small group of little men that inhabit this hollow head and trigger the functions of this button configuration. On one of the walls, where the button structure is, there is a notice board, something like a rule book, explaining how to correctly trigger the functions in the button configuration. On this notice board there are state cards – equivalent to mental states – that have symbols that designate specific states in the button configuration. (BLOCK, 1976, p. 277-8)

Let's imagine that on this notice board there is a card with a symbol "G" printed on it. The bank of lights triggers an alert I to the little men who are at rest S_a, to activate the functions of the button structure. Let's imagine that the bank of lights represents "G", when the little man reads the card with the symbol "G", the bank of lights activates a light I that surrounds the little man, he then automatically presses the button S^1 corresponding in the button structure and changes the card state S^2 for the symbol "M". In this analogy with respect to the Turing machine, the input data I corresponds to the act of the little man reading the card with the symbol "G", the activation of the bank of lights on the little man corresponds to the state S^1, this activation triggers the next state of S^2 which corresponds to the output data O_k

[23] In original: "Um experimento de pensamento clássico para argumentar que há dimensões do mental, como a consciência, que o funcionalismo não consegue capturar, é o da 'população da China'. Sem entrar nos detalhes a respeito do modo como esse sistema é concebido, a conclusão do argumento apoia-se no fato de que não atribuiríamos mentalidade a esse sistema mesmo que satisfaça rigorosamente as condições impostas pelo funcionalista. O experimento reforça a nossa intuição de que por mais que dois sistemas possam ser similares em sua organização funcional, um deles pode ter e o outro não ter experiência fenomênica, não ter consciência." (ABRANTES, 2005, p. 230)

de pressionar o botão para modificar o estado do símbolo do cartão para “M”, então, há o momento S^3 em que o homenzinho volta ao estado de repouso em S_a. The duration of the moment between the S^1 activation of the light bank on the little man, S^2 your response to pressing the button to modify the card symbol and S^3 their return to rest represent the functional activity inherent to the Turing machine:

> On one wall is a bulletin board on which is posted a state card, i.e., a card that bears a symbol designating one of the states specified in the machine table. Here is what the little men do: Suppose the posted card has a 'G' on it. This alerts the little men who implement G squares-'G-men' they call themselves. Suppose the light representing input I_{17} goes on. One of the G- men has the following as his sole task: when the card reads 'G' and the I_{17} light goes on, he presses output button 0191 and changes the state card to 'M '. (BLOCK, 1978, p. 278)

The question expressed in this part of the argument is: how many of these little men are needed to simulate the relationships of neuronal synapses? It is likely a billion of these, given that there are approximately one million neurons in the brain. Which brings us to the number of people who live in China, the next stage of this argument. The central idea of this part of the argument is to transform the region of China into a Turing machine. And this is because, for the functionalist, any system that has input data, a functional activity capable of processing information and output data, can have intelligence and, consequently, possess mental states and consciousness. (BLOCK, 1976, p. 278)

We replace the artificial body, the hollow head, and the little men who inhabit it – which we mentioned in the example of the homunculus-headed robot – with the region of China and the Chinese population, and the bank of lights with radio transmitters that connect the paths between the population. We also replace the notice board with cards with printed symbols with numerous satellites that distribute information to the entire Chinese population. Let us now imagine that the entire set of elements corresponds to an integrated system. In this way, the input data I corresponds to the radio transmitters that connect the Chinese population, the information that is transmitted via satellite to the region of China corresponds to the processing state S^1; whatever happens in the region will have equivalence of the processing state S^2 and the output data O_k e após o dado de saída acontecer S^3 o sistema integrado volta ao estado de repouso S_a:

> Remember that a machine table specifies a set of conditionals of the form: if the machine is in S_i and receives input I_j, it emits output O_k and goes into S_1. Any system that has a set of inputs, outputs, and states related in the way described realizes that machine table, even if it exists for only an instant. For the hour the

> Chinese system is "on," it *does* have a set of inputs, outputs, and states of which such conditionals are true. Whatever the initial state, the system will respond in whatever way the machine table directs. (BLOCK, 1978, p.279)

It may be the case that there are external factors capable of interrupting the information via satellite, or natural disasters such as floods or earthquakes could cause the satellite signal receivers to malfunction, or bombs or other artificial disasters could be produced in the computers that capture the satellite waves. But the system is also made up of people and an artificial structure – in the case of the Chinese population, the structure is made up of cities – that can function far from the possible adversities mentioned above. It may also be the case that adversities occur in several regions of the artificial structure simultaneously, which would compromise the neuronal activity of the sensory organs of the artificial body as a whole. (BLOCK, 1976, p. 279)

In both cases, both in the homunculus-headed robot argument and in the Chinese population argument, what we have in common are ways of creating artifacts capable of simulating the human mind and mental states of consciousness. In the first case, we have an artificial body and a hollow head where a structure of configured buttons that control the artificial body and a bank of lights are installed. In this hollow head live little men who control the structure of buttons and follow rules set out on a notice board and a bank of lights. In the second case, we have the Chinese population representing neuronal synapses, the region of China representing an artificial body, and waves of information that are transmitted via satellite representing neurons. (BLOCK, 1976, p. 280)

Although both systems simulate the functional activity of mental states, both systems are incapable of possessing qualitative phenomena, intentionality or subjectivity – a first-person ontology. And this is because it is not the consciousness of the robot or of the region of China that goes “towards” that which is the object of consciousness, but, in the first case, it is the little men who operate the homunculus-headed robot, while the robot itself is an automaton and, in the second case, it is the Chinese population who communicates through satellite signal receivers to carry out a collective action. The mental states that both systems simulate also do not have qualitative phenomena, because these phenomena are not “about” something or “of” something, that is, if the homunculus-headed robot observes an apple tree, it will not even perceive it and this is because it does not have a perceptive apparatus or a first-person ontology to have genuine representations, it is the little men that control it who have these attributes, the same goes for the region of China, it is the Chinese population and not the region of China who has the qualitative phenomena and the first-person ontology –

subjectivity – capable of having genuine representations.

1.9. Panpsychism, dualistic naturalism or non-reducible functionalism

Panpsychism aims to unite the approaches of property dualism and functionalism, thus promoting the conception of dualistic naturalism. This conception defends the point of view that neurophysiological properties do not play a causal role in the production of consciousness. To this end, it promotes an argument that involves the existence of qualitative phenomena – qualia – that are evanescent and dancing, with the purpose of demonstrating the impossibility of there being an interaction between functional activity and consciousness. Qualitative phenomena – qualia – are characterized as invariable principles, in the sense that they do not change as mental states can. If this interaction were possible, it would also be possible to imagine the evanescence – evanescent qualia – of a system, even if the system continued to perform its functions. In this way, conscious states could be imagined independently of the behavior of a system. (SEARLE, 1997, p. 143-51)

Chalmers' (1996) conception of functional activity links information processing and mental function in such a way that any system is capable of performing mental functions. (SEARLE, 1997, p. 160-1) Physical systems, such as computers, have functional activity at various levels; similarly, both hemispheres of the brain perform a functional activity equivalent to information processing. Functional organization – or, better said, cognition – is what determines the behavioral capabilities of a system. (CHALMERS, 1996, p. 248-9)

To elucidate his argument, Chalmers (1996) uses, metaphorically, the example of a brain that has its neurons replaced by silicon chips and, then, of a clone that has the same mental states as the individual who is cloned and has a brain made of silicon. The purpose of the examples is to ask whether it is possible that, in the first case, the silicon chip is capable of interacting with neuronal synapses through electrochemical reactions and, in the second case, if the silicon structure is capable of performing mental states, behavior and qualitative phenomena like those performed by the human brain:

> "Even if our neurons were replaced with silicon chips, then as long as these chips had states with the same pattern of causal interactions as we find in the neurons, the system would produce the same behavior." (CHALMERS, 1996, p. 248)

Chalmers' (1996) goal in developing the argument of evanescent and dancing qualitative phenomena – qualia – is to counter-argue, respectively, the absent and inverted

qualia. The absent qualia, in Chalmers' (1996) approach, correspond to Ned Block's (1976) argument of the Chinese population, as expressed in the previous section **1.8.3. Do homunculus heads invade the Chinese population?** In his conception, the homunculi in the hollow head correspond to the absent qualia. The inverted qualia correspond to having a change in the perceptive apparatus in such a way that we capture the perceptive experiences in an unusual way, where, for example, ordinary people have a perceptive experience of red, the individual who has inverted qualia has a perceptive experience of green – the argument of the inverted qualia is almost the same at the end of section **1.3.3. Intentionality as an ontological element of mental states**. (CHALMERS, 1996, p. 249-50)

1.9.1. Absent and inverted qualia or absent and inverted qualitative phenomena

The general idea of the concept of absent qualia is to demonstrate whether it is possible for a system to have mental states without having conscious experiences. If a system has the appropriate structure and functional activity capable of performing information processing, then it can perform the appropriate behavior, thus not needing conscious states or qualitative phenomena to perform that behavior. As mentioned in the previous section, any system is capable of processing input data in a functional activity and generating the appropriate behavior for that input data. (CHALMERS, 1996, p. 250-1)

The possibility of absent qualia is demonstrated in two ways, first in Block's (1976) metaphorical narrative in which little men perform the same function as neurons in a robot's hollow head in such a way that they control its behavior through a configuration of buttons and receive commands to perform the robot's actions through a light panel that illuminates a notice board with the information necessary to activate the configuration of buttons. The second form of this demonstration is a discussion of blindsight – as will be discussed in **3.4.2. Perceptual experience as conscious mental events and presentation of the state of affairs of the world** – in which patients with a lesion in the cerebral cortex, which makes them unable to see, still manage to have visual perceptions through other regions of the brain. According to the example of blindsight, a visual perception is not determined by the perceptual stimulus of the visual experience, which makes the existence of absent qualia a possibility of an invariant principle of visual perception where there is no visual experience promoted by the perceptual stimulus. (CHALMERS, 1996, p. 252-3)

Imagine a clone that has a silicon structure instead of a brain, such that this structure is functionally isomorphic to the brain. Is this clone capable of having inverted perceptual

experiences derived from its inverted qualia? Remembering that the idea of an inverted qualia is to have a perceptual experience that is the opposite of what another organism has, therefore, where one organism has an experience of red, the clone with inverted qualia will have an experience of blue, for example:

> Even those who consider themselves materialists have often supposed that functional isomorphs might have different conscious experiences. For example, it is often thought naturally possible that a functional isomorph of me with different physical makeup might have blue experiences where I have red experiences, or something similar. This is the hypothesis of inverted qualia. If it is true, then while the presence of conscious experience might depend only on functional organization, the nature of experiences would depend on physiological makeup, or some other nonfunctional factor. (CHALMERS, 1996, p. 264)

The central idea of the inverted qualia argument, as we have already mentioned in the previous paragraphs, consists of demonstrating that two organisms can capture different perceptive experiences of the same sensory stimulus, so that where one organism has the experience of red, another organism can have the experience of blue, but the sensory stimulus is the same in both cases. The argument is divided into two parts. The first part admits that the fact that the perceptive apparatus has inverted qualia causes the organism to have a different experience from the experience of a second organism under the perceptive stimulus of the same object. The second part assumes the existence of a twin Earth that has inverted perceptive spectra from our planet Earth, in this way, where the sky of the twin Earth promotes the perceptive experience of wine while the sky of planet Earth promotes the experience of blue. (CHALMERS, 1996, p. 264-6)

We can conclude that the perceptive stimuli that generate the perceptive experiences in both cases do not promote the same perceptive experiences, but the qualia – qualitative phenomena – responsible for promoting the perceptive experience do not change during the perceptive experience itself. Therefore, the qualia have an invariable principle in relation to the act of perceiving itself, they are intrinsic characteristics of the perceptive apparatus, while the mental state generated by the act of perceiving is different in relation to each organism – we will address this topic specifically in **3.4.2.2. The interference of the external environment in the presentation of the visual experience**.

1.9.1.1. Evanescent qualias or evanescent qualitative phenomena

The aim of the evanescent qualia argument is to counter the absent qualia argument.

To this end, Chalmers (1996) uses the hypothetical example of replacing neurons in a brain with silicon chips that are programmed to perform the same internal states that a neuron has. It is worth remembering that when we refer to internal states, we are referring to having mental states, conscious states, having qualitative phenomena, among others. If this replacement of neurons with silicon chips is correct, the silicon chip will be able to perform the same functions as the neuron it replaces – as discussed in **1.7. Functionalism**, the structure for having internal states does not matter; what matters is that the structure can perform the functions necessary to produce them:

> [...] We can imagine, for instance, replacing a certain number of my neurons by silicone chips. In the first such case, only a single neuron is replaced. Its replacement is a silicon chip that performs precisely the same local function as the neuron. Where the neuron is connected to other neurons, the chip is connected to the same neurons. Where the state of the neuron is sensitive to electrical inputs and chemical signals, the silicon chip is sensitive to the same. We might imagine that it comes equipped with tiny transducers that take in electrical signals and chemical ions, relaying a digital signal to the rest of the chip. Where the neuron produces electrical and chemical outputs, the chip does the same (we can imagine it equipped with tiny effectors that produce electrical and chemical outputs depending on the internal state of the chip). Importantly, the internal states of the chip are such that the input/output function of the chip is precisely the same as that of the neuron. (CHALMERS, 1996, p. 254)

The replacement of neurons by silicon chips is carried out until the moment in which all neurons are replaced by silicon chips that perform the same role as neurons do. Silicon chips do not have the essential biochemical mechanisms to perform the neuronal synapses of the brain. This replacement will cause this structure isomorphic to the brain to perform the same internal states as the brain and, consequently, will provide the same behavioral dispositions. On the one hand, the spectrum of this replacement will maintain the characteristics of the first-person ontology – subjectivity – and, on the other hand, it will essentially be a copy of a robot. In the sense that, whenever the individual who had the neurons replaced by silicon chips has subjective experiences – such as the memory of the day he watched a football match –, the part of the silicon chip responsible for these experiences will process the same information, but will not experience the subjective state completely. (CHALMERS, 1996, p. 255)

The question posed in this example is whether the consciousness of the individual whose neurons have been replaced by silicon chips will disappear completely or whether somewhere between the path of consciousness and the information processing of the silicon chip the subjective experience will fade away? The possibility of the subjective experience

fading away between consciousness and the information processing of the silicon chip is what Chalmers (1996) will call evanescent qualia. (CHALMERS, 1996, p. 255)

The missing qualia responsible for information processing and behavioral disposition in inorganic organisms suddenly appear through the evanescent qualia. This scenario would occur through a correction between the information processing of the silicon chips and the subjective ontology of the individual whose neurons have been replaced by the silicon chips. If the complete replacement of neurons by silicon chips places a gap between consciousness and information processing; and the physical structures of both the brain and the silicon cluster are isomorphic, this would generate two distinct organisms: the consciousness of the individual who had the neurons and the consciousness of the implanted silicon chips, which we will call Joe. The next question posed by Chalmers is: what is it like to be like Joe – the cluster of silicon chips? (CHALMERS, 1996, p. 255-6)

In the following example, Joe, the cluster of silicon chips, does not have the experiences of qualitative phenomena at all, he experiences the phenomena of such perceptual experiences that are captured by the responsible qualitative phenomena – for example, red qualia, yellow qualia, in the case of vision. The phenomena of perceptual experience are captured by Joe and transmitted to the consciousness of the individual who has the silicon chips implanted to assist him in his perception, after the transmission is made to the consciousness of the individual, they disappear – absent qualia. (CHALMERS, 1996, p. 256-7)

There is an intermediate level between the experience of the individual's consciousness that possesses the qualitative phenomena responsible for identifying colors and Joe, the cluster of silicon chips that is capable of processing the color information, reproducing the appropriate behavior by identifying them and transmitting this information to the individual's consciousness. This intermediate level is the territory where evanescent qualia develop. The evanescent qualitative phenomena, in turn, have the objective of transmitting the information of the qualitative phenomena that are captured by Joe to consciousness. Once these qualitative phenomena are transmitted, they become absent qualitative phenomena and disappear. (CHALMERS, 1996, p. 258-9)

1.9.1.2. Dancing qualia or dancing qualitative phenomena

The concept of dancing qualia aims to counter the idea of inverted qualia. We have already presented the general idea that functional organization determines whether an

organism will have the existence or absence of qualitative phenomena. Now, to establish which organisms are capable of performing a perceptual experience, we need to refute the idea of inverted qualia. (CHALMERS, 1996, p. 263)

Returning to the hypothesis of Joe, the cluster of silicon chips, Chalmers replaces the possibility of the action of evanescent qualia states acting at an intermediate level to transmit perception to the individual's consciousness for inverted qualia states to perform this intermediation of transmitting qualitative phenomena, in such a way that where the individual has the perceptive experience of blue promoted by blue qualia, Joe, the cluster of silicon chips processes the information of the same perceptive experience as red. (CHALMERS, 1996, p. 264)

The idea of dancing qualia begins with the intermediate level that transmits information about the qualitative phenomena perceived by Joe, the cluster of silicon chips, to the individual's consciousness. The problem with this intermediate level is that the evanescent qualia that mediate this information between Joe's consciousness and information processing are internally absent, in the sense that they are not in the physical world. Both systems—the individual's consciousness and Joe, the cluster of silicon chips—are not mistaken about the same experience, they just have different experiences of the same perceptual stimulus:

> Nevertheless, a good argument against the possibility of inverted qualia can be found in the vicinity.15 Once again, for the purposes of *reductio*, assume that inverted qualia are empirically possible. Then there can be two functionally isomorphic systems, in the same functional state but having different experiences. Suppose for the sake of illustration that these systems are me, having a red experience, and my silicon isomorph, having a blue experience (there is a small caveat about generality, which I discuss later). (CHALMERS, 1996, p. 266)

The question we raise here is not how perceptual experience is apprehended in itself until it jumps into the visual field. But that both – the consciousness of the individual who perceives and Joe, the cluster of silicon chips – have distinct meaningful experiences. The noticeable differences of the same perceptual stimulus are tiny, to the extent that these jumps in the visual field can capture different color spectra of the same colors of a perceptual stimulus. (CHALMERS, 1996, p. 267)

Chalmers (1996) provides a second example of Bill, the lonely silicon chip, which is installed in an individual's brain with backup circuitry and programming to interact with the individual's brain's neural synapses and a switch that turns it on and off. Bill, the lonely chip, does not interact directly with the brain, but the switch that turns it on switches the neural system to Bill's processing. The switch, in turn, controls the interface between Bill's circuitry

and the rest of the brain, and when the switch is turned on, information processing is performed by Bill. The question now arises: what happens to the individual's experiences when he or she activates Bill, the lonely chip via the switch? After turning on the switch, there is a pendulum system that involves the neural activity of the neural synapses and Bill's information processing. So when the individual has a perceptual experience, Bill also processes the information from the perceptual experience. (CHALMERS, 1996, p. 267-8)

When I have the experience of blue, it will automatically be replaced by Bill's processing of red information and the perceptual experience will change before my eyes in such a way that the qualia that promote the experience will dance around altering my field of vision. The functional organization of both systems - the individual's neuronal activity and the silicon chip - is the same and remains normal and there is no change in behavioral disposition. What happens is a functional difference between the two systems and the individual's cognitive capacity does not change, in the sense that he has some mental state of my color-sensation-qualia connecting. (CHALMERS, 1996, p. 269)

If dancing qualia are naturally possible, they can happen independently of the existence of Bill, the lonely chip. The micro-level neurophysiological properties of the brain are constantly changing, and this can happen through evolution. If we admit the possibility that the invariant principle can change and that qualia do not depend on functional organization, then qualia can change. But since a change in the neurons for the silicon chip makes a change at a level that a change in neuronal activity does not, the only possibility of changing the invariant principle of a qualitative phenomenon is by changing the programming of a functional line.

1.10. Final Considerations

It is possible to conclude that all the theories of mind briefly discussed derive from substance dualism. We sought to promote an analysis of the mind-body problem, what the nature of the mind is and whether there are qualitative phenomena – qualias – of the mind, such as mental states, sensations, beliefs, desires, volitions and subjectivity. A general analysis of substance dualism was made where we presented that the body is divided into two distinct and incommunicable substances – the body and the mind –, that it is easier to know the soul than the body, because the soul is incorporeal, indivisible and immaterial and that the soul has unique properties, such as a propensity for knowledge and subjectivity. Still on substance dualism, we addressed the theoretical principle of the mind-body problem that

seeks to understand how the mind relates to the body?

Starting from the point of view that body and mind are distinct and incommunicable substances. Based on this general analysis, some monist approaches that are inspired by substance dualism are presented: property dualism, anomalous monism, behaviorism, functionalism and panpsychism. These are monist conceptions because they assume that the mind is derived from only one substance, matter – which can be the brain or some analogous artifact. There are two essential differences between these approaches: first, the conception of mind, consciousness – subjectivity – and mental states changes in three ways, these conceptions have a first-person ontology and are in a supervenient relationship with the brain; they may be non-physical phenomena that any system is capable of carrying out through a functional activity or such conceptions do not exist may not correspond to reality and, therefore, are reduced to their physical causes - mental processes that can be triggered through a disposition of behavior and, secondly, the conception of intentionality that will change between an intrinsic characteristic of some mental states of connecting psychological modes to the content of mental states; a disposition to carry out a certain behavior according to the corresponding input data or the capacity to generate an output data according to an input data processed by a functional activity.

Property dualism is an approach inspired by substance dualism and, in all its versions, it is admitted that the mind is derived from the brain, but is in a relationship above – supervenience – it. There are two versions of this theory, the weak one is called epiphenomenalism and states that despite the mind being derived from the brain, it has no causal function on it, in addition, it also states that the mind arises in biological beings according to the complexity of its brain evolution, to the point that the more complex the activity of a biological being, the greater its propensity to develop a mind. The strong version is called interactionism and it admits that there is a causal relationship between mind and brain.

Having done this, we present the approach of three authors considered property dualists: Frank Jackson, Thomas Nagel and Tim Crane. The first two will defend the point of view that the nature of mental states is constituted by qualia – or qualitative phenomena – and the last one that this nature is also constituted by intentionality, in addition to qualitative phenomena. Frank Jackson will state that there are qualia properties that constitute consciousness. This property, in turn, is produced by the network of neurons in our brain and is responsible for the mental states of the brain. He uses the knowledge argument to exemplify this qualia property.

Thomas Nagel seeks to understand what mental phenomena are and to do so he will use subjectivity as a starting point to carry out his undertaking. He will state that consciousness manifests itself at different levels in living organisms and that subjectivity is the element that characterizes the nature of consciousness. He develops the analogy of "what is it like to be from the point of view of another living being", more specifically "what is it like to be a bat?" The author concludes that it is impossible to know what it is like to be a bat, at most to describe how its perception of the world occurs and this is because it is impossible to possess the subjectivity of another.

Tim Crane argues that one of the ontological elements of consciousness is intentionality, and to this end he presents arguments from authors who defend intentionality and authors who reject this conception. He admits that there is a weak and a strong version of intentionality, and intends to counter-argue the weak version of the concept, because if the weak version is false, then the strong version will be too. To this end, he presents Franz Brentano's conception of intentional non-existence, which is derived from the mind-body problem, and emphasizes that the contemporary discussion of intentionality arises from Brentano's conception that the contents of the mind are representations or have representations as their origin, and that in the act of representing, we are able to conceive sensations, feelings, or judgments. After this, he presents an analysis of emotions and questions whether they are intentional or not. Finally, he states that intentionality has two clear and distinct elements, the first being that it is always a relationship between thought and the objects of thought, and the second being that when something is apprehended as an intentional state, this is always learned in some way.

Anomalous monism is an approach that lies between property dualism and materialism. This approach will absorb the property dualist view that there is only one substance in the world – the brain – and from it arise two properties, one physical and one mental; the materialist view that the mind is reduced to its physical causes and that behavior is the empirical way of collecting data to interpret the mind; and the physicalist view that the causal powers of the brain to produce minds are reduced to its structural capacity for processing information through functional activity. The main difference between researchers of this approach is that they will divide into those who defend the view that everything is essentially mental and those who defend the view that everything is essentially physical. We will reduce our investigation to Donald Davidson's view that consists of arguing whether a rationalization involving an individual's action is possible, and this rationalization of the action is characterized by him as a coherence of a voluntary action. Such coherence occurs

through a familiarization that the individual who rationalizes the action has in relation to the world according to his own set of beliefs and expectations regarding the action itself. There will be semi-intentional actions that translate into the way other individuals see the individual's action itself – because the individual's rationalization always happens in the first person – and, once the familiarization is standardized, the individual intends himself in the world according to that rationalization.

Behaviorism is a conception that has two aspects, the methodological and the logical. This conception, in general, excludes the possibility of subjectivity and mental states from theories of the mind. Instead, its methodological version defends the hypothesis that there are mental processes that can be identified through behavior. In this sense, the mind is explained only in behavioral form. Therefore, mental processes are characterized by certain stimuli from the external environment that promote a disposition of behavior in the subject. The more this stimulus is activated, the greater the disposition for this behavior to be conditioned as a response.

Next, we analyze some elementary aspects of Gilbert Ryle's behaviorist theory, which brings Cartesian elements to behaviorism. Ryle admits that there is a mind and a body and that the first has a private and temporal existence and the second a public, physical and temporal existence. Mind and body are related similarly to the analogy of a ghost in a machine. Thus, we receive stimuli from the physical world that are captured by our sensory organs and through these stimuli we create private mental processes of a certain behavior. These private processes become a disposition for a certain behavior whenever we come into contact with the same stimuli. Ryle contributes to the development of logical behaviorism through the approach of the category error. In general terms, mental states have equivalence to logical statements in the sense that a mental state belongs intrinsically to a certain logical statement. The problem of the category error is that there are mental states that represent more than one type of logical statements, thus forming a system.

Reductionist materialism is an approach that has two versions: type theory and occurrence theory. In Smart's version of type theory, the neurophysiological states of the brain have an equivalent one-to-one relationship with mental states, so that there is a neuronal synapse that corresponds to each mental state. They also defend the view that only artifacts such as the brain are capable of having mental states. In the occurrence theory version, there is no one-to-one relationship between mental states and brain regions, so that the same mental state can be associated with several neurophysiological states simultaneously.

Eliminative materialism aims to exclude the concept of mental states and

consciousness from discussions about the nature of the mind – which authors such as Churchland define as folk psychology –. Its general justification is that these concepts are too influenced by metaphysics and should therefore be abandoned. The general goal of this abandonment is to develop an objective conceptual apparatus for neuroscience. However, the biggest problem with this approach is that abandoning metaphysical influence in itself implies abandoning the very problems that develop the concepts of neuroscience themselves.

Functionalism is an approach to the philosophy of mind that downplays the importance of the brain in the eventual simulation of mental states. This conception understands that the manifestation of mental states is obtained by a set of causal relationships involving input data, information processing, a functional activity, and output data. In view of this, authors such as Turing defend the point of view that any physical system – such as electronic mechanisms or digital computers – capable of simulating processing states in a functional activity has mental states and cognitive capacity.

From this point of view, practically the entire basis of computer science and the operation of electronic mechanisms was developed. This development was only possible through the conceptual schematization of the Turing machine. A Turing machine is a black box with a standard configuration of input data, processing states and output data. The processing states are carried out on a tape on which the standard configuration is located. In this standard configuration there are a series of events and conditions that the machine must simulate. Using the Turing machine hypothesis, Alan Turing developed the argument of the imitation game with the purpose of investigating whether or not machines are capable of thinking. The game is divided into two parts, in both of which there is an interrogator and a woman who helps the interrogator in the game; in the first part of the game there is a man who tries to deceive the interrogator and in the second part the man is replaced by a machine with the same purpose. The man – or the machine – and the woman are in separate rooms from the interrogator and must answer the questions that are asked by the interrogator. Both the questions and the answers are written down and printed. If the machine can deceive man in the imitation game, this means that it has cognitive capacity.

We also present the psychofunctionalist approach that uses Ramsey's correlative equation to associate functions with mental states in psychological theory. Mental states and functions of a functional activity are equivalent and both systems have a functional activity – information processing for inorganic systems and cognition for organic systems. The central idea of Ramsey's correlative equation is to develop a mental variable that corresponds to each mental state in the brain. Therefore, there is a symbiosis between living organisms and

physical systems that have a functional activity.

We present the argument of Ned Block's homunculus-headed robots and Chinese population, with the aim of investigating whether it is possible to simulate a human brain in unusual physical systems. The first part of the argument consists of sketching a robot with a physical structure analogous to the human body but with a different internal physiology. This robot has a hollow head with a structure of buttons, a bank of lights, a notice board with cards with symbols printed on it, and a little man who inhabits and controls the robot. The little man is responsible for reading the cards on the notice board; when this happens, a light is activated so that the little man can press the buttons on the structure, perform a simple function on the hollow head's control panel, and change the symbol on the card on the notice board. The set of elements that form the hollow head is equivalent to a Turing machine, where the act of the little man reading the card with the symbol on the notice board corresponds to the input data, the bank of lights that turn on under the little man corresponds to the processing states and the act of the little man pressing the button on the machine to perform a simple function on the body and modify the symbol on the card corresponds to the output data.

The second part of the argument consists of increasing the number of little men to a one-to-one relationship with the brain synapses and trying to simulate a human brain from a physical system. For this, the physical system used is the Chinese region. Thus, the body structure and the hollow head in the robot are replaced, respectively, by the Chinese region and its population. The bank of lights by radio transmitters that connect the paths between the population and the notice board with cards with symbols printed by satellites that distribute information to the Chinese territory. This whole new set of elements consists of an integrated system in which the input data correspond to the satellite waves, the information that is distributed via satellite to the population of inhabitants to the processing states and whatever happens to the Chinese region to the output data. All these arguments form the background for possible definitions about what the nature of the mind is, what mental states are and how the mind relates to the body.

Last but not least, we present Chalmers' approach to panpsychism or dualistic naturalism, which promotes an interaction between property dualism and functionalism. In general terms, neurophysiological properties do not play a causal role in the development of consciousness, and any system can be intermediaries of mental states and qualitative phenomena. To this end, he uses the example of a silicon chip that processes information in a way analogous to the cognition of a neuron. This silicon chip replaces a neuron in the brain, and he pursues the purpose of how this interaction between the organic and inorganic

structures occurs. Based on this argument, he develops two concepts that promote this interaction between both structures: evanescent qualia and dancing qualia. Respectively, the first ones have the function of associating the silicon chip's information processing of a perceptive experience with the qualia responsible for defining such perceptive experience and if the silicon chip is configured in a way that it inverts the perceptive experience of a sensory stimulus – for example, where blue would be decoded through the brain structure, the silicon chip's programming would interpret it as red –, the second ones have the role of promoting this change from red to blue when the silicon chip is activated by a switch.

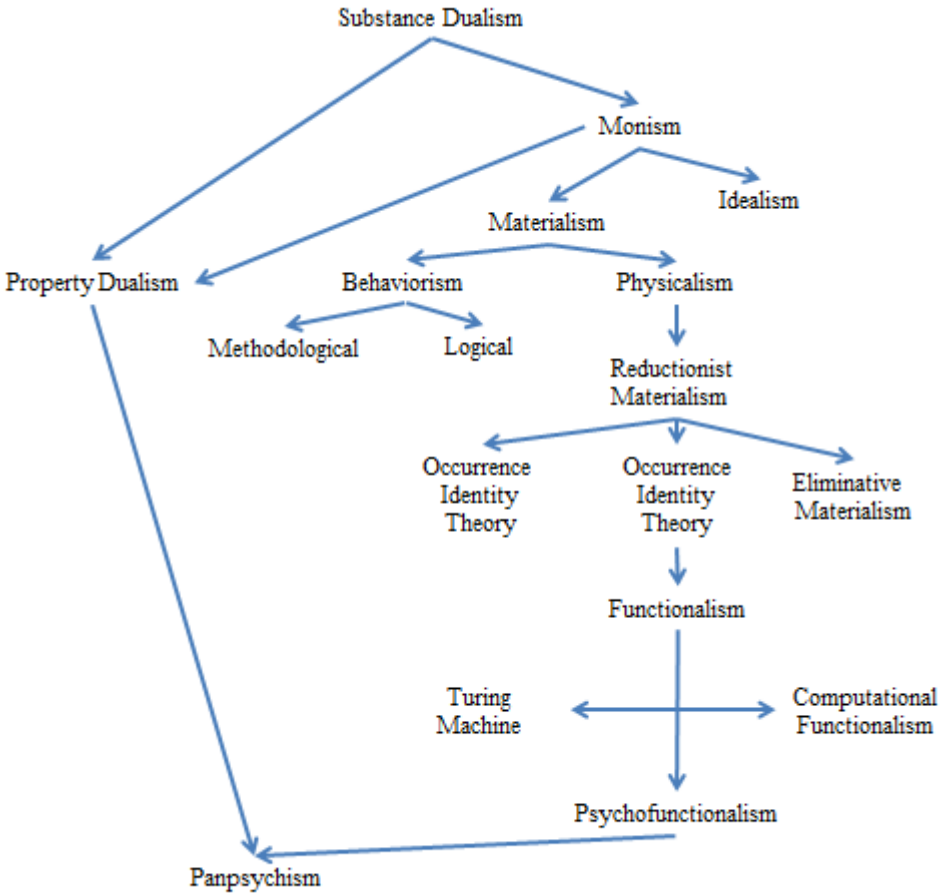
Table 1.2 – Essential aspects of approaches to philosophy of mind

Approach	General Concept	Main Features	
Substance Dualism	There are two distinct and incommunicable substances: *res cogitans* and *res extensa*.	*Res Cogitans* Pure Intellection Indivisible Immortal Incorporeal	*Res Extensa* Appearance Subjective Knowledge Divisible Mortal Material
Property Dualism	There are two properties, one physical and one mental, that arise from the brain. The mental property is above the physical property and has no causation over the physical property.	Epiphenomenalism: consciousness has no causal relationship with physical properties and is acquired through evolution. There are intrinsic and non-physical qualitative phenomena.	
		Interactionism: physical and mental properties have a causal relationship, but the former is irreducible to the latter. Intentionality is always a relationship of moving toward something.	
Anomalous Monism	There is only one substance in the world and two properties arise from it: one physical and one mental.	The mind is reduced to its physical causes. Behavior is the objective representation of the mind. The brain is reduced to a functional activity. The individual engages in the world through a rationalization of action.	

Philosophical Behaviorism	The mind is excluded and replaced by mental processes of external stimuli that produce a behavioral disposition and an eventual response.	Methodological behaviorism believes that behavior is the objective representation of the mind.
		Logical behaviorism believes that linguistic entities and speech are the objective representations of the mind.
Reductive Materialism	Mental states are reduced to neurophysiological states. Chauvinists believe that only brains produce minds.	Type identity theory: mental states are reduced to neuronal synapses on a one-to-one scale.
		Occurrence identity theory: mental states are reduced to a set of interrelated neuronal synapses.
Eliminationist Materialism	Mind, consciousness and mental states must be eliminated because they are not objectively apprehended.	Metaphysical discourse on mind and consciousness must be excluded in order to develop the neuroscience approach.
Functionalism	The mind is a non-physical property and brain structure is reduced to cognitive capacity. Having mental states is a relationship between input data, information processing, functional activity and output data.	Any system capable of having a functional activity can have minds. Processing information is not the same as having intentionality.
		Psychofunctionalists establish an equivalence between mental states and variables through the Ramsey functional equation.
Panpsychism	It promotes a junction between property dualism and functionalism.	Neurophysiological properties do not play a causal role in the development of consciousness.
		Evanescent qualia: responsible for promoting an interaction between a perceptual experience of an organic and an inorganic system.
		Dancing qualia: responsible for altering the qualitative phenomenon of a perceptual experience of an organic system promoted by an inorganic system.

Source: own authorship

Figure 1.1 – Genealogy of the approaches to mind presented in Chapter 1



Source: adaptation of the Figure on p. 99-100 of the book *La Mente, una breve introducción* by John Searle.

CHAPTER 2

2. BIOLOGICAL NATURALISM, COGNITION AND THE ONTOLOGICAL ELEMENTS OF CONSCIOUSNESS

> [...] Counsciouss states are caused by lower level neurobiological processes in the brain and are themselves higher level features of the brain. The key notions here are those of *cause* and *feature*. As far as we know anything about how the world works, variable rates of neuron firings in different neuronal architectures cause all the enormous variety of our conscious life. (SEARLE, 2002b, p. 9)

2.1. Presentation

In this second chapter, we seek to understand the ontological conception of mind, consciousness and mental states from the perspective of biological naturalism. In addition, we present the distinction between cognition and consciousness and what are the main conditions for systems to be capable of possessing consciousness and mental states. We also outline the distinction between objective and subjective knowledge and the reason why the mind cannot be defined in purely objective terms for science.

The conception of biological naturalism reconciles functionalism and property dualism, both addressed in **Chapter 1**. The most appropriate name for this theory in the Philosophy of Mind is non-reductive physicalism. Physicalism because it admits that the mind is not a property that is outside the world, but that it is derived from physical properties and non-reductive because, once derived, the mind cannot be explained by the physical characteristics that cause them, thus requiring definitions that escape the objective field of knowledge.

Roughly speaking, the mind emerges from the brain, it is produced by the brain through relations of neuronal synapses in its physical system on a micro scale and emerges from the brain as a property of these relations on a macro scale. As soon as it emerges, it has other ontological characteristics that are not described only by physical properties. Consciousness is the primary aspect of the mind and mental states are realized in this primary aspect. Both the mind and its ontological characteristics are not reducible to physical properties because the mind requires something more than physical causes such as freedom and subjectivity.

Thus, it can be said that biological naturalism is a reductionist and emergent point of view. Reductionist because it reduces the conception of mind to the neurophysiological

properties of the brain, leaving no room for it to be a property above the physical world, and emergent because consciousness emerges from this causal relationship that occurs in the neurophysiological properties of the brain for the production of the mind and, once it has emerged, it is no longer capable of being explained in purely objective terms.

We will therefore address in this chapter what are the ontological elements that configure the mind, consciousness and mental states from the point of view of biological naturalism. If so, is it possible for systems to be capable of producing minds? How do mind and body relate? Why can't the mind be reduced to its physical causes? And how can intentional states of consciousness cause bodily movements? In this second chapter, we explore how John Searle elaborated biological naturalism taking into account some of the main elements of property dualism and functionalism addressed in **Chapter 1**. Furthermore, we seek to indirectly address a few elements about the conception of intentionality, which will be discussed in **Chapter 3**.

2.2. The Approach of Biological Naturalism

Biological naturalism is a conception of philosophy of mind proposed by John Searle that attempts to construct an approach to the mind-body problem from the perspective of the problems raised in **Chapter 1**. Searle seeks to incorporate a scientistic point of view into the mind-body problem and to disentangle his approach from some of the elementary problems that were discussed previously; more specifically, he attempts to construct an interactionist approach between mind and body in which the mind is a product of the brain and how our intention to act emerges in the world. (SEARLE, 2003, n.p)

The main purposes of constructing this approach are to preserve the subjective character of the mind and to solve the problem that mind and body are two distinct properties that do not communicate with each other. For if they are, how is the mind capable of feeling the pain that occurs in the individual's physical body? In relation to our intention to act, how are we capable of affirming that our mental states are or are directed to states of things that are in the world? When I am thirsty and have the desire to drink tea, what connects my desire to make tea with the bodily movements that drive me to the kitchen and make me produce the action of making tea to drink? And finally, how is our brain capable of causing consciousness? (ALVES, 1999a, p. 65-6)

The author pursues these purposes due to the fact that, on the one hand, in the dualist point of view the mind does not have a causal function over the body; the mind has mental

states which, in turn, are qualitative phenomena in which when I feel or apprehend something these mental states develop. Furthermore, these mental states themselves can be about something that is in the world. On the other hand, in the materialist point of view, a subjectivist view of the mind must be eliminated because it does not have a correlation with reality. The mind is reduced to a process of disposition of behavior in which there are stimuli from the external environment and responses of a certain behavior. From the functionalist point of view, the mind is reduced to a process that involves input data, processing states and output data and any system that has this processing structure is capable of having a mind. (ALVES, 1999a, p. 67)

In view of this, Searle proposes the approach of biological naturalism to try to solve these issues and adapt the approach to the mind-body problem to a perspective in which the mind and the brain have an interactive relationship through causation, that is, the mind and the brain are not distinct and irreconcilable substances, but the mind is a product of the brain. From this product arise consciousness and mental states, but the nature of the properties of the mind remains unknown. (ALVES, 1999a, p. 67)

In this sense, the mind is neither a non-physical substance in relation to the brain nor can it be reduced to the neurophysiological states intrinsic to the brain. Biological naturalism asserts that the mind is a process caused by the brain itself and at the same time is an intrinsic characteristic of it. The mind is caused by neurophysiological processes in a micro-structural perspective of the brain and after being caused by these substances at the micro-structural level of the brain, it is projected in an abstract way at a macro-structural level:

> There is a cause and effect relationship, but at the same time the surface features are just higher level features of the very system whose behaviour at the micro-level causes those features. (SEARLE, 2003, n.p.)

In an analogy, this causal relationship is similar to the process of water liquidity or the process of digestion. In the first case, water liquidity is a macrostructural process derived at a microstructural level from a cluster of particles that, when united, become water. The characteristic of water liquidity cannot be seen or perceived because it is simply part of the system. In the second case, there is no organ responsible for digestion; it is a process that involves several chemical reactions at a micro level and several organs at a macro level, and digestion derives from this process. (SEARLE, 2002b, p. 9-10)

By trying to break away from materialist and dualist approaches, Searle does not claim that the mind has characteristics that do not correspond to the physical characteristics of the

brain, such as qualia phenomena, in the sense that these are non-physical phenomena, and he also does not ignore the fact that we have subjectivity and introspection, claiming that there is consciousness and that we are free to make choices.

Biological naturalism is a theory that, in some way, tries to reconcile property dualism and functionalism in a synthesis. As much as Searle admits the opposite, he brings elements of property dualism into his theory and, at the same time, encompasses some characteristics of functionalism in his approach.

The main difference between biological naturalism and property dualism is that, for the dualist, mind and brain are divided into only two properties – one physical and one non-physical – while, for Searle, consciousness is divided into several qualitative characteristics that guarantee specific attributes in the brain. Regarding functionalism, for a system to have a mind, it is not enough for it to have input data, a processing unit and output data, as in the analogy of the homunculus head and the Chinese population; it is necessary for the system to also have physical properties analogous to the brain. (ALVES, 1999a, p. 69-70)

Consciousness, in turn, is caused by the brain and is a qualitative characteristic of it, and from this consciousness other mental states arise as attributes of the mind. Mental states are products of brain relations that do not involve only physical features of the brain. If this were possible, we would be able to identify the nature of these mental properties in the neurophysiological states of the brain, but there is no way to identify such mental properties because the mind is a process that occurs in the brain, just like the analogy of digestion or the liquidity of water mentioned earlier. Therefore, mental states cannot be found in behavioral states or functional states of the brain:

> If we recognize that mental phenomena are caused by brain processes at the microlevel and are realized in the brain system at the macrolevel, and if we recognize that causation by brain processes enables a causal explanation of mental phenomena in terms of brain processes, we will be – according to Searle – led to conclude that these phenomena are biological, maintaining with the brain the same type of relationship maintained by several systemic properties extremely common in nature with their physical substrates [...][24] (PRATA, 2021, p. 29)

After presenting the general characteristics of biological naturalism and a brief correlation with the dualist and materialist point of view in analytical philosophy, we will

[24] In original: "Se reconhecermos que os fenômenos mentais são causados por processos cerebrais no micronível e são realizados no sistema cerebral no macronível, e se reconhecermos que a causação por processos cerebrais possibilita uma explanação causal dos fenômenos mentais em termos de processos cerebrais, seremos – de acordo com Searle – levados a concluir que esses fenômenos são biológicos, mantendo com o cérebro o mesmo tipo de relação mantido por diversas propriedades sistêmicas extremamente comuns na natureza com seus substratos físicos [...]" (PRATA, 2021, p. 29)

present the main elements to distinguish consciousness and cognition, the conception of consciousness in John Searle's philosophy and the conception of mental causation. The distinction between consciousness and cognition, in general terms, consists of associating the information processing of a computer with the cognitive capacity of the brain – syntax, the capacity to process information and perform logical-mathematical operations – and consciousness with the semantic capacity that a computer has to process information appropriately. Therefore, simulating intelligent behavior, as the functionalist argues, is not the same thing as interpreting meanings in the world. This line of reasoning is a critique, more specifically, in relation to the Turing machine and the argument of the Chinese population. The conception of consciousness in Searle emerges as one of the properties of the mind, and is the space in which mental states arise, as well as other characteristics of the mind, such as intentionality, subjectivity, beliefs, desires, volitions, among others. The idea of mental causation outlines a conception of how mental states and conscious states arise from micro-level properties of the brain, if consciousness cannot be reduced to its own causes.

2.3. The difference between cognition and intelligence

We address in **1.8. Functionalism** that any system is capable of having a mind as long as it has a functional activity capable of processing input data information and producing the appropriate output data. Therefore, any system that has a functional activity is capable of having a mind. But how can we actually affirm that there is some algorithmic level of information processing in the brain? How can we empirically demonstrate that there is some level of manipulation of binary symbols in the functional activity of the brain? What we can affirm is that while in the brain there are linguistic entities that mean something in the world, in the computer there are binary symbols that process information and both, in some way, transmit information. But, the functional activity of data processing that exists in the computer depends on an observer who performs its functions:

> Intrinsically speaking the commercial computer is just a complicated electronic circuit. For the commercial computer to meet the causas reality constraint we have to appeal to the outside programmers, designers and users who assign an interpretation to the input, to the processes in between, and to te output. For the commercial computer, we are the homunculi who make sense of the whole operation. (SEARLE, 2002b, p. 122)

We use the example of getting a cup of tea. The individual gets up from the chair, goes

to the kitchen, opens the bottle and pours the tea into the cup. If we take into account the concept that a computer CPU has a functional activity analogous to the brain, then the individual who gets up to get a cup of tea performs information processing in this action. His brain processes this information on a two-dimensional level and represents the act of getting a cup of tea through images and tastes. These representations are activated in the retina and taste buds and the motor system goes in search of the cup of tea. But it is likely that this level of functional activity that the human brain affects is reduced to the algorithmic level that the computer affects. (SEARLE, 2002b, p. 206-9)

The main distinction between the two, as we will see in the course of this chapter, is that the brain does more than just process information; it represents linguistic entities and has intentionality, while the computer merely manipulates symbols according to a previously established syntax. We can admit that the brain is a functional system, but this system does not process information in the same way that a computer does. A computer uses binary language at a micro level to process information and perform functions, while the human brain interprets information through neuronal synapses promoted by the neurophysiological states of the brain. (SEARLE, 2002b, p. 209-10)

2.3.1. Silicon brains

Let us return to the example of the silicon brain, briefly presented in **1.9. Panpsychism, dualistic naturalism or non-reducible functionalism** by Chalmers (1995). Imagine that an individual's brain degenerates to the point of blindness and silicon chips are implanted to restore vision. This same individual's brain degenerates more and more, and the entire degenerated region is eliminated by silicon chips until it is completely replaced. These silicon chips not only have a functional activity capable of processing information, but they can also produce mental results responsible for these functions – even though, as seen in the previous paragraphs, it is impossible to reproduce the causal capacities of the brain in inorganic systems. (SEARLE, 2002a, p. 65-6)

This argument will have three variations: (i) in the first, the silicon chips placed in place of neurons reproduce all the mental phenomena responsible for the function that the neuron performed; (ii) in the second, more neurons degenerate and are replaced by silicon chips and their conscious experience is gradually reduced while their external behavior remains the same; and (iii) in the third, the silicon chips do not alter states of consciousness, but there is an increasing difficulty in putting action – intentionality – behind their thoughts

and the individual's behavior ceases; the chips maintain the processes of their body, even if the organic system of the brain is completely replaced by an inorganic one; the individual still perceives the world around him, but he is unable to perform physical movements. (SEARLE, 2002a, p. 66-8)

The purpose of this example and its three variations is to demonstrate the difference between brain processes, mental processes, and external behavior. In (i) silicon chips and neurons have equivalent causal capacities because both have mental phenomena. In (ii) there is no intermediation between motor behavior and the individual's mind because silicon chips do not reproduce the brain's causal capacities to manifest conscious states, only the functional activity of behavior. And in (iii) the individual has his entire mental life conscious, but he cannot manifest his mental life in his behavior. (SEARLE, 2002a, p. 68)

In the ontological sense, behavior, functional activity, and causal relations are irrelevant to the existence of mental activity. In the epistemic sense, it is behavior that will define a person's mental states and in relation to the causation of conscious states – which we will address in more detail in **2.5. Mental causation** – consciousness mediates the causal relationships between the functional activity of the brain – or the system in which the brain has been replaced – and bodily behavior. (SEARLE, 2002a, p. 68-9)

The central idea of the silicon brain hypothesis is to demonstrate that consciousness is conceptually distinct from behavior, contrary to what we mentioned in the epistemic sense in the previous paragraph. The brain is what causes consciousness and conscious mental states. However, causing consciousness and causing bodily movements are distinct phenomena. Therefore, it is possible to conclude that a system performs behavior without manifesting consciousness and that it has consciousness without performing behavioral activity. (SEARLE, 2002a, p. 69-70)

2.3.2. Chinese Room argument

The Chinese room argument is developed by Searle (2015) with the aim of promoting a critique of functionalism, more specifically the arguments of the Turing machine and the imitation game – as discussed in the section **1.7. Functionalism**. For functionalism, in general terms, the brain is analogous to a digital computer and the mind can be associated with a computer program. This conception is commonly known as strong artificial intelligence. (SEARLE, 2003, p. n.p.)

In a sense, the biological character of the brain is not essential for the reproduction of a

mind or mental states; in general, any physical system that has input data, processing states, and output data is capable of producing mental states. Thus, the relationship between the mind and the brain can be reproduced in an identical way to that between a computer program and computer hardware:

> On this view, any physical system whatever that had the right program with the right inputs and outputs would have a mind in exactly the same sense that you and I have minds. (SEARLE, 2003, n.p.)

Functionalism defends the point of view that computers can think when they interpret input data according to processing states programmed in their software and that, consequently, it is a matter of time before computers have minds analogous to those of human beings, since the only obstacle to this actually becoming a reality is the design of appropriate hardware that is capable of simulating the complexity of the mental states that the human brain is capable of producing. (SEARLE, 2003, n.p.)

For functionalism, intelligence is purely a matter of manipulating symbols and processing input data appropriately in order to generate output data. For this to be possible, a system must have a processing unit, have a functional activity that is activated by input data, and produce appropriate output data. Any system capable of performing these functions is capable of possessing intelligence and, consequently, being conscious. A system is understood to be any entity that possesses all of the characteristics described above. Therefore, a refrigerator thermostat is conscious of two things that it is capable of identifying about the world: that it is too hot or that it is too cold. (SEARLE, 2003, n.p.)

The concept of a digital computer encompasses the necessary characteristics of a system that possesses intelligence, because it has specific formal operations in purely formal terms and these formal operations are limited to interpreting abstract symbols with the aim of emulating software. Symbols, in turn, have no meaning and, therefore, have no semantic content. They are described in purely formal terms that correspond to a syntactic structure. Software that has a purely formal nature is compared to mental processes that occur in the brain in the functionalist conception. However, mental processes have something more than having the ability to process data and interpret symbols in a purely syntactic way; mental processes also have semantic content. (SEARLE, 2003, n.p.)

The Chinese Room argument begins with an analogy between two systems. The first is a piece of software developed by a group of programmers that simulates the understanding of Chinese. This software is so well programmed that its responses are identical to those of

native Chinese speakers. The second is about an individual who is locked in a room with baskets of Chinese symbols and a manual on how to manipulate these symbols. The central question that permeates both systems is: does the computer software or does the individual in the room understand Chinese in the same way that Chinese people understand it? (SEARLE, 2003, n.p.)

Let us return to the second system, which is the central example addressed by Searle (2003). This individual does not understand Chinese and is locked in a room where there are several baskets with Chinese symbols. The rulebook, which contains the individual's native language, explains how to manipulate the Chinese symbols that are in the baskets. These are the sets of elements that form the Chinese room system. The rules contained in the book explain how to manipulate the symbols in the baskets in a purely formal context – syntax – but they do not explain the meaning – semantics – of the Chinese symbols in question. Thus, the rulebook describes things like: "(...) 'Take a squiggle-squiggle sign out of basket number one and put it next to a squogglesquoggle sign from basket number two.'" (SEARLE, 2003, n.p.)

> To counter this thesis, Searle describes the Chinese room thought experiment in the following terms. Consider a language that is unintelligible to us. In Searle's case, Chinese. Suppose we are in a room with containers full of Chinese symbols. Suppose also that inside the room there is a rulebook (the program) that matches Chinese symbols to other Chinese symbols simply by their shape, without requiring us to understand them. Imagine that people outside the room, fluent in Chinese, insert pieces of paper containing symbols (inputs) through a slot in the room, and in response, after manipulating the rulebook, we return another piece of paper containing symbols (outputs). Thus, suppose that the rulebook guarantees that our responses are indistinguishable from the responses that would be given by a native Chinese speaker.[25] (OLIVEIRA, 2020, p. 6)

Some Chinese symbols are introduced into this Chinese room system, these symbols are Chinese questions asked by Chinese speakers outside the room, and the symbols in the baskets inside the room represent the answers to the questions that are entered through these newly introduced symbols. The role of the individual in the Chinese room is to collect these Chinese question symbols that are introduced into the room, read the rulebook, and identify

[25] In original: Para contestar esta tese, Searle descreve a experiência de pensamento do quarto chinês nos termos que se seguem. Consideremos uma linguagem ininteligível para nós. No caso de Searle, o chinês. Suponha-mos que estamos em um quarto com recipientes cheios de símbolos chineses. Admitamos também que dentro do quarto há um livro de regras (o programa) que faz a correspondência de símbolos chineses com outros símbolos chineses apenas pelo formato, não requerendo que nós os entendamos. Imaginemos que pessoas fora da sala, com fluência no chinês, introduzam por uma abertura no quarto pedaços de papeis que contém símbolos (inputs), e em resposta, após a manipulação do livro de regras, nós devolvamos outro papel com porções de símbolos (outputs). Deste modo, suponhamos que o livro de regras garanta que nossas res-postas sejam indistinguíveis das respostas que poderiam ser dadas por um falante nativo de chinês. (OLIVEIRA, 2020, p. 6)

the baskets that will be used to insert the “question” symbols that are introduced into the room, and collect the symbols that represent the “answers to the questions” in order to put them out of the Chinese room. Now, imagine that this individual is so good at performing this task of interpreting the question symbols that enter the Chinese room with the rulebook, identifying and putting the symbols that represent the answers to the questions out of the Chinese room, that his or her answers are indistinguishable from those of a native Chinese speaker. From the point of view of someone reading the responses coming out of the Chinese room system, this individual inside the room behaves as if he understood the language through the responses he inputs outside the room, but he does not understand, he is just manipulating the symbols according to a rulebook:

> All that the computer has, as you have, is a formal program for manipulating uninterpreted Chinese symbols. To repeat, a computer has a syntax, but no semantics. The whole point of the parable of the Chinese room is to remind us of a fact that we knew all along. Understanding a language, or indeed, having mental states at all, involves more than just having a bunch of formal symbols. It involves having an interpretation, or a meaning attached to those symbols. And a digital computer, as defined, cannot have more than just formal symbols because the operation of the computer, as I said earlier, is defined in terms of its ability to implement programs. And these programs are purely formally specifiable – that is, they have no semantic content. (SEARLE, 2003, n.p.)

What if question symbols were introduced into the Chinese room system that are in the native language of the individual who lives in the room and interprets the Chinese question symbols that enter the room with the rule book in order to find the symbols that are the answers? What would be the difference between a question in Chinese and a question in his native language? As for the Chinese question symbols, the individual is merely manipulating formal symbols according to a rule book – which corresponds to the software of a computer, as mentioned in the first system in the previous pages – and does not understand the meaning of the Chinese symbols. If question symbols in the individual's native language are introduced, that individual will understand the meaning of what those questions represent – and he will probably not find the answer symbol, because they have Chinese symbols. When a Chinese question symbol is introduced and the rulebook is needed to manipulate this symbol, the work that the individual does on the question symbol is purely syntactic, because he does not understand the semantic content of what the symbol means. In other words, he only interprets that the symbol should be placed in a certain basket and that another Chinese symbol, equivalent to the answer to that symbol, should be taken out of another basket to take it out of the room. However, when a Chinese question symbol is introduced into the Chinese

room, the individual understands the semantic meaning of the question without having to use the rulebook as a resource to find its answer. In other words, the individual may be as fast as computer software to process the information of the Chinese question symbol that enters the room, but he does not actually understand what that information means. (SEARLE, 2003, n.p.)

The functionalist viewpoint usually argues that the individual in the Chinese room may not understand Chinese, but the entire system understands Chinese, and the individual in the room symbolizes part of that system, something analogous to the computer processing unit. In the sense that understanding is found in the process of inputting the question symbol, analyzing it in the rulebook, and putting out an answer symbol. Which leads us to the same objection, because the interpretation of the system is purely syntax, and there is no way for the Chinese room system to transfer this understanding from syntax to semantics. (SEARLE, 2003, n.p.)

2.3.2.1. Is it possible for a robot to learn Chinese?

If we install the software programmed for the purpose of simulating the understanding of Chinese – which is mentioned as the first system in the previous pages – into a robot. And this robot were to move around and interact with the world through the software that was installed. Isn't this reason enough to demonstrate that the robot understands Chinese? If the robot simulates understanding through software, this understanding will only happen in a purely formal context; it is still necessary for the robot to understand the meaning of the symbols. As long as its understanding is reduced to computer software, there is no way to connect any meaning with the algorithms of the programming. Even if this robot were to interact with the world, it would not understand the context of the meanings that are not part of its programming. (SEARLE, 2003, n.p.)

In some sense, we are all machines, assuming that the definition of a machine is a physical system capable of performing certain types of operations. Brains fit the definition of a machine, and therefore there are machines that think. If we associate the brain, by analogy, with the internal hardware of a robot, is it possible for that robot to understand Chinese? Or for it to express desires, volitions, and beliefs as it interacts with the world? Or, better yet, can a man-made machine possess mental states?

Well, once again, it depends on the kind of artefact. Suppose we designed a machine

> that was molecule-for-molecule indistinguishable from a human being. Well then, if you can duplicate the causes, you can presumably duplicate the effects. So once again, the answer to that question is, in principle at least, trivially yes. If you could build a machine that had the same structure as a human being, then presumably that machine would be able to think. (SEARLE, 2003, n.p.)

From a purely formal point of view, if any physical system can be described as a digital computer, any system can be described as implementing computer software – as is the case with the example of the Chinese room or the example of the thermostat. Can a digital computer be programmed to understand Chinese? No, because its programming is defined in terms of syntax – programming language – and understanding Chinese is more than manipulating symbols according to a rulebook or following commands previously established in the programming language; understanding Chinese implies understanding semantic contents that have meaning. In the same way, mental states, that is, consciousness, thoughts, feelings, emotions and desires, need something more than syntax; they need semantic contents. The main aspect of this question consists in admitting that simulating software is not the same thing as having mental states: "The key distinction here is between duplication and simulation. And no simulation by itself ever constitutes duplication." (SEARLE, 2003, n.p.)

The simulation of computer software is not actually something real. For example, if we simulate the sensation of water in our eyes, that does not mean that any part of the hardware responsible for simulating the organs of vision will get wet. In fact, why would a simulation of understanding Chinese actually have mental phenomena? Functionalists believe, in general terms, that the mind – and, consequently, understanding – is not a product of biological processes, but rather something purely formal. The argument of the fourth Chinese man ends with four conclusions that present themselves as ontological conditions for it to be possible to duplicate the human brain with the same effects in a machine. (SEARLE, 2003, n.p.)

2.3.2.2. Four elementary conditions for machines to have mental phenomena

The four conclusions are presented as ontological conditions for the possibility of reproducing the human brain in an artifact at the level at which it possesses mental states. They arise as a response to the functionalist view that any artifact is capable of possessing mental states if this artifact is capable of processing information through input data and output data. Searle will demonstrate that yes, as long as this artifact has a physical structure analogous to the brain, this artifact can possess different properties as long as these properties

have the same powers of mental causation. (SEARLE, 2003, n.p.)

Brains cause minds, which means that they have the capacity to cause mental processes, and these mental processes are macro effects derived from micro biological properties that occur within the brain. Computer software, on the other hand, is defined in a purely formal context – in its programming language – and does not have the same capacity for causation as the brain. Computer software exists in the universe of syntax, but it alone is not sufficient for semantics. Semantics, in turn, requires mental contents, and there is no way to unite the syntax necessary for the construction of computer software with mental content. Minds caused by brains have mental states, and these states have semantic contents that are about things that exist in the world. Computer software has no way to absorb this semantic content:

> CONCLUSION 1. *No computer program by itself is sufficient to give a system a mind. Programs, in short, are not minds, and they are not by themselves sufficient for having minds.* (SEARLE, 2003, n.p.)

This means that the goal of creating mental states – such as understanding – by programming computer software fails because there is no way for the programming language to absorb the semantic content of the states of things it interacts with. A simulation will never be able to duplicate the effects of the brain, and this has nothing to do with the state of technology or the complexity of software design. Causing a mind involves more than programming software with a programming language: "CONCLUSION 2. *The way that brain functions cause minds cannot be solely in virtue of running a computer program*." (SEARLE, 2003, n.p.)

As we have discussed, brains cause minds and computer software does not have this capacity to cause minds because its simulation is not capable of interacting with and absorbing the semantic content of the world. The way in which brains cause mental states is not analogous to the simulation of computer software, and this is because the brain causes mental states at a macro level from properties of the brain at a micro level, while computer software is programmed to process the information from a given input data with the aim of providing an output data. This means that mental states are not reduced to the logical-formal capacity of the brain, but also to the brain's capacity to absorb the semantic content of the environment: "CONCLUSION 3. *Anything else that caused minds would have to have causal powers at least equivalent to those of the brain.*" (SEARLE, 2003, n.p.)

For a system – an artifact – to be able to cause mental states, it needs the means to

reproduce the brain properties that cause mental states at a micro level. Thus, if a system can reproduce these brain properties in an analogous way, but with completely different devices to reproduce these same properties. In the case of the brain, these are the chemical and biochemical characteristics necessary for the causation of mental states. If the system can reproduce these micro characteristics, mental states at a macro level will occur. The devices for the system to reproduce must have a symbiotic relationship with the brain properties necessary to cause mental states. To build a system that has mental states, we must have a structure as powerful as the brain to produce these mental states:

> CONCLUSION 4. *For any artefact that we might build which had mental states equivalent to human mental states, the implementation of a computer program would not by itself be sufficient. Rather the artefact would have to have powers equivalent to the powers of the human brain.* (SEARLE, 2003, n.p.)

Therefore, for a system – an artifact – to be able to cause mental states, it needs a physical structure in symbiosis with the brain. Brains cause minds, that is, their brain properties at a micro level – such as chemical and biochemical characteristics – cause mental states that occur at a macro level. Computer software in itself is not capable of causing mental states because it does not have the brain properties necessary at a micro level to cause mental states; its programming, however refined it may be, only exists in the universe of syntax. Minds caused by brains are capable of relating to the semantic content of what exists in the world; software merely simulates a mental state – such as understanding – according to its programming language, and this simulation cannot relate to the semantic content, only provide responses according to what is programmed in its configuration. For a system – an artifact – to be able to cause mental states, it needs to have a causative capacity as powerful as that of the brain, and this means that it has devices analogous to the brain properties that constitute mental states. Thus, mental states, mental causation, consciousness, and intentionality are derived from biological processes that occur in the brain at the micro level. (SEARLE, 2003, n.p.)

2.4. Mind, consciousness and mental states

This section aims to define what mental states are, what the mind is, and what the nature of consciousness is. We saw at the beginning of this chapter that biological naturalism is the approach that seeks to define the mind as a product of the brain, that is, the mind is a

macro representation caused by the brain from its brain properties at a micro level. The mind is not a non-physical substance that does not have causal relationships with the brain, but it is a process that occurs within the brain, just as digestion is a process of the digestive system. We can say that in the same way that properties at a micro level cause digestion at a macro level in the digestive system, this same causal relationship occurs in the relationship between mind and brain. The difference is that we are referring to distinct properties with distinct functions in our organism, but the process of causation occurs in an analogous way. (SEARLE, 2003, n.p.)

The mind is not a non-physical substance, that is, it is not a formal property that is outside the material world, like the programming of a computer software is. It is a process caused by the brain and through it we have consciousness, intentionality, desires, beliefs, volitions. The mind has the capacity to interact with and absorb the semantic content of things that exist in the world and this goes beyond purely formal characteristics, because these properties in themselves do not absorb semantic content. Therefore, for an artifact to be able to cause a mind, with all its effects, it is necessary that it has a micro-level structure with the same powers that the physical structure of the brain has. We emphasize here that the capacity to process information – which is a purely formal property – is not the same thing as having a mind, being conscious or having mental states:

> Let's abandon the idea that there is a computer program between the mind and the brain. Think of the mind and mental processes as biological phenomena which are as biologically based as growth or digestion or the secretion of bile. (SEARLE, 2003, n.p.)

If the mind is a biological phenomenon, its primary aspect is consciousness. Consciousness can be defined as a property in which mental states occur and relate to things in the world. It emerges from the cerebral properties of our brain and its manifestation cannot be reduced to the physical properties that constitute it, because when it emerges it possesses internal, qualitative and subjective mental properties without which it could not be defined. These mental properties cannot be explained solely in physical properties and constitute the mental activity of an individual:

> By “consciousness” I mean those states of sentience or awareness that typically begin when we wake up in the morning from a dreamless sleep and continue throughout the day until we fall asleep again. (SEARLE, 1998, p. 40-1)

Consciousness has a large number of forms and mental states. Its forms consist of

desires, beliefs, affects and judgments and these forms configure part of the conscious experience so that they make up, in part, the subjective experience of an individual – as we saw in **2.3. Chinese Room argument**, the semantic content of what exists in the world configures another part of our subjective experience. Mental states have three intrinsic characteristics, which are: (i) internal, (ii) qualitative and (iii) subjective. (SEARLE, 2002b, p. 36-44)

Mental states are (i) internal because they occur within the brain and necessarily occur within a system. In this sense, the mental states that are in my consciousness depend on neurophysiological reactions in my brain structure. Mental states are also internal in a context in which a given mental state exists as a sequence of these states. They are closely related to other mental states and this relationship constitutes a system, this system is always correlated with things that exist in the external world. Therefore, if an individual suffers from stomach pain, for example, this action in itself is an event in the world that has a reflection in his body, the individual's brain, in turn carries out neurophysiological reactions in specific regions of his structure and these reactions neurophysiological functions are manifested as, by for example, the mental states of pain, colic and attrition. These mental states, in turn, are part of a system that represents events of having suffered from stomach pain. (SEARLE, 2002b, p. 41-2)

Mental states are (ii) qualitative in the sense that they have a subjective way of being felt, thus: "(...) for each conscious state there is a certain way that it feels, there is a certain qualitative character to it." (SEARLE, 1998, p. 42) Let's return to the example of pain, each mental state that he feels, when suffering from stomach pain, consists of a different way of feeling, they can appear simultaneously, some of them can cease to exist and reappear one as a consequence of the other. (SEARLE, 2002b, p. 40-1)

Os estados mentais são (iii) subjetivos porque são sempre experimentados por um algum indivíduo. Essa característica gera uma ontologia em primeira pessoa em que os estados mentais de um indivíduo são acessíveis única e exclusivamente por esse próprio indivíduo. Nessa óptica, se retornarmos novamente ao exemplo da dor, ela é um estado mental que pode ser única e exclusivamente experimentada pelo próprio indivíduo que sofre de dores no estômago, ou, nas palavras de Searle (2000): "It is not just how I know about them, (...) each of my conscious states exists only as the state it is because it is experienced by me, the subject." (SEARLE, 1998, p. 43)

Searle (1998) denies the point of view of **1.6. Eliminative matereialism** which, in turn, defends the point of view that concepts such as (iii) subjectivity should be abandoned

because they do not correspond to reality. In this point of view, non-physical properties, such as subjectivity, prevent the possibility of consciousness being an object of scientific study. Only that which is seen as objective can be an object of study in science, since objective properties have a mode of existence that does not depend on subjective experience:

> In what is, perharps, the most commonsense notionof "subjectivity", and of the distinction between "subjective" and "objective", a statementis considered objective if it can be known to be true or false independently of the feelings, attitudes, and prejudices of people. A statement is epistemically subjective if its truth depends essentially on the attitudesand feelings of observers. (SEARLE, 1998. p. 44)

Its denial is based on the fallacy of ambiguity with the possible meanings of words: subjective and objective. For science, only objective statements have a valid epistemological meaning, because they define the mode of existence of a given phenomenon or thing without the need for it to be experienced by a subject. This implies saying that a given phenomenon or thing has a certain mode of existence independently of the existence of observers. A mode of existence has an ontological meaning, because the mode of existence refers to the identity of a given phenomenon in the world:

> [...] the persistence of these errors is not only in the physical tradition, but also in the scientific tradition. In other words, it lies in the way in which, over the last few centuries, philosophy and science have been dealing with these questions of nature. This treatment is based on the conception that everything that exists in nature is necessarily objective and, so to speak, is impossible not to be attainable by any observer and analyzed in the third person. It follows, therefore, that due to the objectivity of reality, access must be empirical, that is, through experimentation. Therefore, if it is postulated that mental phenomena are irreducible to physical processes, not being intelligible, and therefore not being part of nature, I do not perceive reality. Otherwise, assuming that mental phenomena are reducible to physical processes, then they are necessarily observable, thus becoming the answer to the question of how it is possible to observe other minds through the behavior of the body.[26] (FAVRETO e PINHEIRO, 2019, p. 783-4)

A given phenomenon or thing also has a subjective mode of existence, which is its existence for the purpose of being experienced by some subject. The fallacy of this argument lies in assuming that mental states have an ontologically subjective mode of existence and this

[26] In original: [...] a persistência desses erros está na tradição não só física, mas também científica. Ou seja, reside na maneira como, ao longo dos últimos séculos, a filosofia e a ciência vêm tratando essas questões da natureza. Tal tratamento fundamenta-se na concepção de que tudo o que existe na natureza é necessariamente objetivo e, por assim dizer, é impossível de não ser alcançável por qualquer observador e analisado em terceira pessoa. Segue- se, portanto, que em razão da objetividade da realidade, o acesso deve ser empírico, isto é, através de experimentações. Sendo assim, se se postula que fenômenos mentais são irredutíveis a processos físicos, não sendo inteligíveis, logo, não fazendo parte da natureza, não percentenco a realidade. Caso o contrário, admitindo-se que fenômenos mentais são redutíveis a processos físicos, então, necessariamente eles são observáveis, tornando-se, portanto, a resposta à questão de como é possível observar outras mentes através do comportamento do corpo. (FAVRETO e PINHEIRO, 2019, p. 783-4)

characteristic prevents them from serving as an object of study in science. The fact that consciousness and mental states have a (iii) subjective character does not prevent science from knowing the nature of consciousness and mental states in an objective way. (SEARLE, 1998, p. 44-5)

But how is it possible for mental states to be described objectively if, despite being caused by neurophysiological reactions of the brain, they have a subjective – non-physical – nature? How can meaningless physical particles be defined objectively and make sense to our – subjective – consciousness? What is the relationship between the brain – objective – and the mind – subjective – which, initially, seem to be so distinct? (SEARLE, 2003, n.p.)

2.4.1. The Mind-Body Problem

There are four problems for the mind to be interpreted objectively: the first is how consciousness, caused by physical properties, can have non-physical elements that constitute it; the second is intentionality – which will be presented in the chapter **3. Intentionality, Network and Background** – defined as the way in which our mental states refer to and are directed towards things or objects that exist in the world; the third is the intrinsic (iii) subjective characteristic of mental states, such a characteristic makes mental states a unique and exclusive experience to the individual who possesses them; and the fourth problem is that of mental causation, the relationship between my consciousness – subjective and non-physical – and my body – physical. Thus, what is the nature of consciousness? How can a property – consciousness – that arises from my brain refer to physical objects and things? Can the sensation of pain that an individual feels when suffering from stomach pain be shared or is it unique and exclusive to that individual? How can this same individual feel stomach pain if the pains occur in his body, does he feel them in his mind? And, conversely, how can I move my body towards an object if what directs this action is my mind? How can a world constituted solely and exclusively of physical properties have conscious systems?

> In the case of consciousness and the mind-body problem, we were told that we had to choose between dualism, which insists on the irreducibility of the mental, and materialism, which insists on the irreducibility of the mental and, the materialism, which insists that consciousness must be reducible, and hence eliminable, in favor of some purely physical existence of the mind. (SEARLE, 1998, p. 49)

Let us return once again to the pain argument. When, for example, an individual suffers from stomach pain, his or her brain transmits signals from the pain region of his or her

body to his or her consciousness. The experience of pain is caused by a series of events; these events pass through our nerve endings and are transmitted from our brain to our consciousness. Pain is, broadly speaking, a mental state that occurs in the brain and central nervous system. In one sense, the materialist conception states that pain is a processing state or behavioral disposition. In contrast, the dualist conception states that each individual has a consciousness that is not part of our biological activity and that what we feel through consciousness is unique and exclusive to each individual's subjective experience. SEARLE's (1998) biological naturalism position states that pain, in general, is a mental state that is (i) internal, (ii) qualitative, and (iii) subjective. (SEARLE, 2002b, p. 46-7, 1998, p. 47-9)

When we abandon the classical positions – materialism and dualism – to resolve the mind-body problem, we obtain the fact that consciousness is a biological process that occurs within the brain, which means that it is, initially, a material phenomenon. At the same time, it has aspects that cannot be described in physical terms, such as its (i) interiority and (iii) subjectivity, which configures a first-person ontology where consciousness occurs at a higher level of the brain's structure. The idea of being a naturalist is that the mind is part of nature and biological because its causal explanation occurs through neurological phenomena and biochemical reactions in the brain. The mind-body problem, in this conception, is eliminated because biological naturalism understands the mind as a biological phenomenon comparable to meiosis or digestion:

> Consicousness is a biological process that occurs in the brain in the way that digestion is a biological process that occurs in the stomach and the rest of the digestive tract. [...] Consicousness has a firts-person ontology and so cannot be material, because material things and processes all have a third-person objective ontology. (SEARLE, 1998, p. 51)

We can affirm that consciousness is the primary aspect of the mind, it consists of (i) internal, (ii) qualitative and (iii) subjective mental states and also has a first-person ontology in the sense that the experiences that occur in consciousness are accessible solely and exclusively by the possessor of consciousness. Due to this first-person ontology, it is incapable of being reduced to its physical properties that constitute it or, in the words of Elemar Kleber Favreto (2019) and Ulisson da Silva Pinheiro (2019): "(...) the ontology of consciousness is subjective, therefore, irreducible to physical processes."[27] (FAVRETO and PINHEIRO, 2019, p. 787) It is a biological phenomenon, analogous to the digestion process.

[27] In oroginal: "(...) a ontologia da consciência é subjetiva, portanto, irredutível aos processos físicos." (FAVRETO e PINHEIRO, 2019 , p. 787)

This biological process occurs at a lower level through neurophysiological reactions in neuronal synapses and from these biological processes emerge consciousness, mental states, intentionality, beliefs, desires and volitions at a higher level of the brain system. As we saw in **2.3. Chinese Room argument**, para que possamos construir um sistema análogo ao cérebro, isto é, que também cause e tenha consciência e estados mentais, é necessário que esse sistema possua os mesmos poderes causais que o sistema cerebral possui. (SEARLE, 1998, p. 44-7)

Biological naturalism's solution to the mind-body problem is therefore reductionist and emergent. Reductionist because it reduces the mind to a cause of the neurophysiological properties of the brain, that is, of the brain's synapses. Emergent because consciousness emerges from this mental causation and, once emerged, cannot be reduced to the very physical properties that constitute it. (SEARLE, 2002a, p. 111)

2.4.1.1. The irreducibility of consciousness

Emergent properties are intrinsic characteristics that manifest themselves in a system. A system is understood as any physical or non-physical organism that is made up of a set of elements a, b, c, etc. Two examples; first, the (d) digestive system is composed of the set of elements: mouth, pharynx, esophagus, stomach, small intestine, large intestine, and rectum. The emergent property of the digestive system is digestion. It emerges from the elements of the set themselves, and there is no single element that defines it, because it is a process that depends on all the elements to occur. There is no single element responsible for it. Second, the (c) brain system is composed of the set of elements: cerebral cortex, cingulate sulcus, corpus callosum, diencephalon, anterior commissure, temporal lobe, midbrain, pons, medulla, and cerebellum. The emergent property of the brain system is the mind, it emerges from the elements of the system itself and there is no one element that defines it, since it is caused by the elements of the system it no longer depends on all of them to exist. (SEARLE, 2002a, p. 111-2)

The difference between both examples is that, in the first example (d) the emergent property is defined by the process involving the set of elements of the system; in the second example (c), the emergent property is not completely defined by the process involving the set of elements of the system and this is because its subjective character is not capable of being defined by the set of elements that caused it. In this way, some characteristics of a system that may not necessarily be deduced from the set of elements that constitute it and other characteristics are explained in terms of interactions between the set of elements:

> [...] some other system features cannot be figured out just from the composition of the elements and environmental relations; they have to be explained in terms of the causal interactions among the elements. Let's call these "causally emergent system features." (SEARLE, 2002a, p. 111)

Consciousness, in this sense, is a causally emergent property because it is caused by the relations of neuronal synapses and, after emerging, it no longer depends on those neuronal relations that were the product of its cause. This causal emergence capable of generating the (c) mind or (d) digestion, we will call "emergent1", while there is a second form of emergence that arises from the processes that carried out the causal emergence, we will call these processes "emergent2". A characteristic such as (c) mental states is "emergent2" if, and only if, it is derived from consciousness that is "emergent1". Therefore, mental states have causal capacities that are not reduced to the set of elements that caused them, the point here is that consciousness is autonomous in relation to the relations of neuronal synapses that caused it:

> Consciousness has its own way of existing, and this way is subjective, that is, its ontology is different from the ontology of physical processes, which are objective. In the ontology of physical processes, it is possible for an observer to trace input and output lines and processes of mental causation. Thus, the 'how the mind arises' is nothing more than an epistemic question. Therefore, there is a third-person observation of objective phenomena. However, the subjective ontology of conscious processes does not allow an observer to trace any objective path, since conscious processes are in the first person, that is, it is only sensitive in the subject that manifests itself.[28] (FAVRETO e PINHEIRO, 2019, p. 791)

It is a characteristic of reductionism in science to reduce something to nothing except some other set of things, in the sense that the meaning that a thing represents is nothing except the set of things that constitute it. This definition of nothing and except is the central characteristic of reductionism. There are several forms of reductionism and all of them have as their central characteristic the relationship between nothing and except. Let us look, in general terms, at some forms of reductionism: an ontological reduction demonstrates that an object is nothing except the very elements that constitute it; an ontological reduction of properties demonstrates that a given property is nothing except the cause of its own

[28] In general: A consciência possui seu modo próprio de existir, e esse modo é subjetivo, ou seja, sua ontologia é diferente da ontologia dos processos físicos, que são objetivos. Na ontologia dos processos físicos é possível a um observador traçar linhas de input e output e processos de causação mental. Assim, o 'como surge' a mente é nada mais do que uma questão epistêmica. Logo, há uma observação em terceira pessoa de fenômenos objetivos. Contudo, a ontologia subjetiva dos processos conscientes não permite a um observador traçar qualquer caminho objetivo, pois os processos conscientes são em primeira pessoa, ou seja, ela só é sensível no sujeito que se manifesta. (FAVRETO e PINHEIRO, 2019, p. 791)

manifestation; a theoretical reduction demonstrates a relationship of theories in the sense that the laws of a given theory can be nothing except the theory from which it was reduced; a logical or definitional reduction demonstrates that sentences that refer to one type of entity are nothing except sentences that refer to another set of entities and a causal reduction which is a relation between two phenomena that may have causal capacities in which the existence of both phenomena in question is demonstrated, this existence is demonstrated because the causal capacities of the caused phenomenon can be completely reduced to the effects of the reducing phenomenon, or, in the jargon of reductionism, that the caused phenomenon is reduced to nothing except the effects of the reducing phenomenon. (SEARLE, 2002a, p. 112-5)

Causal and ontological reductionisms are correlated in such a way that a causal reductionism, for example, implies a form of ontological reductionism. If causal reductionism is successful: "(...) we simply redefine the expression that denotes the reduced phenomena in such a way that the phenomena in question can now be identified with their causes." (SEARLE, 2002a, p. 115) Let us take as an example (e) the subjective experience of perceiving red, which can be defined as the act of seeing red by normal individuals under normal conditions. By performing a causal reduction in this example, the action of the subject of the phenomenon in question is eliminated. If we exclude the individual's subjective experience of the act of seeing red, we are left with the physical facts that the sensation of a color is a chromatic experience caused by a certain emission of photons, and red is an emission of photons of 600 nanometers. Therefore, any individual who has the subjective experience of seeing normally under normal conditions has a chromatic experience of the emission of photons of 600 nanometers. The central problem with causal reduction is that it does not apply to phenomena such as (c) consciousness, because if we exclude the intrinsic characteristics of the phenomenon of consciousness, then it is impossible for consciousness to be autonomous in relation to the brain. We can then state that consciousness is irreducible to its physical causes:

> However, even if biological naturalism is interpreted in this way, in which the identity between consciousness (macro level) and brain activity (micro level) is avoided, the theory remains in difficulty, because the way in which Searle conceives of the causal capacities of consciousness is not so easily harmonized with ontological irreducibility (because it seems to lead to reductionism). By arguing that consciousness is, at the same time, causally reducible and ontologically irreducible to brain processes, Searle seems to be trying to articulate a form of non-reductive physicalism [...][29] (PRATA e LIMA FILHO, 2013, p. 197)

[29] In original: Porém, mesmo se o naturalismo biológico é interpretado dessa maneira, em que a identidade entre

Why is it impossible to make a causal reduction with the phenomenon of consciousness? Or, because consciousness is by nature irreducible to physical phenomena? This brings us back to the argument of the fallacy of ambiguity and the confusion between the possible meanings of the concepts of subjective and objective – addressed at the end of the first part of **2.4. Mind, consciousness and mental states**. We cannot reduce (c) consciousness to its physical causes, that is, the neurophysiological synapse relationships of the brain because it has intrinsic non-physical characteristics – including subjectivity. As discussed in **1.3.2. What is it like to be in another organism's point of view? Or "what is it like to be a bat"?,** with Nagel (1974), the subjective experience of an individual is something unique and exclusive to him/her, so we can at most know things about him/her, but we can never possess his/her subjective experience. In the example already seen, we can at most understand how bats perceive the world, through their echolocation, but it is impossible for us to perceive the world with the subjective experience of a bat. Consequently, we cannot reduce the subjective (and) experience of perceiving red, but we know that objectively red is an emission of photons at 600 nanometers. Let us recall the second version of the knowledge argument, discussed in **1.3.1. Epiphenomenalism: qualia as an ontological element of consciousness**, with Jackson (1982), Mary is a neurophysiologist who studies the neurophysiological processes involved in color interpretation, but she has lived her entire life in a black and white room. Mary understands the neurophysiological process involved in the perception of red, even though she has never had the subjective experience of what red is. (SEARLE, 2002a, p. 115-8)

In this sense, if we perform a causal reduction in mental states such as pain, it consists of the fact that it is caused by neurobiological processes in the thalamus, motor system, among other regions. Its subjective fact is a subjective experience of a feeling of discomfort, but this subjective experience is always irreducible to the very sensation of the individual who feels it. If we causally reduce the mental state of pain to nothing, except the neurophysiological synapses caused in the thalamus and other regions of the brain; the essential characteristics of pain are excluded, that is, the subjective experience of the person who feels it:

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consciência (nível macro) e atividade cerebral (nível micro) é evitada, a teoria permanece em dificuldades, pois o modo como Searle concebe as capacidades causais da consciência não é tão facilmente harmonizável com a irredutibilidade ontológica (porque parece conduzir a um reducionismo). Ao defender que a consciência é, a um só tempo, causalmente redutível e ontologicamente irredutível aos processos cerebrais, Searle parece estar tentando articular uma forma de fisicalismo não-redutivo [...] (PRATA e LIMA FILHO, 2013, p. 197)

> No description of the third-person, objective, physiological facts would convey the subjective, first-person character of the pain, simply because the first-person features are different from the third-person features. (SEARLE, 2002a, p. 117)

According to Nagel (1974), there is a duality between the objective characteristics – the facts in the third person – and their subjective characteristics – their subjective experience – in relation to mental states. According to Jackson (1982), even if someone had full knowledge about a certain mental state, this does not mean that you have that mental state. This means stating that my knowledge about a mental state – such as the mental state of pain – is different from the knowledge that you have of that mental state. (SEARLE, 2002a, p. 116-7)

To understand why consciousness is irreducible, we must understand the reduction of other properties such as (e) color. When we reduce a property such as color, this is a relationship between subjective appearance – perceiving red – and objective knowledge – emission of 600 nanometer photons. The central idea of a reduction is to redefine a phenomenon according to the physical causes that produce it and exclude appearance from its definition. Therefore, the objective knowledge of red is that its phenomenon consists of the refraction of light emission at 600 nanometers. The problem with promoting this same reduction analysis with mental states of (c) consciousness, such as pain, is that it is ontologically constituted by physical facts – neural synapses in the thalamus, nervous system and other regions of the brain – and mental facts – the subjective experience of the person feeling the pain. (SEARLE, 2002a, p. 118-20)

What is necessary for the development of a science are not the subjective aspects, but the physical causes that produce a given phenomenon in question. Once a causal reduction is achieved, we then obtain an ontological reduction capable of reformulating the definition of a given phenomenon in question. These reductions have in common the fact that the phenomenon is defined in objective terms – reality – and not in subjective terms – appearances: "*Where appearance is concerned we cannot make the appearance-reality distinction because the appearance is reality*." (SEARLE, 2002a, p. 122)

Consciousness, therefore, is excluded from the possibility of a causal reduction, because it is ontologically constituted by physical properties – objective – and mental properties – subjective. In this context, it becomes impossible to reduce it causally to its set of physical facts. We can then say that the mind has a supervenient relationship with the mental, it is something that happens after the physical facts:

> [...] mental states are totally dependent on corresponding neurophysiological states in a sense that a difference in mental states would necessarily involve a corresponding difference in neurophysiological states. (SEARLE, 2002a, p. 124)

If I feel pain or perceive a color, first there is a change in the neurophysiological states of my brain, and only then there is a corresponding change in my mental states. This supervenience relation occurs because the set of physical facts – neuronal synapse firings – is causally sufficient but not necessary for the causation of corresponding mental states. As we saw in **2.3.2. Four elementary conditions for machines to have mental phenomena**, any artifact can produce mental states, as long as it has powers analogous to the brain to cause these effects. If we could then reproduce a brain with a technological artifact, to the point that every molecule was reproduced and the physical structure of that artifact guaranteed that it was possible to cause mental states. Then, the technological artifact will effect mental states in a supervenience relation. (SEARLE, 2002a, p. 124-5)

When we characterize mental phenomena at the macro level as effects of physical phenomena at the micro level, this causation occurs from the bottom up, in the sense that first the causation occurs with the set of physical facts at the micro level and only then do the mental effects arise as effects of these causes. If we take this fact into account, then the supervenience relation loses its meaning, with the risk of the conception itself becoming an epiphenomenalism – you can see **1.3. Property dualism, qualia states and intentionality** – in which mental states are on a higher level than physical states. (SEARLE, 2002a, p. 125-6)

2.4.1.2. Is biological naturalism a form of epiphenomenalism?

Epiphenomenalism is the approach that consists of admitting that consciousness has a form of supervenience with the brain, in the sense that it is a phenomenon that arises after and is above its causal properties and only arises after the brain reaches a certain type of complexity. Consciousness is caused by brain processes, but it has no causal effect on these processes. Let us now use the intentional mental state, such as the act of raising my hand to grab a cup of tea, and interpret it from the perspective of epiphenomenalism. The command that intends the movement of my hand towards the cup of tea is the effect of neural relations between the brain and the nervous system. According to epiphenomenalism, consciousness has no causal role in this relationship:

> So, for example, if you raise your arm, you will think that your conscious decision caused your arm to go up, but in fact we all know that thre is a detailed causal story to be told at the level of neurons in the motor cortex, neurotransmitters, especially acetylcholene, axon endplates, muscle fibers, and all the rest of the neurophysiology that is quite sufficient to give a complete causal account of the movement of your arm independent of any reference to consciousness. (SEARLE, 1998, p. 58)

The biological naturalist viewpoint consists in admitting that there is a mutual causal relationship between mental and physical properties in the intentional movement of moving my hand towards the teacup. Consciousness ceases to be useless in this relationship and consciousness can affect the body by intending a movement – in the case of picking up the teacup – and, conversely, the body can affect the mind – in the case of feeling pain. This conception has no correlation with interactionism or any other form of property dualism, because it admits that the mind and consciousness, although autonomous in relation to the physical properties that produce it, are biological phenomena. (SEARLE, 1998, p. 58-9)

The mistakes of epiphenomenalism consist in admitting that mental phenomena are not of a biological nature. Since they do not have a physical – biological – nature, mental phenomena have no causal action on the biological phenomena of the body. The causality of the biological phenomena of the body, therefore, can only be described in biological terms, while mental phenomena do not have a causal relationship because they do not have a biological nature. Thus, mental states are epiphenomena that do not have a causal relationship with our behavior. (SEARLE, 1998, p. 59-60)

Biological naturalism is therefore a kind of combination of property dualism and functionalism. It admits that consciousness is a biological – physical – phenomenon that has intrinsic mental – non-physical – characteristics. Furthermore, it considers consciousness to be a macro-level process of micro-level causations in the brain system. We have a form of non-reductive physicalism; physicalism because it admits that the mind is a biological product of the brain and non-reductive because it admits that, once consciousness is caused, it cannot in itself be reduced to the physical phenomena that caused it. (PRATA e LIMA FILHO, 2013, p. 195-8)

2.5. General aspects of consciousness

Consciousness is the primary aspect of the phenomenon of mind. It is the phenomenon that accompanies us throughout our waking life, from the moment we wake up until the moment we go to sleep again. According to Searle (2002b): “(...) Consciousness consists of

inner, qualitative, subjective states and processes of sentience or awareness." (SEARLE, 2002b, p. 38) It is a macro-level characteristic caused by micro-level neuronal processes. (SEARLE, 2002b, p. 38)

There are elements that are the focus of attention and others that are on the periphery of consciousness. This means that "paying attention" is not the same thing as being conscious. Everything that is the object of our attention occupies only the focus of attention of our consciousness, but there are always elements in the background such as desires, intentions, beliefs, volitions, among others; and consciousness encompasses both elements. (SEARLE, 2002b, p. 44)

There is a distinction between consciousness and self-awareness, in that "paying attention" and "being aware" are not the same thing. Being aware of oneself is different from having a sense experience, that is, hearing a motorcycle honk does not require "being aware." (SEARLE, 2002b, p. 43-4)

Neural processes cause consciousness, its nature is not that of a substance or entity, but a higher-level characteristic of the brain – or system. Consciousness is a private phenomenon and is not reduced to its physical causes, that is, it has a subjective ontological nature and cannot be understood only through physical properties. Its subjective structure is constituted by three intrinsic characteristics, namely (i) unity, (ii) quality and (iii) subjectivity and other minor characteristics, namely (iv) intentionality, (v) the distinction between the brain and the periphery of consciousness; (vi) the gestalt structure of conscious experience, (vii) familiarity and (viii) mood. We will now present an overview of each of these intrinsic and minor characteristics. (SEARLE, 2002b, p. 44-6)

2.5.1. Intrinsic characteristics: (i) unity, (ii) quality and (iii) subjectivity

All experiences throughout life are part of an internal unified field, so that (i) unity has an implicit relationship with (ii) quality and (iii) subjectivity. Therefore, (i) unity arises from (iii) subjectivity and (ii) quality, because they are intrinsic characteristics of the phenomenon of consciousness. My conscious states may be divided between the periphery and the focus of attention of consciousness, but they occur in a (i) unified way for my consciousness. In this way, just as the vision system integrates all visual experience into a single unified visual perception, the brain unites all our different stimuli into a single conscious experience. (SEARLE, 2002b, p. 7-11)

In our consciousness we have an (i) instantaneous unity and an organized unification

of conscious sequences. In this organized unification, recent or iconic memory is found in a non-pathological way, that is, in such a way that the conscious sequence of memory occurs in an organized way. Organized unification is essential for the healthy functioning of the conscious organism. The manifestation of consciousness, therefore, consists of a unified conscious experience in which all experiences are unified in a single field of consciousness. In this conscious field, we find recent memory, which is the organization of our short-term experience, and our iconic memory, where our medium and long-term memory is located. Conscious memory is presented horizontally, while iconic memory is presented vertically. (SEARLE, 2002b p. 7-11)

The conception of (i) unity has the same problem described in the fallacy of ambiguity between subjective and objective – addressed in 2.4. Mind, consciousness and mental states. Among the problems is the ontological one, which consists of how to affirm the existence of the unity of my consciousness if it cannot be described from an objective point of view. The idea of non-reduction of the mind – also addressed in this chapter – is a possible way out of this problem. (SEARLE, 2002b, p. 41-4)

Every conscious state has its own qualitative intention (ii) – qualia – this qualitative intention defines the quality of a conscious state, such as: smell, sound, pigmentation, among others. Every conscious experience produces an impression, such as, for example: “the experience of seeing red” or the experience of being a bat”. Each impression of conscious experience is something unique and exclusive to the individual who has these conscious experiences. (SEARLE, 2002b, p. 40-1)

What is the nature of consciousness and qualia are separate issues, but the definitions of consciousness and qualia coexist in the same theoretical field. Qualia or qualities are intrinsic features of conscious states. Some property dualists, such as Jacskon (1982), believe that qualia are nonphysical features of perceptual experience, as Searle (2002b) points out:

> Some people think that qualia are characteristic of only perceptualexperiences, such as seeing colors and having sensations such as pain, but thatthere is no wualitative character to thinking. (SEARLE, 2002b, p. 40)

Thought and conscious states, according to Searle (2002b), have their own qualitative impression and are experienced (iii) subjectively by the individual who possesses them. Thus, the “experience of seeing red” or the “experience of being a bat” is an intrinsic characteristic of the individual who experiences the qualitative impressions of each conscious state and, of course, the “experience of being a bat” is a characteristic exclusive to bats, just as the

“experience of seeing red” is a characteristic exclusive to those who are not colorblind. (SEARLE, 2002b, p. 40-2)

(iii) Subjectivity is the essential characteristic of consciousness. Conscious states exist only in view of the subjective experience of an agent. Thus, for every event to have an impression of quality there must also be an individual who experiences that event. Even if two individuals subjectively experience the same event, with the same set of facts, even if the experience of each of these individuals is identical, each symbolic experience of the experience of that event exists only for the individual who experiences it, and the experiences of one individual cannot be shared by others. (SEARLE, 2002b, p. 40-1)

In effect, subjectivity is the characteristic that makes an individual's subjective experiences unique and exclusive to that individual. It is a mental property that makes the phenomenon of the mind irreducible to its physical causes. It is the attribute that makes each individual unique in relation to other individuals and the characteristic that makes the mind incapable of being described in purely objective terms. (SEARLE: 1998, p. 62-4, 2006a p. 115-8)

2.5.2. Other minor features: (iv) intentionality, (v) active and passive consciousness, (vi) distinction between brain and periphery of consciousness, (vii) gestalt structure of conscious experience, (viii) familiarity, (ix) humor, and (x) the sense of self

Conscious states are references to a set of facts that exist in the world. We call this reference intentionality. Conscious states have intentionality, that is, they “refer to something”, “are about something” or “are directed towards something”. Every mental phenomenon has referential content, so representing beliefs, desires and volitions is attributing intentionality to something. (SEARLE, 2002b, p. 12)

(iv) Intentionality is the characteristic of conscious states that are directed toward things and situations other than themselves. Not every intentional state is conscious; intentional states that become accessible to our consciousness are called genuine intentional states. Genuine intentional states have conditions of satisfaction in relation to the thing or situation to which they refer. Conditions of satisfaction, in turn, represent things as we would like them to be or as we intend them to be. A more detailed presentation on this topic will be presented in chapter **3. Intentionality, Network and Background**. (SEARLE, 2002b, p. 12)

In all our conscious experiences there is (v) a voluntary intentional activity and an involuntary intentional activity. In an experience of perceiving there are elements that are

active in our perception and elements that are passive. For example, when I raise my arm, there is a deliberate action of moving the arm, but it may be that an involuntary movement occurs due to a stimulus in the neuronal cortex – we will address this aspect in a more elaborate way in **3.5.1. Intentional Actions, Unintentional Actions, Prior Intention and Intention in Action**.

Everything that is not in our focus of attention is, to a greater or lesser degree, (vi) on the periphery of our consciousness. That which is on the periphery of consciousness is everything that is in the background of our focus of attention. This is the characteristic of the mind that represents an individual's attention capacity. (SEARLE, 2002b, p. 12-3)

Consciousness has a (vii) gestalt structure, that is, a characteristic of recognizing patterns in random stimuli and transforming them into conscious and coherent perceptive forms for the individual who interprets it. Based on these stimuli, we are able to recognize objects or situations in the world in question. From this characteristic of recognizing patterns arises (viii) familiarity; there are structures in the events of the world that we are able to recognize with a greater degree of familiarity than others. This level of familiarity depends on how much that pattern is in our memory. (SEARLE, 2002b, p. 13-4)

All human experiences involve (ix) mood and this presupposes emotions about something, therefore, a person's conscious states involve emotions to a greater or lesser degree. Likewise, all conscious states reach the individual in a relationship of pleasure or displeasure, but mood and pleasure do not mean the same thing: “The pleasure/unpleasure feature is not the same as mood, though of course some moods are more pleaant than others.” (Searle, 2002b, p. 45)

Finally, there is the aspect of consciousness of (x) us identifying ourselves as ourselves and as different from the other people around us. No matter how much our body changes, no matter how much our appearance changes over the years, there is always something in ourselves that remains the same. This characteristic was also addressed throughout this chapter as first-person ontology. This self as a subject that inhabits the world and perceives the things around it has characteristics that involve it such as perception, reflection, and successive psychological states that involve intention and its actions in the world. (SEARLE, 2004, p. 279-80)

2.6. Mental Causation

One of the problems left so far by Searle's philosophy of mind is the **2.4.2. The**

irreducibility of consciousness and it can be summarized in two questions: how can a property, which is generated by physical properties, have a cause other than the same physical properties that generated it? And how can conscious states cause physical effects in the real world – such as the act of moving one's arm or the sensation of pain? What we are asking here is that the physical world is causally closed by properties that are not part of it; it cannot be influenced by external causes. We will use Hume's principle of causality to better elucidate the principle of mental causation as proposed by Searle (2004).

The general idea of causality in Hume is the notion of cause and effect. We can assume that the effect is a successive action of the cause. However, the central point we want to clarify is what is the notion of cause? According to Searle (2004), there are three main factors for understanding cause from Hume's point of view: (a) priority, in which the cause must always occur before the succession of the effect; (b) contiguity in space and time, in which the cause and the effect must have a causal connection. In other words, the fact of brushing your teeth and someone ringing the doorbell are isolated effects and do not have a causal connection. On the contrary, it is the fact of brushing your teeth to wait for the effect of refreshing breath. (c) necessary connection, in which the cause and the effect must be connected in such a way that the first produces the second. The cause follows the effect. The cause needs a necessary connection with the effect. (SEARLE: 2004, p. 193-5)

The problem arises for Hume because he categorically states that there is no necessary connection between cause and effect. Using Searle's own example (2004), if (1) I touch the switch, then (2) the light turns on or off. I think there is a causal connection between (1) and (2) in which the effect of (2) happens necessarily because (1) was its cause. But, if we carry out a more careful analysis of this simple event we can see that this necessary connection does not exist. It can be said that the necessary causal connection is (3) in the passage of electricity through the cable when (1) I turn on the switch. It can also be said that the necessary causal connection is in the (4) closing of the circuit or in the (5) activation of the tungsten molecules so that there is a succession of five factors for a necessary causal connection (1)(4)(3)(5)(2). But for Hume there is no connection between cause and effect, it is we who represent with words this necessary connection in the things that exist in the world. (SEARLE: 2004 p. 194-6)

Searle (2004) points out that there is a lack of equivalence between two basic principles of causality in Hume: the principle of causation, which states that every effect must have a cause, and the principle of causality, which states that there are equal causes for equal effects. The central issue is that the effect of a cause may not be equivalent or that the effect

may not have a cause in itself. The central problem with both principles is that they are not demonstrable and that there is no way to establish a method to define them because every method presupposes these two principles:

> For it might be the case that every event had a cause though there was no consistency in what sort of effects any particular cause might have, and no consistency in what sort of causes any effect might have. And it might be the case that when there were causes and effects, like causes had like effects, even though not every event had a cause. But, says Hume, if we examine these two principles, the principle of causation and the principle of causality, we find a peculiar feature. They do not seem to be provable. They are not true by definition. That is, they are not analytic truths. So they must be synthetic empirical truths. But now, and this is the real cruncher of Hume's argument, there is no way that we could establish them by empirical methods, because any attempt to establish anything by empirical methods presupposes exactly these two principles. (SEARLE, 2004, p. 196)

The essential point is that there is no relation between (a) priority and (b) contiguity in the relation between cause and effect, that is, what we call cause and effect is nothing more than an artificial relation between words to denote things that exist in the world. We find facts that we denote as causes that are followed by other facts that we call effects that follow from the causes. This constant association between the facts that we denote as causes and successive facts that we denote as effects generates an expectation in our minds so that whenever the first fact that we denote as cause occurs, we consequently expect the subsequent fact associated with the effect. The regularity of this association gives us the association that the connection between the facts and what we denote as cause and effect is necessary, when in fact it is not. (SEARLE: 2004, p. 197- 200)

The problem with this relationship between cause and effect is that the regularity of the association in cases where the association between facts and their respective causes and effects occurs does not guarantee that the next event will occur. "It is not because the sun rises today that it will rise tomorrow," Hume would claim. This association is an expectation that we create that comes from the regularity of this association. This connection between the facts that exist in the world and their respective causes and effects is an illusion that gives us the false sensation of having found a (c) necessary connection. But this connection is an artificial relationship of words that we create in our minds and not a fact that takes place in the world:

> The existence of regularities (causality) gives us the illusion of necessary connection, and the illusion of necessary connection gives us the conviction that every event has a cause (causation). (SEARLE, 2004, p. 200)

We can reach some conclusions regarding the regularity between the association of

facts and their respective causes and effects. The first is that this regularity is artificial and derives from our mind; there is no necessary connection in nature; we are the ones who create it through words. The second is that what we find are universal regularities and not (c) a necessary connection between cause and effect; “the sun may not rise tomorrow,” Hume would claim. These conclusions do not exclude the truths that exist behind causation; regularities exist, but not the expectations of their realization. We always create expectations that there is a causal link between the effect and its cause, but what exists are successive events that result in universal laws. The essential thing here is to understand that the regularity of these events are examples of these Laws. (SEARLE: 2004, p. 201-2)

Our sensory experiences and bodily movement, as we have seen in **1.3.3. Intentionality as an ontological element of mental phenomena**, **1.4.1. Ryle’s “proto-functionalism”** and we will see in **3. Intentionality, Network and Background**, the action of bodily movement only occurs if it is caused by the intention of thought – such as the intention I have to get my flash drive before leaving for work – and its conditions of satisfaction – the object that my thought is intended for. In each case – both in bodily movement and in the intention of thought – it is necessary that we experience the causal connection between experience on the one hand and the facts that exist in the world on the other hand – it is clear that there is a distinction between the experience of getting my flash drive and that of the flash drive being at my house. When there is an interaction between the intention of thought and bodily movement, we effectively realize a causal connection between the intention of thought and the bodily movement, which is different from getting up to get something we do not know what it is and suddenly remembering that we need a flash drive. In the first example, there is a bodily movement effectively caused by an intention of thought and, in the second case, intention and bodily movement are in a dissonant relationship. In both examples, what is common is that there must be a causal connection between the facts that exist in the world – the pendrive – and what we experience – the intention of thought. In the first case of the interaction between intention of thought and bodily movement, our intention to look for the pendrive causes the bodily movement of getting up. In the second case, the bodily movement does not have a thought intention and it is the facts that exist in the world – the pendrive – that cause the perceptual experience in us – the memory of the need for a pendrive. In Hume's conception, there is no (c) necessary connection between the facts that exist outside ourselves and the relationship between (a) priority and (b) contiguity that are regularized in our conscious experience. However, in real experiences, what happens are successive events between an intentional state and some of the sense data. (SEARLE: 2004, p.

202-4)

If we have an experience of causation—that is, an intention to move that causes a bodily movement in my body—in my conscious life, and that this causation has a relationship with a fact in the world. If consciousness is a mental property that is not reducible to its physical causes, as we saw in section **2.4.1 The Mind-Body Problem**, how does it manage to move my body? There is a neurobiological response to the movement of my body that involves the nervous system and biochemical relationships in my brain. There are two independent ways of producing bodily movement, one is associated with the neurobiological response and the other is associated with the intention of thought. We can define general postulates to exemplify mental causation:

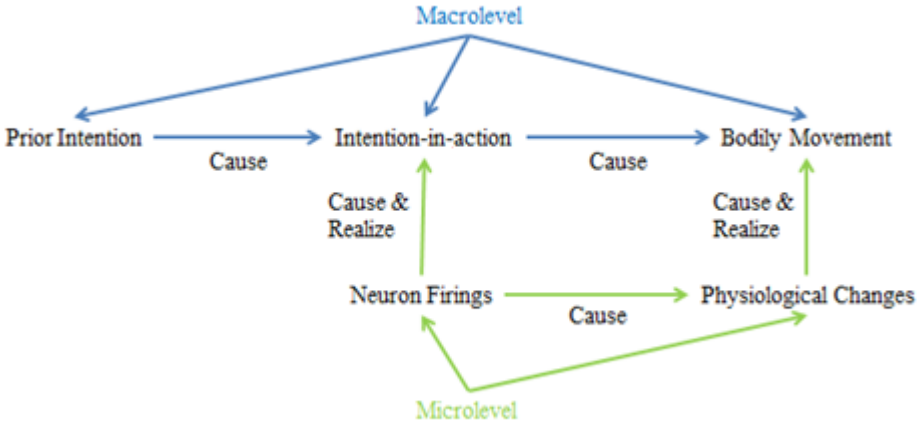
> l. The mind-body distinction: the mental and the physical form distinct realms.
> 2. The causal closure of the physical: the physical realm is causally closed in the sense that nothing nonphysical can enter into it and act as a cause.
> 3. The causal exclusion principle: where the physical causes are sufficient for an event, there cannot be any other types of causes of that event.
> 4. Causal efficacy of the mental: mental states really do function causally. (SEARLE, 2004, p. 207)

The problem is that there is an error in these postulates and it appears in the first premise, which characterizes the distinction between mind and body, which has already been addressed in the course of the following **1.2. Cartesian dualism and the ancient dilemma between thinking and existing** and the **1.3. Property dualism, qualia states and intentionality**. The solution proposed by Searle (2004), as seen in **2.4.2. The irreducibility of consciousness**, consists in affirming that consciousness and, therefore, mental intentionality is not reducible to its physical causes. The question of the irreducibility of consciousness does not reduce its argument to a form of epiphenomenalism, as we saw in **2.4.2.1. Is biological naturalism a form of epiphenomenalism?** And this is because consciousness and, consequently, intentional states are a type of property that one is in a state of epiphany, both properties are derived from neurophysiological processes of the brain that are not reduced to the same:

> Once we abandon this assumption, the answer to the two puzzles is first that the mental is simply a feature (at the level of the system) of the physical structure of the brain, and second, causally speaking, there are not two independent phenomena, the conscious effort and the unconscious neuron firings. There is just the brain system, which has one level of description where neuron firings are occurring and another level of description, the level of the system, where the system is conscious and indeed consciously trying to raise its arm. (SEARLE, 2004, p. 210)

Thus, we can say that intentional states cause bodily movement, and neuronal activations and physiological changes can cause intentional states and bodily movement. Now, how does this relationship of mental causation work in relation to our conscious life? When we refer to examples of voluntary actions – such as my intentional state of searching for the pendrive – the action is performed according to a premeditated intention and these intentional states act causally in our conscious life to perform bodily movement, but neuronal activations and physiological changes can also cause bodily movements – such as when I get up from my chair to perform an action that I am unaware of. We can elucidate this reflection in a more didactic way through **Figure 2.1**:

Figure 2.1 – Illustration on intentional causation



Source: adaptation of the Figure on p. 210 of the book Mind, a brief introduction by John Searle.

An example of how intentional causation works in our lives is if we think: "I voted for Lula because I wanted a better educational policy". This means that the intentional state generates a necessary condition to carry out the causal effect of the bodily movement in the electronic ballot box. Now, let's suppose that I go to vote in the elections and I don't think about which candidate to vote for and, suddenly, the thought of "Luís Inácio Lula da Silva" comes to my consciousness. In this second case, the intentional causation is in going to vote in the elections and there is no causal connection between the intention of the thought and the fact that there is a candidate "Luís Inácio Lula da Silva" in the world. However, the fact is always represented in the world. These conditions are not necessary to explain electoral behavior and this is because they do not give us sufficient conditions for a purpose. I could have voted for any other candidate under equal conditions to satisfy the conditions of satisfaction – which implies "a better educational policy" – like Ciro Gomes. We only

consider possibilities according to the conditions of satisfaction to the point where we only understand what other candidates say if their campaign proposals satisfy the conditions of satisfaction. Therefore, the implicit purpose is to fulfill the conditions of satisfaction, in this way the agent of the intentional state produces the condition of satisfaction, which is its intentional content. All this elucidation added to the factor of freedom of choice and the requirement of an explanation that satisfies the intentional content form a more comprehensive phenomenon that is rationality. It is essential that rationality be the ontological principle of intentional thought. (SEARLE: 2004, p. 211-2)

2.7. Final Considerations

We have seen throughout this chapter that biological naturalism is the approach to the philosophy of mind that seeks to propose a synthesis between functionalism and property dualism. This interactionist approach proposes that the mind is a product of the brain, but is not reduced to it. Mental property is not a property that arises above physical property, as in property dualism, nor is the brain a system that has input data and output data, and consciousness is reduced to processing states that act according to input data.

For biological naturalism, the mind is caused by the brain at a macro level by neurophysiological substances that act on its physical system at a micro level. It is a property that arises from the brain, but cannot be explained solely by its physical properties. In an equity analogy, it is similar to the process of digestion. There is no single region or organ responsible for the process. It is the digestive system itself that is responsible for the digestion process. According to biological naturalism, only a system analogous to the brain is capable of reproducing consciousness or mental states. This means that the system does not need to have the same structure, but must have powers of causation in an analogous way. Consciousness and mental states are not reduced to their syntactic structure. In order to have consciousness, the system must have a semantic capacity.

Thus, having consciousness and mental states is something more than a process of simulation. Searle constructs the Chinese room argument with the purpose of elucidating these conclusions. In this argument, he supposedly creates two systems: the first is a computer software that has the ability to translate Chinese, and the second is a room in which there is a man with a rulebook. In this room, Chinese symbols are placed, which are questions, and this man must interpret the symbol according to the rulebook, deposit the question symbols in a basket, take the answer symbols from another basket, and put them outside the room. The

general purpose of this argument is that what both systems do is manipulate data according to a general set of rules, a syntactic analysis, but they do not have the ability to understand Chinese, that is, a semantic capacity. Thus, to cause a mind, something more than symbol manipulation is necessary. The mind and consciousness have non-physical characteristics, but these characteristics arise from the physical system of the brain. The mind is a biological phenomenon at the macro level caused by the neurophysiological properties at the micro level of the brain.

Its background is consciousness, and mental states are realized in it. Consciousness and mental states have intrinsic characteristics that define them beyond their physical properties, and thus cannot be reduced to them. These intrinsic characteristics are ontological and consist of (i) unity, because all mental states are phenomena that occur within the brain and necessarily occur in its physical system, (ii) quality, because all mental states have a unique way of being felt, and (iii) subjectivity, because they are always experienced by an individual and uniquely and exclusively by that individual. In addition, consciousness and mental states have minor characteristics, such as intentionality, brain and periphery of consciousness, a gestalt structure, familiarity, and mood.

Each of these minor characteristics has a specific function. Consciousness cannot be described in purely objective terms, and therefore it is incapable of being described by science. It has subjective, non-physical characteristics, and because of this we obtain the mind-body problem, that is, how is it possible for me to move a member of my body if the one who performs the action of movement is my mind and, in turn, the mind is a property that cannot be reduced to its physical causes? The answer to this problem is to affirm that the mind is a mental property that arises from the physical causes of the brain and from this causal relationship, it emerges from the brain. Once it emerges, it can no longer be explained solely by its physical properties. Admitting this implies affirming that the mind is irreducible to its physical causes. That it is a phenomenon that arises from the physical properties of the brain, but, once it arises, it can no longer be explained solely by its physical causes, and this is because this phenomenon has intrinsic characteristics.

Taking this stance does not imply adopting a form of epiphenomenalism, since in epiphenomenalism the mind has no causal relationship with the body, both are irreconcilable properties, and in the approach proposed by Searle there is a causal relationship between mental states, sense data and the facts that exist in the world. Thus, we can state that biological naturalism consists of a form of non-reductive physicalism. Since the mind cannot be reduced to its physical causes, it arises from a causal relationship of the physical properties

of the brain, and since conscious states can produce some physical effect in the world.

Mental causation is part of the solution to the mind-body problem. It arises from criticisms of David Hume's theory of causality. In general terms, the theory of causality states that every effect must have a cause as its origin and that there must always be equal causes for equal effects. Cause and effect, in turn, are connected by a necessary connection where the effect always occurs before its cause. The problem found by Hume in the theory of causality is that there is no necessary connection between cause and effect, since what we call cause or effect is an artificial relationship to denote things that exist in the world. This necessary connection does not exist; it is an expectation in the sense that what we denote in the world as a cause is always followed by something else that we denote in the world as an effect. However, what unites both parties is regularity. There is no necessary connection in nature. We are the ones who create it through words. What exists is a regularity of events that we use as examples of universal laws. This regularity is demonstrated by a causal connection. Using Hume's theory of causality as a parameter to demonstrate the experience of causation in the brain and, in turn, how conscious states correlate with bodily movements.

Conscious states have an effective effect on bodily movements. There are two conscious ways of producing bodily movements. The first is associated with the neurophysiological processes of the brain and the central nervous system, and the second is associated with the intention of thought. In both cases, movement is always associated with some fact in the world. In the first case, if we have a movement associated with the neurophysiological processes of the brain, this movement is not caused by intentional states and, consequently, is not free. In the second case, we have a movement caused by intentional states, that is, this movement is a free action. Finally, intentional states cause voluntary bodily movements, and neurophysiological processes can cause non-voluntary intentional states.

Table 2.1 – Main Characteristics of Biological Naturalism

General Concept	Main Features
Biological Naturalism	The mind is a macro structure that arises from neuronal synapses at the micro level
Non-reductive Physicalism	The mind is a physical property of the brain, but it is not reducible to its physical causes.
Cognition	Brain activity corresponding to information processing.

Objective Knowledge	Phenomena or States of Affairs that are apprehended independently of the observers' point of view.
First-Person Ontology	Mode of inner existence of an organism's life: its subjectivity, its qualitative phenomena and its internal experiences.
Irreducibility or non-reducibility	That which cannot be reduced to its physical causes.
Supervenience	An emergency relationship, that which is at a higher and non-physical level.
Mind	What is in our head in a macro structure.
Consciousness	The foreground of the mind, the environment in which mental phenomena occur.
Mental States	Any and all states that occur in consciousness, whether intentional or not, conscious or not.
Conscious States	These are conscious mental states, whether intentional or not.
Intentional States	Component that promotes prior intention in mental states.
Mental Causation	Process of connection between the mind and the world that makes the mind have causal relationships with the physical realm.

Source: own authorship

CHAPTER 3

3. INTENTIONALITY, NETWORK AND BACKGROUND

> I am claiming first that Intentional states are in general parts of Networks of Intentional states and only have their conditions of satisfaction relative to their position in the Network. [...] in addition to the Networkof representations, there is also a Background of nonrepresentational mental capacities; and in general, representations only function, they only have the condition of satisfaction that they do, against nonrepresentational Background. (SEARLE, 1983, p. 19-20)

3.1. Presentation

In this last chapter we present a general characterization of the definition of Intentionality from the point of view of biological naturalism and how it relates to consciousness and intentional states. We also present a superficial outline of the discussion on Speech Acts and Expression and Meaning when we refer to illocutionary force, extensionality, metaphors, literal sense and meaning.

The conception of Intentionality for biological naturalism is, in a certain sense, derived from the Brentanian conception when Searle refers to consciousness as an act of representing and intentional states as representations in the act of representing, states that can eventually have their conditions of satisfaction realized if, and only if, they have intentional objects derived from states of affairs in the world.

In general, Intentionality is the characteristic of intentional states that bring movement and transform them into actions in relation to the states of things in the world. We can say that Intentionality is related to the action and freedom that individuals can have to act and relate to the world around them. As we will see throughout the chapter, intentional states are composed of intentional modes and an intentional content. The intentional mode is always associated with verbs that denote beliefs, desires and volitions. The intentional content is always related to an intentional object – which is the state of affairs with which the intentional state seeks to relate – a direction of fit that can be mind-to-world – when the origin of the intentional state arises in the mind and is directed towards the world – or world-to-mind – when its origin arises in the world through perceptive stimuli and such stimuli generate the intentional state in the mind. Furthermore, intentional states are caused in our consciousness and have a direction of causation that also has a mind-to-world relationship – as when we plan to act and think about what to do – or world-to-mind – when we see or feel something in the world.

Apart from that, Intentionality never acts in isolation, it always acts according to a Network of other intentional states and a Background of non-intentional capacities and aptitudes. The Network of other intentional states consists of the intentionality of other agents – be they other individuals or institutions – that serve as support for the intentional state and the Background consists of skills, capacities, biological aptitudes and local culture with which the individual interacts.

We seek to correlate this last chapter with some topics from **Chapter 1** and **Chapter 2**, mainly when we address intentional causation, outline a brief conception of representation as analogous to Brentan's conception of the act of representing, and when we refer to the capacity of systems to understand metaphors. Apart from that, we do not concern ourselves with characterizing in detail how Intentionality relates to biological naturalism, since **Chapter 2** already addresses this subject exhaustively. We limit ourselves to presenting the definition of Intentionality-with-a-t for this purpose.

3.2. General conception of intentionality

When we refer to intentionality, we are referring to the aspect of conscious states that are directed toward or represent facts and situations that are in the world. Every conscious state has intentionality—like my conscious intention to get a cup of tea and continue writing, for example—but not every mental state has intentionality—like a stomachache or an elbow ache. (SEARLE, 1998, p. 85-9, 2003, n.p., 2002b, p. 77) Both mental states are rooted in my consciousness:

> The way Searle uses to explain the phenomenon of intentionality is by describing the logical structure of intentional states and events without which we could not understand conscious life.[30] (CARVALHO, 2016, p. 56)

Thus, "To say that a mental state has intentionality simply means that it is about something." (SEARLE, 2003, n.p.) Intentionality manifests itself through speech acts, perceptual experiences, and acting experiences. A belief is always a belief about something, in the same way, a desire or a volition is always related to something in the world and when I consciously tense my body, I always do so toward something, be it my own body as an object or some state of affairs that exists in the world. Therefore, an intentional state always has two

[30] In original: O modo que Searle utiliza para explicar o fenômeno da intencionalidade é descrevendo a estrutura lógica dos estados e eventos intencionais sem a qual não poderíamos entender a vida consciente (CARVALHO, 2016, p. 56)

characteristics, a psychological mode – wanting, desiring, judging, intending, among others – and a content – which makes it about something about the world:

> [...] I can want to leave the room, I can believe that I will leave the room, and I can intend to leave the room. In each case, we have the same content, that I will leave the room ; but in different psychological modes or types: belief, desire, and intending respectively. (SEARLE, 2003, n.p.)

Intentional states are used to associate a conscious state with some particular state of affairs in the world. And this is because individuals have minds with mental states that can represent facts in the world and ourselves. (CARVALHO, 2016, p. 56) Thus, we always represent the world or ourselves as we would like it to be or as we fear things will not be. In this sense, we always intend to act with respect to things, whether to keep them as they are, prevent certain types of things from happening or harmonize with things as they are. (SEARLE, 2003, n.p.)

Intentional states, in general, have satisfaction conditions, that is, if the intentional states are always about a set of facts in the world – this fact can be a state of affairs in the world, other individuals or ideas that we have about something. (CARVALHO, 2016, p. 56) Having a satisfaction condition implies an expectation of the intentional state being realized or not in relation to the set of facts in the world to which it is directed. Therefore, if I have the intentional state that I believe that the bus will be late, the condition of satisfaction of this state is only realized if the set of facts in the world – which is represented by the delay in the bus schedule – occurs. Conditions of satisfaction function as a way of harmonizing or frustrating our expectations between our intentional states and the facts in the world. (SEARLE, 1998, p. 86-9, 2003, n.p.)

Every intentional state also has a direction of fit that establishes a relationship between the conscious state and the set of facts in the world through intentional states. (CARVALHO, 2016, p. 56) The contents of psychological modes relate to the world through intentional states. Roughly speaking, beliefs, perceptions, memories and volitions have a mind-to-world direction of fit. If I believe that the bus will be late, this belief will only be true or false if the world corresponds to the content of my intentional state. Similarly, if I promise to go to the cinema on Sunday, this volition will only be true if I remember to go to the cinema on Sunday and if the cinema is open on Sunday. Intentional, prior actions and desires have a world-to-mind direction of fit. If I intend to move my arm to the cup of tea, it is necessary that the set of facts in the world exist for my mind to tense my body. If I have a desire, the content related to my desire is in the world and, only then, is it the content of a psychological mode of my

mind. Ultimately it is the individual's responsibility to match the direction of fit in both cases:

> In the way that the aim of beliefs is to be true and thus achieve the mind-to-world direction of fit, and the aim of desires is to be fulfilled and thus achieve the world-to-mind direction of fit, being glad or sorry does not have that kind of aim, even though each intentional state has propositional contents that may or may not be satisfied. (SEARLE, 1998, p. 103)

The general purpose of intentional states is to cause actions on a state of affairs that exists in the world. Actions, in turn, have a physical – or causal – component and a mental – or intentional – component. The mental component of an action is the intention about which state of affairs in the world that action will be. The physical component is the set of facts in the world in which the action will be performed, such as picking up a cup of tea or moving a car with the aim of activating its ignition. Intentionality is the characteristic of the mind to represent situations in the world, our mind has a constant causal contact with the world, whether through perceptions or memories that we have of the states of things in the world:

> It is essential to the functioningof intentionality, and indeed essential to our survival in the world, that the representing capacity of the mind and the causal relations to the world should mesh in some systematic way. (SEARLE, 1998, p. 105)

It is an intrinsic characteristic of the intentional state itself that it is satisfied if it functions causally. If it has as its mental – intentional – component the intention to raise the arm, its satisfaction condition is that the physical – or causal – component has its satisfaction condition fulfilled, that is, the movement of the arm. The mental component is only satisfied if it causes the physical component and, consequently, its conditions of satisfaction. There is a gap between both components that we can define as free will. For example, if an anesthetized patient has the intention – mental component – to move the arm and is unable to do so due to the effect of the anesthesia, it can be concluded that he had the mental component, but the causation – physical component – of the arm movement did not occur. (SEARLE, 1998, p. 105, 2003, n.p.)

There are actions that are premeditated and spontaneous actions. Premeditated actions occur when they are the result of some form of practical reasoning, and spontaneous actions occur without reflection on what we are going to do. Premeditated actions have intentions in the action, that is, they have intentional states that are formed before we carry out the action itself. Practical reasoning is the driving force when deciding the best way to act. Every previous action is driven by intentional causation. The causes of an action are psychological

modes linked to their respective contents, and the content causes the behavior of an action. For example, protesters tore down statues of slave owners because they believe that they perpetuate prejudice and social inequality. The action of tearing down statues of slave owners is driven by the psychological mode of "believing" that the content "perpetuating prejudice and social inequality" is true. The narrative of this event itself does not cause the event itself, but rather the psychological mode linked to the content of the individuals who were involved in the fall of the slave statue. Intentional states occur according to a Network of other intentional states and a Background of capabilities that determine their conditions of satisfaction – we will address this topic in **3.8. Intentional Network and Background**. (SEARLE, 2003, n.p.)

3.3. The ontological character of intentional states

In general, intentionality is characterized as the property of mental states that are directed toward something external to consciousness—whether it be something, someone, or objects and things in the world. Not all mental states have intentionality, for example, I may suddenly have a stomachache and not want to have it, or, in the jargon of Searle's (1983) theory of mind, not have the corresponding intentional state. (SEARLE, 1983, p. 3, 2002b, p. 77)

As we saw in **1.3.3. Intentionality as an ontological element of mental phenomena**, There are forms of feelings, such as nervousness, anxiety and exaltation that are not directed, that is, they are not directed at something external to consciousness. These contents are always accompanied by corresponding intentional states, usually beliefs and desires, but they are not identical aspects. If these feelings are not intentional, there is no answer to questions such as: what does your anxiety refer to? What is the reason for your anxiety? Even if I may believe that I am anxious. Therefore, there are mental states that have intentional modalities and others that do not. (SEARLE, 1983, p. 1-2)

Not every conscious state is intentional, in the sense that intentionality and consciousness, although sometimes interconnected, are not always intentional phenomena. I can have the conscious state of anxiety and it will be unintentional because it does not have a direction in the world. In the same way, I can believe that I have not been thinking, have an intentional modality and this is not conscious. There is an identity between consciousness and intentionality in which both are always "of" something, or, in Searle's words (1983): "(...) all consciousness is consciousness *of*, that whenever one is conscious there is always something

that one is conscious *of*." (SEARLE, 1983, p. 2) As we saw in section 2.4. Mind, consciousness and mental states, we have an example of the fallacy of ambiguity between objective and subjective in the sense that feelings such as anxiety or euphoria cannot be captured objectively, because experience and sensation are original, or better said, are identical and inherent to consciousness. (SEARLE, 1983, p. 2-3)

Thus, we can admit that there is a category of mental acts that are actions whose relationship between the mind and the facts of the world does not depend on external agents for the conditions of satisfaction to occur, such as being anxious, doing mental calculations or drinking beer – remembering that external agents and things in the world are not the same thing. Intentionality is only implicit in mental acts when they depend on external agents to occur, for example, the intentional state that "President Jair Bolsonaro be tried in the Hague court". In this case where there is implicit intentionality, there is always an intentional modality – believing, desiring, wanting, fearing, hoping, observing, meaning – that links the intentional content – the president's judgment – of the proposition. These states or events are intentional because there is a disparity between the intentional mode of what the agents intend. See **Table 3.1** below:

Table 3.1 – Example of junctions between intentional modalities/mode, conditions of satistaction and intentional contents

P (intentional mode) > state of affairs in which x happens	
A believes there will be a trial in The Hague and Bolsonaro will be arrested	**P** > agent
B notes that the trial took place and Bolsonaro was arrested	State of affairs > conditions of satisfaction
C means in Dutch that Bolsonaro was found guilty	X happens > intentional content
D notices changes in world justice with Bolsonaro's arrest	Note: If the representation of the state of affairs does not exist in the world, it is not satisfied.
E fears that with conviction in the trial Bolsonaro, in addition to being arrested, will be executed	
F waits for the trial to take place and Bolsonaro to be arrested to feel that justice has been served	
G wants the trial to take place and Bolsonaro to be arrested	

Source: own authorship

There are structural differences in each proposition according to the intentional mode/modality and the conditions of satisfaction. In all these propositions there are

intentional states, but their attribution status is not the same for each one. Proposition B does more than attribute an intentionality to the proposition, but it implies that B, by referring to the intentional mode, implied the state of affairs so that the conditions of satisfaction occur. (SEARLE, 2021, 77-9) Therefore, in the case of B, intentionality is realized because the conditions of satisfaction of the observational sentence actually exist, they exist as an observable characteristic. Remembering observational sentences are propositions that, in principle, can be observed in the state of affairs of the world, or, according to Carl G. Hempel (1960):

> [...] by an observation sentence we shall understand any sentence which – correctly or incorrectly – asserts of one or more specifically named objects that they have, or they lack, some specified observable characteristics. (HEMPEL, 1960, p. 109-10)

There is a difference between seeing and believing, seeing implies knowing, although they are not related verbs. Because it is not because I see the state of affairs that it is really there. It is necessary that the state of affairs goes through a visual experience and that this visual experience is not accessible only to me, but to an entire community of observers who have the same conditions to have this same visual experience. When this same visual experience is experienced not only by the agent, but by the community of observers, then there is a visual experience between seeing and knowing, and this is because the visual experience is capable of being apprehended in objective terms. Believing does not imply knowing, because they are more associated with sensations such as euphoria and anxiety, even though they are not identical aspects, they can be associated because a belief, when not realized, even though it has conditions of satisfaction and an intentional content with a mind-to-world direction, it does not cease to be a conscious state that was not created in accordance with the agents who intend it. The same analogy applied to propositions of type A – between seeing and believing – is valid for propositions G and H, respectively, in which the intentional mode/modality refers to expectations and forms of desires.

Proposition C is a synthesis of statements that follow one another according to the state of affairs that exist in the world, and Dutch speakers use the phrase to express this same state of affairs. In proposition D, there are no intentional states, because perceiving changes does not involve any perception. Propositions D and C depend on some intrinsic intentionality of the agents, while the rest of the propositions do not depend on intrinsic intentionality. What are the relations between intentional states and the facts of the world? How are they of

something, are they referenced or directed to these facts in the world? What can we call intentionality and how can we explain what intentionality is? (SEARLE, 1983, p. 3-4, 2002b, p. 78-9)

3.3.1. Intentionality as representation

As we discussed earlier, intentional states represent things and facts in the world in the same way that a speech act represents things and states of things through propositions. Language is something derived from intentionality. In a speech act there is always an illocutionary force – which corresponds to the psychological mode of the proposition – and a propositional or representative content. (CARVALHO, 2016, p. 56) For example, when I say "I suggest that you leave the room," the verb "suggest" represents the illocutionary force while the rest of the statement represents the propositional content. The content is propositional because it represents an observational sentence in which its satisfaction condition is fulfilled if, and only if, the agent leaves the room. Now, if I say "I believe that you leave the room," the illocutionary force of the verb becomes a psychological mode while the content is representational, because it represents a belief. In the case of propositional content, the state is linguistically realized, while in the case of intentional content, intentional states are linguistically realized even if there is no language – as is the case of thinking and not expressing the proposition. (SEARLE, 1983, p. 5-6, 1969, 29-6)

Intentional states, in this sense, have as their content entire propositions, even if these intentional states are not linguistically realized. An intentional state is the form or mode in which the individual has this content – that is, having a direction in things or facts of the world – outside of them. Thus, if an individual has the mental act plus the intentionality of playing with pigs and believing that it is raining, his intentional states have the verbs "to love" and "to believe" as psychological modes and "pigs" and "to be raining" as intentional contents. If these intentional states are verbalized or written, then their verbs become illocutionary acts and the intentional contents become propositional contents:

> [...] it is important to emphatize that not all Intentional states have an entire proposition as Intentional content, though by definition all Intentional states have at least some representative content, whether a whole proposition or not [...] (SEARLE, 1983, p. 7)

Speech acts are, in a sense, realizations of intentional states – actions and perceptual experiences are another form of realization of intentional states. A speech act is realized

through an illocutionary act plus a propositional content and a satisfaction condition. When the speech act is not realized, the illocutionary act becomes a psychological mode and the propositional content becomes a representational content. Propositional, representational and intentional contents correspond and only change the form in which they are realized. The difference between intentional content and representational content is that the former always has a direction in the physical world, while the latter does not always have a direction in the facts of the world. The examples of beliefs and sensations such as anxiety, euphoria and depression are used to illustrate the difference between intentional content and representational content. (SEARLE, 1983, p. 9-10, 1969, p. 29-50)

3.3.1.1. Classes of speech acts: assertive, directive, commissive

The assertive class of speech acts consists of statements, descriptions, assertions in general and they fit in some way to a world of autonomous existence and can be observable or not according to the fit of this class in the world. The assertive class has the direction of word-to-world fit, in the sense that what is said may or may not correspond to reality and if what is said in this context is false, then it is the statement that is at fault and not the reality that it represents. (SEARLE, 1999, p. 1-4, 1983, p. 7-8, 1969, p. 42-50)

The directive class of speech acts are orders, commands, and requests, and the commissive class represents promises, vows, and guarantees. Both classes can be obeyed or disobeyed, performed or unfulfilled, and they fit into the world autonomously in the sense that they bring about changes in the world so that it corresponds to the propositional content of the speech act. Both classes have a world-word direction of fit, in the sense that if the class of words is disobeyed or unfulfilled, it is not the proposition that is at fault, but the world of the person who disobeyed or of the person who breaks the promise that does not fit into its respective class. The general idea of the direction of fit in each case is to ensure responsibility for its adequacy. (SEARLE, 1999, p. 8-9, 1983, p. 7-9)

Regarding intentional states, beliefs have a mind-to-world direction of fit, and desires and intentions have a world-to-mind direction of fit. We can say that beliefs have a relationship similar to the class of assertive speech acts, while desires and intentions have a relationship similar to the directive and compromising classes of speech acts. In the sense that they fit together as a form of representation and as a direction of fit in the world:

> If my beliefs turn out to be wrong, it is my beliefs and not the world which is at

> fault, as is shownby the fact that I can correct the situation simply by changing my beliefs. But if I fail to carry out my intentions or if my desires are unfulfilled I cannot in that way correct the situation by simply changing the intention or desire. In these cases it is, so to speak the fault of the world if it fails to match the intentionor the desire and I cannot fix things up by saying it was a mistaken intention or desire in a way that I can fix things up by saying is was a mistaken belief. (SEARLE, 1983, p. 8)

When an intentional state is realized by means of an illocutionary act and an intentional content – remember that they can also be realized by means of deliberate actions – they cannot contain their negation, because it is impossible for there to be truth conditions of the proposition, conditions of satisfaction in the state of affairs of the world, and a direction of fit. If I state that it is raining, then I believe that it is raining, and this delimits the conditions of satisfaction of my opinion and the truth conditions according to the direction of fit word-to-world. If I promise to go to the theater on Thursday at seven o'clock, then I intend my will to go to the theater on the day and time delimited. If you order me to leave the theater, then I will that you not remain in the same room. Therefore, it is impossible for there to be a negation in the propositional content of my statements, and this is because if I state that it rains and it does not rain, there is no way for my conditions of satisfaction to occur in the state of affairs of the world, there is no direction of fit in the world for my word to be adapted, and there is no way for my statement to have a condition of truth in the world. The same analogy is valid for ordering you to leave the room. It is also impossible for me to promise to go to the theater at seven in the evening on Thursday in two different places or to change the day and time of the theater without fail, and this is because it is impossible for the truth conditions to be established, just as there is no direction of fit for the world to be able to adapt to the words that were stated, and consequently, it is impossible for there to be conditions of satisfaction. (SEARLE, 1983, p. 7-9)

3.3.1.2. Truth conditions and conditions of satisfaction

When we refer to truth conditions, this means that they are internal, they are in the mental act. If we express an intentional state through a speech act, it is not in the background of its realization, but is part of the corresponding intentional state. The conditions of satisfaction and directions of fit, as discussed previously, of each proposition that we state according to each class of speech act also express whether it is realized or not. Admitting this implies affirming that if the speech act is not realized, either the facts in the world do not correspond to the conditions of satisfaction – this is when we refer to cases in which there is a

word-to-world or mind-to-world direction of fit – or it is the world that does not fit the conditions of satisfaction of what is expressed – this is when we refer to cases in which there is a world-word or world-to-mind direction of fit. (SEARLE, 1999, p. 137-41, 1983, p. 9-10)

Conditions of satisfaction are also internal to intentional states and speech acts – when the former are verbalized. A condition of satisfaction depends on a direction of fit and both are intrinsically connected, whether in the intentional state when it is in the mental act, or in the speech act when the intentional state is verbalized. As expressed in the previous paragraph, it is impossible for a speech act to have an implication and a negation at the same time, this makes it impossible for truth conditions to exist and an assertive class is only satisfied if, and only if, it is true, a directive class is satisfied if, and only if, it is fulfilled and a commisive class is satisfied if, and only if, it is realized:

> What is crucially important to see is that for every speech act that has a direction of fit *the speech act will be satisfied if and only if the expressed psychological state is satisfied,* and *the condition of satisfaction of speech act and expressed psychological state are identical.* (SEARLE, 1983, p. 10-1)

A given intentional state is only originated by its conditions of satisfaction through a Network of other intentional states and on a Background of capabilities and assumptions. It is worth remembering that, unlike the Network, the Background is not intrinsically associated with the intentional states and, consequently, the conditions of satisfaction of the same. For an intentional state to be realized, it is necessary that the intentional state depends on other intentional states of the Network – such as the intentionality of other agents – and a Background of capabilities that are logically associated – we will address both concepts in **3.8. Intentional Network and Background**:

> [...] Intentional states only have their conditions of satisfaction, and the whole Intentional Network only functions, against a Background ofwhat I will, for want of a better term, call nonrepresentational mental capacities. Certain fundamental ways of doing things and certain sorts of know-how about the way things work are presupposed by any such form of Intentionality. (SEARLE, 1983, p. 20)

Let us suppose, for example, that Luís Inácio Lula da Silva and Ciro Gomes share the desire to run in the second round of the presidential election. In order for the intentional state of both to be satisfied, there must be a Background of capabilities and a Network of intentional states of other agents. Both must have the mental act with the intentional mode “I want to run for president of Brazil”. This mental act will occur in a specific neuronal synapse until the moment it becomes a speech act when they say to themselves “I want to do this”.

(SEARLE, 1983, p. 19-20)

Now, let us suppose that a Neanderthal man had this same mental act and the same neuronal synapses, for this Neanderthal man it is impossible for the intentional state of his mental act to be realized and this is because there are no suitable circumstances either in the Network of intentional states or in the Background of capacities of this Neanderthal man. (SEARLE, 1983, p. 20)

In all three cases, for this desire to have its conditions of satisfaction fulfilled, it is necessary for there to be a Network of intentional states of other agents, such as the existence of parties, for them to be elected as candidates in their parties and for them to be able to convince, through acts of commissive class speech, a sufficient electoral contingent to compete in the second round, and a Background of capabilities that illustrates a fundamental understanding of how things work, such as the existence of the Federative Republic of Brazil, for there to be a presidential system of government, for there to be periodic elections – so that they can first be chosen as candidates by other agents and only then be able to compete in the elections – and for there to be different parties that can hold a first-round contest, so that there can be a second round. In the first two cases, there is a Network of intentional states and a Background of capabilities that support the intentional state of individuals, whereas in the case of the Neanderthal man, no matter how much he wants to run for president of Brazil, there is no such support for the eventual fulfillment of his conditions of satisfaction. (SEARLE, 1983, p. 20-1)

3.3.2. Belief as representation

What does this have to do with the Bretanian conception of intentional non-existence – discussed in **1.3.3. Intentionality as an ontological element of mental phenomena**. Well, we start from the point of view that all representation depends on an intentional state of the individual who represents. The act of representing requires an individual who represents and an intentional state of representation. In this sense, intentionality is part of representation, but it is not enough to explain representation in terms of an ontology. (SEARLE, 1983, p. 13-4)

What is a belief and how does it relate to representation? What is the nature of the intentionality of a belief? The answer that is repeatedly given to these questions is that: a belief is constituted by a propositional content unique to a given psychological mode; its psychological mode makes its direction of fit to be in a mind-to-world association; that is, what is represented as a belief by the agent through an intentional state must have

correspondence in the world; and if these conditions are not satisfied, then the belief is false. Its propositional content, in turn, determines its conditions of satisfaction. The way in which we represent the mental act of belief is in part an intrinsic intentionality, because, even if the conditions of satisfaction are not met, the individual can continue to represent that belief. (SEARLE, 1983, p. 14-5)

These intrinsic intentional states are caused by neurophysiological relations in the brain, in the sense that they are caused by and realized in the structure of the brain and have a causal relation to other intentional states and a background of capacities:

> Intrinsic intentional phenomena are caused by neurophysiological processes going on in the brain, and they occur in and are realized in the structureof the brain, and they occur in and are realized in the structure of the brain. [...] More important for our present discussion, our ignorance of how it all workss in the brain is an empirical ignoranceof details and not the resultof a metaphysical gulf between two incommensurablecategories, the "Mind" and the "Body", which would prevent us from ever overcoming our ignorance. (SEARLE, 2002b, p. 79)

The realization of an intentional state is irrelevant to its logical properties, just as the realization of a speech act is. The logical properties of intentional states are representations – they follow the same analogy as beliefs, expressed earlier. This means that the logical properties of a speech act are linguistic entities while things – such as trees and rocks – in the world are interpreted as representations. But what about bodily movements? How does the representation happen? When I raise my arm, if we remove the fact in the world of bodily movement, what is left in this intentional state? The answer is that there is an intention in the action in an intentional psychological mode/modality – to want. (SEARLE, 1983, p. 14-6)

3.3.2.1. Extensional, intensional-with-an-s and intentional-with-a-t propositions

In order to know the intention or intentional state mentioned above, it is not necessary to know its ultimate ontological categories, but, first of all, it is necessary to have well defined its conditions of satisfaction, how these conditions are represented by the intentional content and what its intentional mode is. If there is no object referred to – that is, something in the world that refers to the propositional content of a speech act – that satisfies the representative intentional content, the mental act – or speech act, in the case of the mental act being verbalized – is not satisfied and, consequently, is devoid of an intentional object. (SEARLE, 1983, p. 16-7)

If we use, for example, the sentence "I believe the King of France is bald", it has a

representative content, but there is no object referred to and it is not directed to a content outside the world. In this sense, the sentence refers intensionally-with-an-s to the "King of France", but it does not have an extensional reference because there is no "King of France" to fill the description of the sentence extensionally. However, what do extensional, intensional-with-an-s and intentional-with-a-t mean when we refer to a proposition? When we refer to a fictional discourse or a product of fantasy and imagination, this does not oblige us to refer to electing a class of "referred" or "described" objects. There is no specific class of intentional objects for such objects, since they do not have conditions of satisfaction in the facts of the world, which implies admitting that the fictional discourse goes beyond the word-to-world commitment and that its conditions of satisfaction are suspended. (SEARLE, 1983, p. 17-8)

The nature of intentionality cannot be explained solely in terms of representations, because representations involve images and mental acts that do not correspond to facts in the world. In relation to beliefs, for example, when they do not have a direction of fit and, consequently, conditions of satisfaction, in these cases, the only relationship between the mental act and the facts in the world is the individual who represents it: "(...) if a belief is a representation it must be because some agent *uses* the belief as a representation." (SEARLE, 1983, p. 21)

Intentional content and satisfaction conditions are intrinsically associated with the intentional state, but it is the intentional content that determines the conditions of satisfaction. Thus, it is impossible for an individual to have a belief or desire without having conditions of satisfaction, such as the intentional state of "wanting to buy a square-ball". To have the belief of "wanting a square-ball" is to be aware that "there will be a square-ball to buy" and to be aware that the belief will be satisfied if "there is a square-ball" and will not be satisfied if "there is no square-ball":

> A belief is intrisically a representation in this sense: it simply consists in an Intentional content and a psychological mode. The content determines its conditions of satisfaction, and that mode determines that those conditions of satisfaction are represented with a certain direction of fit. It does not require some outside Intentionality in order to become a representation, because if it is a belief already intrinsically is a representation. (SEARLE, 1983, p. 22)

A belief does not require an unintentional entity or a formal syntactic object. A representation can be attributed to images or sentences – as linguistic entities – because, even if it does not have a direction of fit and a correspondence with the physical world, it still exists as a representation and its only relation to the world is in an individual who represents it. The

problem is that the awareness of the conditions of satisfaction is part of the belief and desire, since the intentional content is inherent in the belief or desire as a linguistic entity or image and not its correspondence to the facts in the world. (SEARLE, 1983, p. 22-4)

Thus, an extensional sentence is one in which its content has a correlation with the physical world, in the examples of "the king of France is bald" and "wanting a square-ball" there is no content in extension in the world that can fulfill the satisfaction conditions of "there being a king of France" or "there being a square-ball" and, consequently, there is no direction of fit, because as much as these linguistic entities exist in your mind as a representation, they are incapable of being objectively referred to in the physical world because they do not have extensionality. (SEARLE, 1995b, p. 16-8)

Intentionality-with-a-t is the characteristic of the brain that allows it to represent objects and states of things in the world, even if what is represented does not exist extensionally, it exists in our mind either as an image or a linguistic entity. If the representation – intentional-with-a-t – corresponds to reality, it is extensional. When it does not, it is a linguistic entity that exists exclusively in our representation – in the case of sentences – or an image. (SEARLE, 1983, p. 23-4)

Intensionality-with-an-s is a characteristic of the class of sentences that fails to satisfy certain extensionality tests, such as the substitution of identicals and an existential generalization, in the sense of extensionality or the inability of some sentences to satisfy their extensionality. If we use, for example, the sentence "John T. Fours believes he is a sorcerer". The interpretation does not allow an existential generalization or substitution of the expression with the same reference – believe – when the agent is changed in relation to the illocutionary act – verbalized intentional mode – and to the propositional content – verbalized intentional content – there is no way to obtain an existence generalization, because its propositional content does not have extensionality. Due to this, even though there is an illocutionary act, it is still a psychological mode. Unlike the sentence "John T. Fours believes he is a deadbeat". (SEARLE, 1983, p. 22-4)

In the first example, we have a sentence about an intentional state, that is, John T. Fours' belief, but his belief does not go beyond the scope of a representation, which makes the sentence a presentation of a representation, because the representative content of his belief does not commit to the truth conditions of the facts in the world. The conditions for satisfying John T. Fours' belief depend on themselves and not on facts in the world that represent his beliefs – such as casting spells or being able to produce magic potions. His belief is only satisfied if there is a way to be a sorcerer, but this does not imply that the statement itself is

true, as a linguistic entity, even if there are no truth conditions. Thus, John T. Fours has a belief, which is represented by the psychological mode “to believe”:

> Intentionality-with-a-t is that property of the mind (brain) by which it is able to represent other things; intensionality-with-an-s is the failure of certain sentences, statements, etc., to satisfy certain logical tests for extensionality. The only connection between them is that some sentences about Intentionality-with-a-t are intensional-with-an-s [...] (SEARLE, 1983, p. 24)

What John T. Fours thinks as a mental act, that is, as a representation of a linguistic entity: “I believe I am a sorcerer” is a property of the mind – brain – in which other objects are represented. Even though the John T. Fours’ belief in being a sorcerer is impossible to be represented extensionally, that is, its conditions of satisfaction are suspended if it does not have a mind-to-world direction of fit – or word-to-world, when verbalized – it exists as a representation of a representation. Therefore, when John T. Fours or someone else says that “John T. Fours believes he is a sorcerer” this sentence is intensional-with-an-s and the John T. Fours’ belief in itself is intentional-with-a-t. (SEARLE, 1983, p. 23-5)

Unlike the second example in which “John T. Fours believes he is a deadbeat”, because the belief is true if he is in debt and, therefore, there will be characteristics in the world to determine whether his belief is true – in the case if he is in debt. This implies admitting that “being a deadbeat” is extensional in itself because there is a set of states of things in the world that attribute its conditions of satisfaction as true or false. (SEARLE, 1983, p. 24-5)

Sentences are, therefore, representations of representations – intentional-with-a-t – because they have a psychological mode – or intentional mode – that characterizes them as a mental property of the brain. These representations of representations have intensional-with-an-s aspects that are expressed through representative contents – or intentional contents. Therefore, when we verbalize the sentence “John T. Fours believes he is a sorcerer”, the intentional mode “believes” expresses the representation of a representation – because the sentence itself does not have conditions of satisfaction or direction of fit, as mentioned in the previous paragraphs – and “he is a sorcerer” is the intensional-with-an-s aspect, which makes it not extensional. The sentence itself is the representation of a belief and this means that its conditions of satisfaction only depend on the representation that is being represented in the mind of the agent – or the individual who reproduces the sentence – and not on what is represented by his belief. (SEARLE, 1983, p. 25-6)

3.3.3. Different aspects of the intentional – or psychological – modes between beliefs and desires

What we can understand so far is that the intentional modes of beliefs and desires are basic intentional states – original representations – or, better said, that they are representations of representations. There are different forms of beliefs and desires and we will express them here through sentences. Beliefs, in general, always demonstrate a certain degree of conviction in relation to something, whether positive or negative. Desires have two categories and three propositional attitudes. Their first mode is directed towards facts in the world that have a past place, when the individual would like not to have done something or feels grateful to himself for having done something, for example: "John T. Fours would like to have paid his bills". The second form of desire is directed towards facts in the world when we want something to happen in which he feels frustrated when what he wants does not happen and feels grateful when what he wants does happen, for example, "I want to go to the music event". The three propositional attitudes consist of: wishing, wanting and lusting; and all of them must have complete sentences as intentional content. (SEARLE, 1983, p. 29-31)

We will now present the ways in which definitions and desires are combined in order to exclude those that do not have a direction of fit and, consequently, that do not have a condition of satisfaction or correspondence with the facts in the world. We will begin with Fear, which is summarized in the belief that something will happen added to the desire that it will not happen – the desire for that will not be fulfilled because it is mild or strong and this depends on the intentional agents. Therefore, "John T. Fours must believe that it is possible for his desire to happen and must want his desire not to happen". Intentional content is not part of the nature of Fear, and its condition of satisfaction is only achieved if his desire is fulfilled. (SEARLE, 1983, p. 29-31)

Expectation corresponds to the realization of a belief in the future, for example, "I believe that John T. Fours will be evicted", in this case its intentional content is part of the nature of the expectation, as it is a representation of a representation – even if it does not come true in the physical world, it is still a belief – and its condition of satisfaction is only achieved if the belief is realized. Disappointment is a present belief that something will happen added to a belief in the past that something in the future will not happen and the desire for it not to happen. For example, "I am disappointed because Palmeiras lost with headed goals, this is due to the fact that both in this game and in the past Palmeiras has never played well against corners and I hope that they do not lose any more games conceding headed

goals". Lament is the belief that something will happen and the desire that it does not happen, for example, "John T. Fours believes that it will rain, but he wishes it did not rain". Regret is a restriction of lament and has as its propositional content a state of affairs that is consonant with the individual's regret, for example, "John T. Fours is sorry for not having paid the rent", but not because it is raining, he can only regret that it is raining. Remorse is also analogous to regret, but it adds the element of responsibility, in the sense that the individual believes that something will happen, wishes that it will not happen and believes that he is responsible for the effect of its causes, for example, "John T. Fours is sorry for not having paid the rent, wishes that the event had not occurred and feels guilty for not having paid". Guilt follows the same logic as remorse, but is directed at another person, for example, "John T. Fours is sorry for not having paid the rent, wishes that the event had not occurred and blames his wife for not having paid". (SEARLE, 1983, p. 31-2)

Pleasure, pride, hope, and shame follow the same form – and have some distinctions, just like the analyses of regret, grief, remorse, and guilt. Let's start with the analysis of pleasure. Taking pleasure in something happening implies the belief that something will happen, plus the desire for something to happen. For example, "John T. Fours enjoys watching TV, so he wants to buy a new TV." Hope follows from the uncertainty that a state of affairs will actually come to pass. For example, I don't believe that something will happen and I don't believe that something won't happen, plus the belief that something will happen and the desire for something to happen. For example, "I don't believe that I won't have the money to go to the music event, and I don't believe that I will have the money to go to the music event, but I believe that I will have the money to go to the music event and I wish that I will have the money to go to the music event." Pride implies the belief that something will happen, but the desire for something to happen, plus the belief that what happens is related to me, for example, "John T. Fours is proud of having bought his TV and wished he had bought his TV, so John T. Fours is proud that he bought his TV because he deserved to have bought it". Shame implies the belief that something will happen, but the desire for it not to happen, plus the belief that what happened is related to him, for example, "John T. Fours believes he will be evicted, but wishes he would not be evicted, so John T. Fours is ashamed of having been evicted because he did not pay the rent". Shame can be related to three different aspects, being: "One can be ashamed of one's own desires, one can wish to be ashamed, one can be ashamed of one's own desire to be ashamed, etc." (SEARLE, 1983, p. 32-3)

Affective states are correlated with different types of shame, they result from a form of desire added to a belief about something, for example, the strong desire to win a race, added

to the belief of having won the race: “If I lose the belief, I lose the joy and what remains is simplydisappointment, i.e., wish that I had won the race imposedon a frustrated belief.” (SEARLE, 1983, p. 33) If we feel ashamed of having done something wrong, this happens because we believe that we would not feel ashamed without the belief. In the example of the race, this happens because when our desires are frustrated, our beliefs fade away and, consequently, our joy too. (SEARLE, 1995b, p. 33-4)

Conscious sensations such as panic, joy, disgust or terror are not captured by this usual analysis of belief and desire; their logical form is the conscious state plus belief and desire. We will use this mode in relation to intentional actions, for example, “if I intend to get a cup of tea, then I believe that it is possible to get a cup of tea because I have the desire to drink tea”. In this sense, intending to do something is the conscious state of doing something plus the belief of doing something and the desire to do something. Conscious sensations such as love, hate and admiration are those that, in the first instance, do not require complete propositions as content, even though they have beliefs and desires, for example, “if John T. Fours is madly in love for someone, but has no belief or desire regarding the beloved person, not even that such a person exists”. In this case, John T. Fours in love must believe that he is in love with someone who has certain peculiarities and has a complex desire about being loved: “(...) but there is no way to spell out the complex of those beliefs and desires as partof the definitionof “love”. (SEARLE, 1983, pg. 34)

Admiration follows the same characteristic as love and hate. Let's suppose that John Biden admires Barack Obama, and he must believe that he has certain characteristics in his personality that are a source of joy for John Biden, which John Biden considers something positive. Therefore, anyone who admires Barack Obama could wish that more people, including the person who admires him, were like Barack Obama and that Barack Obama continues to have the same characteristics that people admire. (SEARLE, 1983, p. 34)

What we have sought to argue so far is that intentionality is composed of a representation added to conditions of satisfaction that are correlated with reality. The forms of combination between belief and desire expressed so far are those that have a direction of fit added to conditions of satisfaction. However, there are cases devoid of conditions of satisfaction; joy and sadness are two examples that cannot be reduced to forms of belief and desire. These are two examples that do not have intentionality, because they are only composed of desires. Happiness is the desire for something to be realized and sadness is the belief that it will not happen; happiness outlines the desire for the presence of something and sadness is associated with the absence of something or a certain belief or state of affairs. An

analysis of intentionality in terms of representation – intentionality-with-a-t – and conditions of satisfaction in relation to a given direction of fit is usually used in its application; the hypothesis that Searle (1983) seeks to formulate is that:

> [...] all intentional states , even those which do not have a direction of fit and those which do not have a whole proposition as content, nonetheless contain a Bel or a Desor both, and that in many cases the Intentionality of the state is explained by the Bel or the Des. (SEARLE, 1983, p. 35)

The main objective of this presentation was to present the forms of combination of intentional states of the relation between belief and desire and how they can relate to each other and, at the same time, have different meanings, even when having a close relationship between them. All forms of intentional states are constituted by forms of belief and desire. When they are not, they either reduce themselves to representations of intensional-with-an-s propositions or they are conscious sensations such as joy and sadness.

3.4. Intentionality and perception

As we saw in **3.3.2.1. Extensional, intensional-with-an-s and intentional-with-a-t propositions**, a sentence in itself can be just a linguistic entity and not have conditions of satisfaction or direction of fit, in which case it is just a representation of a representation. Intentionality-with-a-t is the characteristic of our brain that allows us to represent states of things in the world, whether through linguistic entities or images. In this context, how does the relationship between intentionality and perception occur? That is, how can our internal experiences – our representations – relate to the external world? How are the subjective experiences that are “inside my head” – that is, that present themselves as representations to my act of representing – capable of understanding the world in an objective way? (SEARLE, 1983, p. 37)

If we take into account that representations of representations – intentionality-with-a-t – are equivalent to the act of representing in the Bentranian conception, as we saw in **1.3.3. Intentionality as an ontological element of mental phenomena**, How do we reference what is in our representations, whether linguistic entities or images, in the physical world? We will use visual experience, which is the simplest to use as an illustrative example, when we observe something, a golden cooperative bakery, in broad daylight, very close, without any visual impediment between our perception and what is observed. The question itself does not

involve the neurophysiological optical experience of observing the golden cooperative bakery, it involves its conceptual functioning so that what elements make up the truth conditions of sentences in the form “x sees y”, in which x represents the individual who perceives and y represents the material object – the golden cooperative bakery, in this case. When observing something I have a kind of visual experience, when I observe the golden cooperative bakery, I do not see the visual experience itself, but the golden cooperative bakery. When this visual experience happens, the individual has a visual experience, which is the experience of a golden cooperative bakery, in a sense of “of” – visual experience “of” something, as we saw in **3.3. The ontological character of intentional states**. (SEARLE, 1983, p. 37-8)

Even though visual perception has a component that is visual experience, when we close our eyes the visual experience ceases to exist, but the image in our representation – that is, in our intentionality-with-a-t – still exists as an image. In this context, Searle (1983) states that: “(...) it makes no sense to ascribe to the visual experience the properties of the thing that the visual experience is of, the thing that I see.” (SEARLE, 1983, p. 38) For example, if the cooperative bakery is golden and has a certain supermarket-like characteristic, then my visual experience is of a golden object in the shape of a supermarket. What we are analyzing here, as we mentioned earlier, is not the neurophysiological visual experience, but its conceptual functioning. It makes no sense to say that the visual experience is golden or has the shape of a supermarket if the purpose of perception is in its conceptual functioning:

> In introducing the notionof a visual experience I am distinguishing between experience and perception in ways that will become clearer in the subsequent discussion. The notionof perception involves the notion of suceeding in a way that the notionof experience does not. Experience has to determine what counts as succeding, but one can have an experience without succeding, i.e., without perceiving. (SEARLE, 1983, p. 38)

Now, let us suppose that there is no yellow cooperative bakery at all, that the visual experience we observe is nothing more than a hallucination – a representation of a representation without extensionality, as we saw in **3.3.2.1. Extensional, intensional-with-an-s and intentional-with-a-t propositions** –, What is the individual observing? If there is no visual experience, there is nothing in the bread business. What we want to elucidate here is that visual experiences have intentionality, that is, they are “directed to” or are “of” objects, things or states of things in the world. Visual experience has its conditions of satisfaction in the same way that beliefs and desires do. It is impossible to separate the visual experience of seeing a golden cooperative bakery from the fact that constituted the experience of the

cooperative bakery. Even if the visual experience of the golden cooperative bakery is a hallucination, there must be some previous visual experience of the cooperative bakery and of gold that provided the experience of this hallucination as a representation of a representation. Therefore, it is possible to separate this belief "of" the golden cooperative bakery from the fact "that" it exists: "(...) the 'of' of 'experience of' is in short the 'of' of Intentionality". (SEARLE, 1983, p. 39)

3.4.1. Representation, perception and belief

The distinction between belief and experience is that it is possible to be mistaken about which states of affairs actually exist in the world, in the sense that I can have a hallucination of the golden cooperative bakery and it not actually exist. Contrary to the belief, that even if the world does not match the expectations of one who believes in something, this someone may continue to represent that belief. According to the theory of intentionality, what happens so that the golden cooperative bakery is not a hallucination is that the intentional content of the visual experience – as we saw in **3.3. The ontological character of intentional states**, the individual perceives a golden cooperative bakery, where "perceives" is the intentional mode and "a golden cooperative bakery" is the intentional content – which determines the conditions of satisfaction which, in turn, determines what must occur in the physical world so that the intentional content is not a hallucination. In parallel, what must occur in the physical world determines the content of the belief – expressed by the intentional mode "perceives" – also determines the conditions of satisfaction. The presence or absence of the intentional content – "a golden cooperative bakery" is irrelevant to my belief in perceiving whether it exists or not, since beliefs and visual experiences can be representations of representations – or, better said, mental events. (SEARLE, 1983, p. 39-40)

What we want to make clear here is that belief and visual experiences are forms of intrinsically intentional mental phenomena, in the sense that they need not in fact be correlated with the real world. Each of these phenomena has an intentional content that determines its conditions of satisfaction. The conditions of satisfaction determine the content of the experience in a way analogous to the intentional content of an intentional state determining its conditions of satisfaction. The intentional content of the visual experience amounts to a complete proposition – intentional mode plus intentional content. The visual experience "of something" is not "of" an object; rather, the visual experience is what determines that the thing is verified in the real world. (SEARLE, 1983, p. 40-1)

Thus, visual experience as a mental event implies the representation of a golden cooperative bakery, its intentional content is similar to a complete proposition – not in the linguistic sense, but as an image – and the existence of the thing in the real world implies its satisfied representation. This is not a matter of referencing an object according to a given proposition, but of realizing conditions of satisfaction. The intentionality of visual experience implies that all seeing is "seeing that", in the sense that whenever x sees y is true, then it is true that the individual sees that a certain thing happens in the real world:

> The fact that visual experiences have propositional Intentionalcontents is an immediate (and trivial) consequence of the fact that they have conditions of satisfaction, for conditions of satisfaction are always that such and such is the case. (SEARLE, 1983, p. 41)

The intentional mode "see" allows for spatial and content modifiers that, when interpreted naturally, depend on us making a complete proposition regarding the content of the experience. For example, when someone says "I see a golden cooperative bakery that is in front of me", this does not imply "I see a golden cooperative bakery that, by chance, is in front of me", but rather that "I see that there is a golden cooperative bakery in front of me". In this third example, "I see that" implies the intentional content of the visual experience, "see that" reports the intentional content of a perception and "see x" reports only the intentional object and does not commit the reporter to the content, and this is because in the cases of "seeing x" the intentional object was perceived, while in the cases of "seeing that" these are third-person reports. In general, the propositions in which x sees y are extensional, but there are cases in which "seeing that" may be a presentation of a representation, that is, an intensional-with-an-s form. These cases are usually associated with third-person reports:

> The "see x" form does no commit the reporter to reporting how it seemed to the agent, but the "see that" form does, and a report of how it seemed to the agent, but the "see that" form does, and a report of how it seemed to the agent is, in general, a specification of the Intentional content. (SEARLE, 1983, p. 42)

For example, let us take the propositions: "John T. Fours saw that the foreigner was a vegetarian", "the foreigner is a man of short stature" and "vegetarianism is the act of not eating meat". This does not mean that "John T. Fours saw that the man of short stature is a vegetarian", but that "John T. Fours saw the foreigner" and that "John T. Fours saw a man of short stature". In both propositions in which there is "seeing that" the individual who sees commits to the expressed intentional content, if the proposition is false, then it frustrates the

conditions of satisfaction of the intentional content and if the proposition has no correspondence with reality, it is an intensional-with-an-s form. In the proposition in which there is “saw x”, the individual of the proposition is only reporting the intentional content. (SEARLE, 1983, p. 41-2)

Visual perceptions, like beliefs, have a mind-to-world direction of fit. This means that if their conditions of satisfaction are not met, the problem lies in the visual experience and not in the world. They are not propositions to be described as true or false. When there is a failure in the visual experience with respect to the direction of fit, what happens is that we are mistaken, there has been some deviation, distortion, or what we see is an illusion or a delusion. If there has been success, then what we perceive is true in relation to the state of affairs in the world. Like beliefs and desires, visual perceptions are characteristically identified in terms of intentional content. Thus, if I believe in something, I “believe that” and if I visually perceive something I have the “experience of”. (SEARLE, 83, p. 42)

The intentional contents of the visual experience that specify its conditions of satisfaction are true in the literary sense of the visual experience. It is a category mistake that when you see a golden cooperative bakery, your visual experience is also golden and has the shape of a cooperative bakery. Similarly, if I believe that it is raining because I have an auditory perception of rain, this does not mean that I literally have a wet auditory experience. In the case of the golden cooperative bakery, its content is golden and its shape is that of a bakery:

> The first source of reluctance to speak of perceptual experiences is the fear that in recognizing such entities we are admitting sense data or some such, that is, we are admitting entities that somehow get between us and the real world. [...] A second sourceof reluctance to concede that there are visual experiences [...] is the factthat any attempt to focus our attentionon the experience inevitably alters its character. (SEARLE, 1983, p. 44)

The nature of a visual experience is that it is present at all times when we pay attention to the intentional object that is visually experienced. If we shift our attention from the conditions of satisfaction – the intentional content – of the visual experience to the experience itself, this does not imply that the experience is merely a representation of a representation before our attention is shifted. Therefore, we can infer that perceptual experiences exist and have intentionality, their intentional content has, in part, a propositional form – which also has a form as an image, that is, what is perceived if it is not a representation of a representation is a presentation of a representation. They have a direction of mind-to-world fit, and the

properties intrinsic to their intentional content are literary properties of the visual experience.

3.4.2. Perceptual experience as conscious mental events and presentation of the state of affairs of the world

Mental states such as beliefs, desires and perceptual experiences are representations, when we refer to representations here, there is no specific ontology, it is interpreted more as a concept within a larger approach that involves conditions of satisfaction, intentional content and direction of fit. Beliefs and desires are not conscious states, now perceptual experiences are conscious states. The intentionality of the representation does not necessarily need to be realized in consciousness because they do not always have a direction of mind-to-world fit, but the intentionality of the perceptual experience is realized by conscious mental events. (SEARLE, 1983, p. 45)

Returning to the example of the individual who sees the golden cooperative bakery, the verb "to see" is related to the individual's experience; it is not just a representation because it is directly associated with the intentional content itself. The experience provides directionality, immediacy and involuntariness in this case, respectively, because the individual who sees, observes something specific, his experience with what is observed happens simultaneously and what is observed is independent of the individual's will. In this sense, a perception can be a representation of a representation, but experience – of any sense whatsoever – is not a representation; perceptive experience is the presentation of the objective state of affairs in the world. When the conditions of satisfaction perceptive experience are met, it provides direct access to the state of affairs in the world. (SEARLE, 1983, p. 45-6)

The presentations – as we saw previously in **3.3.2.1. Extensional, intensional-with-an-s and intentional-with-a-t propositions** – are a subclass of representations. Both can be opposed, as in cases where there is no extensionality. If this occurs, in the case of perceptual experiences, then there is no direct access and we are talking about the presentation of representations. In the case of perceptual experiences, the presentation grants direct access to the state of affairs in the world. If the intentionality of perception is realized, it generates perceptual experiences that, in turn, constitute conscious mental events. An unrealized intentionality of perception is just a belief or a desire manifested through an image or a proposition:

> [...] the claim that there are propositions or other representative contents adds

> nothing to the claim that there are certain common features of beliefs, hopes, fears, desires, questions, assertions, commands, promises, etc. But the claim that there are visual experiences really adds something to the claim that there are visual experiences really add something to the claim that there are visual perceptions, since it tell us how the content of those perceptions is realized in our conscious life. (SEARLE, 1983, p. 46)

We can state that the empirical nature of perceptual experience, in general, is that it is a conscious mental event – whether through vision, as humans and the vast majority of animals usually use, or through echolocation, as bats and other life forms do. Psychological modes do not have an empirical nature, in the sense that these same perceptual experiences can be represented through images, even if the being in question does not have the capacity to represent linguistic entities, they can have directions of fit and conditions of satisfaction, when not the acts of speech become just representations of representations. (SEARLE, 1983, 46-7)

Let us take, for example, the phenomenon of blindsight for the purpose of elucidating the concept of presentation. We have projections from the retina to the primary visual cortex, where each region of the retina is interrelated with a corresponding region of the striate cortex. Patients who have a lesion in the striate cortex do not project perceptions of visual stimuli from the retina to the cortex. Even though the retina does not project its perceptions to the striate cortex, it still projects the same visual perceptions to other regions of the brain. (CAMPOS, dos SANTOS, XAVIER, 1997, p. 196) In this way, the patient responds to the visual stimuli presented to him, but is not aware of them, in the sense that he is not able to see them. (SEARLE, 1983, p. 47) This means that if a simple stimulus was presented to them, the patients demonstrated appropriate behaviors to interact with the presented object. However, the object was not captured by the patients' field of vision because the retinal region did not project information from that object to the striate cortex. Patients with blindsight do not see the presented object, but they are able to feel it. (CAMPOS, dos SANTOS, XAVIER, 1997, p. 197) The central point in this example is that they demonstrate a form of intentionality, even though they do not have the visual experience of seeing the object. And this is because patients report a perceptual experience that there is something present and are able to interact with the object. The problem that the phenomenon of blindsight brings us is that the visual experience causes the conditions of satisfaction. Let us return, again, to the example of the golden cooperative bakery, if I have the experience that it exists, then its intentional content is in fact satisfied:

> Thus, the Intentional content of the visual experience requires as part of the

> conditions of satisfaction that the visual experience be caused by the rest of its conditions of satisfaction, that is, by the state of affairs perceived. (SEARLE, 1983, p. 48)

The intentional content of visual experience must cause the state of affairs in the world and is specified by statements of the conditions of satisfaction of visual experience. Visual experience, in turn, is the realization of intentional content, in this sense: "(...) unless the presence and the features of the object cause the agent's experience, he does not see the object" (SEARLE, 1983, p. 48) For example, I have a visual experience that there is a golden cooperative bakery in front of me and that it itself causes me to have the visual experience. When the intentional content of the visual experience is explicit, as in this case, its veridicality determines whether or not the conditions of satisfaction are met. Therefore, for the experience to be veridical, the facts of the world must happen in such a way that it presents itself to me visually and the fact of the thing being causally my visual experience. (SEARLE, 1983, p. 48-9)

If the individual references what is presented to me visually in the world and causes my visual experience, this representation of the intentional content becomes verbal and not perceptive. It is a mode of visual experience, but the intentional content of the visual experience itself is self-referential, because it is in itself its own conditions of satisfaction. What we are not able to do is perceive the visual experience itself or its own causation as self-referential. There is, therefore, an interdependence between the visible object and the causal relationship of what is seen as visual experience to guarantee the conditions of satisfaction. If the individual perceives the object without seeing it, there is no visual experience or causal relationship generating it. (SEARLE, 1983, p. 49)

In this sense, perception is interrelated with experience and the causation of experience – the sense data that capture it. The direction of fit of a perceptual experience is mind-to-world, because, as we have mentioned, it can be a representation of a representation and be a hallucination, illusion, among others. And the direction of causation of perceptual experience is world-to-mind, since, as we discussed in blindsight, we can capture perceptual experience through our sense data, even with its perceptual apparatus – the striate cortex – obstructed and, even so, identify this perceptual experience through other regions of the brain and be able to interact with the object. Perceptual experience and causation of experience are correlated because they only occur when there is a state of affairs in the world – which makes them causally self-referential. When not, it is a representation of a representation. (SEARLE, 1983, p. 49-50)

3.4.2.1. The different ways of presenting the same visual experience or the gestalt-form of the visual experience

It may happen that the same visual experience has different satisfaction conditions and, therefore, different intentional contents. Using the recurring example of (i) the golden cooperative bakery, it is possible that two different observers have the same visual experience of an identical type – that is, with the same object generating the visual experience – and see two different cooperative bakerys. Environmental and lighting conditions can cause this to happen. This means that the first observer requires a cooperative bakery to cause his visual experience and the second observer requires a cooperative bakery to cause his numerically different visual experience. If the intentional contents are different because they are perceived in different ways, then the satisfaction conditions are different. (SEARLE, 1983, p. 49-50)

In visual experience, the aspects of the experience itself are determined by the physical characteristics of the situation. This is unlike beliefs and desires, which have the representation of an intentional object and this is always represented in a psychological mode. This means that the direction of causation of visual experience is world-to-mind, while in beliefs and desires the direction of fit is mind-to-world:

> In visual perception the aspect under which an object is perceived is fixed by the pointof view, and the other physical features of the perceptual situation, in which the object is perceived. (SEARLE, 1983, p. 50)

When we refer to cases in which there is a change in the intentional object in relation to the perceptive stimulus, the intentional object may even be represented under multiple aspects, but it is the object itself that is represented through the perceptive experience and not its aspect. The aspect under which an object is represented is not something that mediates the subject-object relationship, it is but a representation of a representation that will only correspond to the physical world if it has a direction of fit and its satisfaction conditions are met. We can use examples from the Gestault and Wittgenstein's example of the duck-rabbit, which was adapted here to the example of a woman-man playing the saxophone, as illustrated in **Figure 3.1**:

Figure 3.1 – Woman-Man playing saxophone

Source: l1nq.com/kV0Wz

In the (ii) example in **Figure 3.1**, the intentional object is the same for our perception of a woman as for our perception of a man playing the saxophone. The two visual experiences have two different presentational contents, but the visual experience is of an identical type, that is, it is the same visual experience – the same illustration – that provides us with two intentional objects with two distinct perceptions. If the intentional objects of perception are different, there are different uses of the verb "to see" as an intentional mode to capture each intentional object captured in this way. Thus, as we can literally see the object, even if it is under different aspects – intentional objects – in this sense, we literally see here the aspect of a woman and the aspect of a man playing the saxophone. (SEARLE, 1983, p. 51-2)

The psychological modes of "seeing" and "remembering" require, in addition to the presence of an intentional content, the satisfaction of that same content. If the individual really sees that particular state of affairs, there must be at least three factors: the state of affairs that symbolizes the condition of satisfaction of the individual's intentional content, the visual experience, and the causation of that visual experience. In the case of remembering, if I remember the visual experience, it must have in fact occurred and its occurrence implies the causation of my remembering the visual experience. Visual experience is a presentation while memory is a representation; both have the mind-to-world direction of fit, are causally self-referential, and their direction of causation determines the intentional content through mind-to-world. (SEARLE, 1983, p. 52-3)

Perceptions reach us in their purest form through language, and it is a function of expectation that we usually carry out through language. Language affects perceptual apprehension in this way: "If the subject expects that the next color he is going to see is red, he will recognize it much more quickly than if he has no such expectation." (SEARLE, 1983, p. 54) Our visual experiences can occur even without mastering certain Background

capabilities – we will address this topic more clearly in **3.8. Intentional Network and Background**, let us use the example in **Figure 3.2**:

Figure 3.2 – Kanji sora, which means heaven in Japanese

Source: l1nq.com/ID3u8

Figure 3.2 represents the word sky in Japanese, but it can be seen as a candy jar, a drawer with partitions, a hanger, or an iron on a table. All of these aspects of the same visual experience that we have just mentioned about **Figure 3.2** depend on the observer having a series of cultural capabilities derived from language. Such as the conception of each specific object to associate the object with the kanji and prior knowledge of the Japanese language. Therefore, a Network of intentional states is necessary – represented by the possible interpretations of **Figure 3.2** and the observer's understanding – and a Background of non-representational capabilities – represented by the knowledge that the observer has to be able to interpret that figure – which affect the perception of the visual experience. If the Network and the Background affect our perception – that is, the way we interpret the visual experience – how can the conditions of satisfaction be determined by the visual experience? (SEARLE, 1983, p. 54-5)

There is a possibility that the Belief Network and the Background affect the intentional content of the visual experience. We can also use the example in **Figure 3.2**, (iii) a first observer could believe he sees a jar of candy because he has no knowledge of Japanese culture and the form of its language, while a second observer with the Background of capabilities of Japanese culture and language could see the word sky in Japanese. In both cases the visual stimuli generating the visual experience are the same, in other words, the content of the visual experience is observing Japanese kanji and the nature of the visual experience – the observer's knowledge and beliefs – affects the content of the interpretation that one has of the perceptual situation. What we would like to emphasize is that the visual stimuli are the same for both observers and the conditions of satisfaction that change. For the first observer what is seen is a jar of candy and for the second what is seen is the word sky in Japanese. The worldview of each observer and their set of beliefs and capabilities affect the way they perceive the visual stimulus:

> [...] It is only because we believe independently that the moon remains constant in size that we allow the Intentionalityof belief to override the Intentionality of our visual experience. (SEARLE, 1983, p. 56)

Our senses or our worldview can deceive us, in the sense that the intentional content of the visual experience can conflict with the intentional content of our preexisting beliefs. An observer will, most of the time, perceive the content of his perceptual experience according to the content of his already existing beliefs. This makes the visual experience and the conditions of satisfaction distinct. Thus, Network and Background have a predominant factor in the nature of the visual experience. In the example of (iii) two observers perceiving **Figure 3.2**, different beliefs cause different visual experiences, with different conditions of satisfaction and the visual stimuli are the same. In the example of (i) the golden cooperative bakery, there are the same beliefs with different visual experiences due to external interference in the transmission of the stimuli. In the example (ii) of the woman-man playing the saxophone, the same beliefs added to different visual experiences produce the same conditions of satisfaction for each aspect – intentional object – of the visual experience.

3.4.2.2. Interference of the external environment in the presentation of the visual experience

There are three approaches to the way we perceive the world visually – or through our senses – namely: (p) phenomenalism, (rt) representative theory and (nr) naïve realism. So far, we have been presenting the (nr) naïve realism version, which, in a way, states that a causation of perceptual experience is necessary for us to have a visual experience, and this only happens if there is a visual stimulus generating visual causation. Once causation generates visual experience, we perceive it through our sense data and, only then, through our representation. (SEARLE, 1983, p. 57)

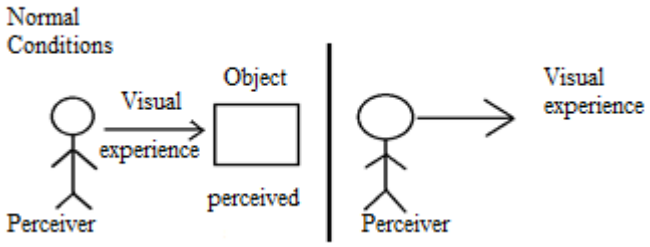
In (nr) naive realism there are therefore three elements that constitute the perception of visual experience: the observer; the visual experience and the perceived state of affairs. What we have argued so far is that in a hallucination, or delusion, the observer has the same visual experience, with the difference that no intentional object is present in our Intentionality under the visual experience:

> What is the relationship between the sense data which we do see and the material object which apparently we do not see? This question does not arise for the naive

> realist because on his account we do not see sense data at all. We see material objects and other objects and states of affairs in the world, at least much of the time; and in the hallucination case we don't see anything, though we do indeed *have* visual experiences in both cases. (SEARLE, 1983, p. 58)

Figure 3.3 exemplifies how the visual experience is captured by our senses and how it occurs in relation to hallucination:

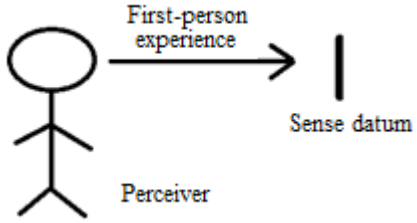
Figure 3.3 – Naïve realism



Source: adaptation of Fig. 1 and Fig. 2 from the book Intentionality by John Searle.

In the phenomenalist (p) view, the states of affairs in the world that are publicly accessible become sensory data, but these sensory data are always particular to the individual who represents them. In this sense, the objects that an observer sees are objects for him, since they are reduced to sensory data – that is, to a strictly subjective experience – and these sensory data are always interpreted in the first person. The world that the individual perceives is a unique and exclusive point of view of the perceiver. This conception is a form of first-person ontology, since everything that individuals perceive in relation to the world are experiences that are strictly subjective to the individual who perceives it and not to others. **Figure 3.4** exemplifies how the capture of individual experience for (p) phenomenalism occurs:

Figure 3.4 – Phenomenalism

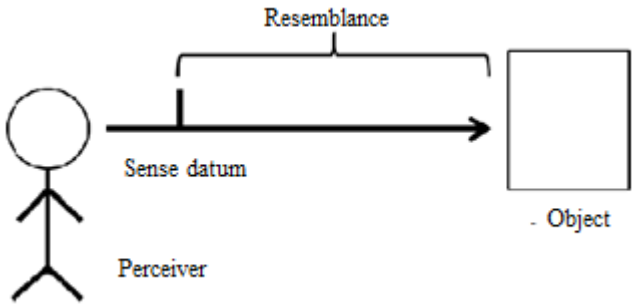


Source: adaptation of Fig. 4 from the book Intentionality by John Searle.

The (rt) representational theory adds a vertical line in the way the observer perceives

the presented object that symbolizes the resemblance between the presented object and the sensory data captured by our senses. It is in this similarity that causation occurs and the visual stimulus becomes a visual experience. If a distortion occurs in the line of similarity, consequently, a distortion also occurs in the way we perceive the sensory data of the visual experience. . **Figure 3.5** demonstrates how the capture of what is perceived in the state of affairs in the world occurs, according to the (rt) representative theory:

Figure 3.5 – Representative theory



Source: adaptation of Fig. 3 from the book Intentionality by John Searle.

Both (p) phenomenalism and (rt) representational theory suggest that perceptual experience occurs on a vertical axis – as demonstrated by the region of resemblance in **Figure 3.4**. Thus, the intentional content of our perception occurs in the gap between the sensory data and the object – sensory stimulus – called similarity. The error of (nr) naïve realists is in failing to take into account the role of experience and the intentionality of experience in the act of perceiving. Therefore, belief and visual perception have something in common, the fact that belief is directed to its propositional content in the same way that visual experience is related to its experiential content – and not, initially, to the perceived object:

> Once one treatsthe contentof perception as the objectof perception, something like the above theories seems inevitable. And indeed the mistake of the sense data theorists seems to me analougous to the mistake of treating the propositional content of the beliefas the object of the belief. The belief is no more about or directed at its propositional content than the visual perception is about or directed at its experiencial component. (SEARLE, 1983, p. 60)

What (nr) naïve realists fail to notice is that the material object can only be the object of perception because it has an intentional content – which is variable, as we saw in the examples in **Figure 3.1** and **Figure 3.2** – and the intermediary of this content is the visual experience – expressed as resemblance, in **Figure 3.5**. This ends up becoming the strong point

of both (p) phenomenalism and (rt) representation theory, in which the intentional content of the object to be perceived is not itself, but the perceptual experience that occurs in the zone of resemblance. (SEARLE, 1983, p. 60)

3.4.2.3. Truth conditions for sentences expressing visual perceptions

Regarding linguistic entities, which can be modes of our perceptual experience when we describe or think about describing what we take as perceptual experience. What are the truth conditions of a sentence of the form – that is, a sentence when I refer to the qualitative characteristics of a given visual experience. For example, when "an individual sees a golden cooperative bakery", in this case there is only the proposition in its intentional content. To be a sentence of a perceptual experience, the example must be modified to "the individual sees that there is a golden cooperative bakery in front of him". (SEARLE, 1983, 60-1)

For the truth conditions of this sentence that alludes to a visual experience, it is true if, and only if, (i) the individual has a visual experience that has satisfaction conditions and phenomenal properties; (ii) the satisfaction conditions are summarized in there being a golden cooperative bakery in front of the individual and that this golden cooperative bakery is the cause of the visual experience of the individual who sees it; (iii) the phenomenal properties, to determine the satisfaction conditions, must be such as the stimulus of the visual experience that the individual sees; (iv) the causal relation between the intentional content of the experience and the state of affairs in the world – that is, the golden cooperative bakery – must be continuous and regular and (v) the satisfaction conditions succeed if there really is a yellow cooperative bakery that causes the visual experience and has the intentional content of what the individual sees. (SEARLE, 1983, p. 61-2)

3.4.3. The problem of the particularity of the intentional object

We have been using the same example of the case in which "an individual sees a golden cooperative bakery that is in front of him", but what about cases where the golden cooperative bakery is a specific, previously identified one that is in front of him? According to this new example, Searle (1983) calls the following question the problem of particularity: "(...) how does this particularity get into the Intentional content of the perception?" (SEARLE, 1983, p. 62)

Let us return to the example of possible worlds, briefly discussed in **1.3.3.**

Intentionality as an ontological element of mental phenomena. Suppose that Bill Jones sees his wife Sally leaving the golden cooperative bakery and that there is another possible world and a twin Bill Jones who sees the twin Sally leaving the golden cooperative bakery of this other possible world. The intentional content of Bill Jones' visual experience of seeing Sally leaving the golden cooperative bakery makes the presence of Sally – and not the twin Sally of the other possible world – part of his satisfaction conditions. This same analogy applies to the twin Bill Jones, with the difference that the place that Sally and the twin Sally occupy in the sentence is replaced. Both experiences are qualitatively identical phenomena and are part of their satisfaction conditions of the experience of each Bill Jones that he is necessarily seeing his respective Sally leaving the golden cooperative bakery. What we want to clarify at this point is that qualitatively identical experiences can have adverse satisfaction conditions. (SEARLE, 1983, p. 62-3)

What happens in Bill Jones's visual experience so that its intentional content requires that it can only be satisfied by a specific woman – Sally – and not another identical woman – Sally's twin – to that of its intentional content. How does this particularity occur in the intentional content? Why does Bill Jones's visual experience necessarily require the presence of Sally and not any woman with characteristics identical to Sally's? The answer to this question is that the intentional content of Bill Jones's visual experience refers particularly to Sally and not to Sally's twin, because it is the first Sally who is in causal relations with Bill Jones's sentence, as well as in his visual experience:

> There will indeed be cases where he refersto Sally without knowing it, cases where true third-person descriptions do not match his Intentionality. But such cases are always dependent on there being first-person Intentionality which sets internal conditions of satisfaction, and no causal answer to our question can ever be adequate until it accounts for how the causation is part of the Intentionality, in such a way as to determine that a particular object is part of the conditions of satisfaction. (SEARLE, 1983, p. 64)

The fact is that, in cases like Bill Jones's, intentional contents are directed to particular intentional objects. There are two errors regarding particularity that make it impossible to solve this problem: (a) the assumption that each intentional content is an isolated unit that determines its conditions of satisfaction without taking into account non-representational capacities – Background and Network – and (b) the assumption that the causation of visual experience is a relation that does not have intentionality, that visual experience is always a natural relation between objects and states of affairs in the world. The solution to both of these problems lies in the fact that (a) Network and Background – we will analyze both

conceptions in more detail in **3.8. Intentional, Network and Background** – interfere in the conditions of satisfaction of the intentional state and (b) intentional causation is inherent to the conditions of satisfaction of intentional states and (a) and (b) the individuals – in this case both Bill Joneses – are in relationships that depend on a context – provided by the Network and Background – to establish their referents – in this case the respective Sally of each respective Bill Jones. The intentional contents of each individual's visual experience do not determine their conditions of satisfaction in isolation, but rather the intentional contents of each Bill Jones added to his particular experience are closely related to other intentional contents – linked to the Network of his respective Sally – and to a Background of non-representational capacities:

> No matter how qualitatively similar Jone's experienceis to twin Jone's and no matter how type identical his whole Network of Intentional states is to twin Jone's, from Jone's point of view there is no doubt that these are his experiences, his beliefs, his memories, his propensities; in short, his Network and his Background. (SEARLE, 1983, p. 66)

Intentional causation – we will analyze this topic in more detail in **3.7. Intentional causation** – determines the conditions of satisfaction of intentional states when the causal relationship occurs as part of the intentional content – which is the case of visual experiences in which the capture of the visual stimulus is part of the causal relationship between the object and the visual experience. There is an indexicality, that is, there is a context in which individuals – each Bill Jones – establish their referents in sentences, which are associated with the Network of intentional states of which he is aware – who is the Sally he is referring to, what are her particularities, personality, among others – and their non-representational capacities inherent to the individual himself. (SEARLE, 1983, p. 66)

If (l) Bill Jones has prior knowledge of Sally, this means that he has a Network of mental states of memories "a", "b" and "c" that relate to experiences "x", "y" and "z" that both may have when they meet. Memory "a" is the satisfaction condition for cause "x". The elements of a sequence – of memories or experiences – will be references for other elements of the same sequence. In this sense, Searle (1983) claims: "(...) part of the conditions of satisfaction of the memory that it must have been caused by Sally." (SEARLE, 1983, p. 67) For the satisfaction conditions to be met, it is necessary that the experience and the memory must be correlated with the same woman:

> The conditions of satisfaction of each experience and each memory after the initial

> encounter with Sally are not just that the experience should be satisfied by a woman satisfying Sally's description in general terms but that it should be caused by the *same* woman who caused Jone's other experiences and memories. (SEARLE, 1983, p. 67)

Thus, if Bill Jones meets Sally, she is present and both she and her peculiarities and memories cause the visual experience in Bill Jones. Now, if Bill Jones meets twin Sally, he meets a woman with identical peculiarities to Sally and her presence and peculiarities cause the visual experience. There is a relationship between Network and Background and the intentional content – the presence of Sally – that can be summarized as follows: Bill Jones had in the past a series of experiences x, y and z that were caused by the presence and peculiarities of Sally and has in the present a series of memories a, b and c and the woman who is present causes the x, y and z experiences that, in turn, cause the memories a, b and c. From Bill Jones' point of view, it is in his interest that the conditions of satisfaction of his intentional content – the presence of Sally – are satisfied. What if Sally were replaced by twin Sally? Her replacement would not satisfy the intentional content because the memories and experiences are not the same. (SEARLE, 1983, p. 67-8)

If (s) Sally had been replaced at birth and because of this Bill Jones had never met Sally, in this case Bill Jones' intentional content is satisfied with respect to the twin Sally. From the point of view of a third party, it is not the same Sally that Bill Jones sees, but from Bill Jones' point of view, in this case, he sees the person whose conditions for satisfying his intentional content he desires, because in this case the past experiences and memories are the same. (SEARLE, 1983, p. 68-9)

In perceptive cases, the Background functions as perceptive recognition, it has the function of recognizing Sally – or twin Sally – but this recognition capacity in itself is not a representation. Thus, (rt) if we take into consideration solely and exclusively the Background's capacity in relation to visual experience, both Sally and twin Sally are qualitatively identical experiences. Thus, the application of the Background to both Sally and twin Sally is that Bill Jones sees the presence of a woman who he himself recognizes as having physical characteristics identical to Sally's and her presence and physical characteristics cause the visual experience. From Bill Jones' point of view, he has the capacity to recognize the woman's presence as being Sally, that is, Bill Jones sees a woman and recognizes in this presence the physical characteristics identical to Sally's and her presence and physical characteristics cause the visual experience of this woman who is identical to Sally. (SEARLE, 1983, p. 69-70)

In each case, both in which we take into account the (l) Network of intentional states – memories of Sally's experiences – and in the cases in which we take into account her (rt) physical characteristics for perceptive recognition of the Background's capabilities or in the case in which (s) Sally is replaced at her birth, there is an indexicality, that is, a context in which Bill Jones establishes who he references in the intentional content as a way of achieving his satisfaction conditions:

> And the shared aspect of the experience involves more than just that I believe that you and I seeing the same thing; but the seeing itself must make reference to that belief, since if the belief is false then something in the content of my experience is unsatisfied: I am not seeing what I took myself to be seeing. (SEARLE, 1983, p. 71)

What makes it possible for both Bill Joneses to share the same visual experience are their respective perceptive apparatuses that are located in their bodies and make them perceive the world and have perceptive experiences. If Bill Jones and Bill Jones twin have the visual experience of the same intentional object, this does not mean that they observe it from the same aspect, because, as mentioned previously, each one has a Network of intentional states unique to him/herself, what they both have in common are the same perceptive capacities. (SEARLE, 1983, p. 70-1)

3.4.4. Causation, causal inference and visual perception

If objects cause the experience, the individual who perceives them does not necessarily perceive the objects, and it is impossible to know whether objects cause the experience because it is impossible to observe the two aspects – object stimulus and visual experience – separately to identify a causal relationship between both aspects. (SEARLE, 1983, p. 71-2)

Let us return once again to the example of the golden cooperative bakery. For an individual to actually see the golden cooperative bakery, his or her visual experiences seem to be caused by such a state of affairs. Therefore, for the individual to know that there really is a golden cooperative bakery, taking into account his or her own visual experiences, he or she must know that the state of affairs itself caused the visual experience. To recognize such a causal relationship – that is, between the stimulus of the object – the golden cooperative bakery – and the visual experience – this happens according to a causal inference – just as we saw about the difference between “seeing” and “seeing that” in **3.4.1. Representation, perception and belief** “the individual saw that there is a bakery in front of him or her”. A

causal inference refers to the nature and presence of the perceptual experience and, consequently, the existence of the characteristics of the intentional object – the golden cooperative bakery – as a cause. However, there is no justification for a causal inference because there is no way to objectively verify it, which makes it observational and unobservable – just as we saw in **3.3. The ontological character of intentional states**. This is because the only access one has to the intentional object – the yellow cooperative bakery – is through other perceptual experiences and not through linguistic entities. It is impossible to verify the inference of the visual experience in relation to the state of things itself. Thus, it is impossible to truly know that the intentional object caused the individual's perceptual experience, when we refer to causal inferences – that is, reports. Which also makes it impossible to know whether there is an intentional object taking into account only my visual experiences. (SEARLE, 1983, 71-3)

Let us consider the form of the argument about perceptual experience and causal inference that we mentioned in the previous paragraph. First, seeing x implies that x causes the visual experience. Second, knowing x on the basis of visual experience implies knowing that x caused the visual experience. Third, knowing that x caused the visual experience implies a valid causal inference from the visual experience to x. Fourth, valid causal inference implies a verification of the inference, but there is no way to verify a linguistic entity, that is, there is no way for the causal inference to be valid. Fifth, there is no way to know that x caused the visual experience. Sixth, there is no way to know how to see x, given the visual experience. The error in the argument lies in the causal inference because the individual does not infer that he sees a golden cooperative bakery, he simply sees it. (SEARLE, 1983, p. 72-3)

In intentional causation – we will address this issue more clearly in **3.7. Intentional causation** – there is a distinction between the intentional object and the state of affairs in the world. Taking into account that the state of affairs in the world satisfies the conditions for satisfaction of the intentional object. If someone has the experience of a golden cooperative bakery and it is satisfied. This experience may not be literally as inferred, but it is literally caused by a state of affairs in the world. Regarding perception and causal inference, it is possible to obtain two conclusions: (eq) The individual who perceives can have an experience qualitatively indistinguishable from what the inference provides and, even so, there is a golden cooperative bakery and (ic) in the perceptual situation between individual and object – golden cooperative bakery –, for there to be a golden cooperative bakery present, it is necessary for the individual to infer the existence of the object through a causal inference

from this visual experience. Of these two conclusions (eq) is true and a logical consequence of what has been discussed about Intentionality, that the intentional state determines the conditions of satisfaction and that, eventually, this intentional state may not be satisfied and (ic) is false because, causal inferences are – as previously discussed in **3.3.2.1. Extensional, intensional-with-an-s and intentional-with-a-t propositions** – linguistic entities.

3.5. Intentionality and action

We have argued so far that intentionality consists of deliberative actions, perceptual experiences or speech acts expressed by mental states involving beliefs or desires. Every intentional state necessarily has a psychological mode, an intentional content and an intentional object, conditions of satisfaction, direction of fit, causal self-referentiality – for propositions –, direction of causation – both causal self-referentiality and direction of causation will be addressed in **3.7. Intentional causation** –, a Network of other intentional states, a Background of non-representational capacities – the latter two will be addressed in **3.8. Intentional, Network and Background** –, presentations of representations – that are intensional-with-an-s, as was addressed in **3.3.2.1. Extensional, intensional-with-an-s and intentional-with-a-t propositions** – or presentations of stimuli for bodily perceptions. Thus, Searle (1983) admits that:

> Just as my belief is satisfied iff the state of affairs represented by the content of the belief actually obtains, and my desire is satisfied iff the state of affairs represented by the content of the desire comes to pass, so my intentions is satisfied iff the *action* represented by the content of the intention is actually performed. (SEARLE, 1983, p. 79)

In our mind, an intentional state is represented by images or statements that range from syntax – as described in the previous paragraph – to semantics. Images or sentences are manifested through intentionality-with-a-t – which is the ontological characteristic of causation of intentional states in our brain, we saw this in **3.3.2.1. Extensional, intensional-with-an-s, and intentional-with-a-t propositions** and we will see in greater detail in **3.7. Intentional causation** – and represent intentional states. Intentional states that have an intentional object that represents their satisfaction conditions are considered extensional, if the intentional state does not have an intentional object, consequently it does not have satisfaction conditions and is considered intensional-with-an-s. (SEARLE, 1983, p. 80)

A deliberative action only represents the conditions for satisfying its intention, for

example, “I want to have sixty-two kilos by the end of December”. As commonly expressed in this chapter, it is the intentional content that will delimit the conditions for satisfaction – just in case, just access **Table 3.2**. In this sense, everything that is manifested in the intention as conditions for satisfaction is an intentional action. (SEARLE, 1983, p. 80-1)

How can we define intentions and actions in a way that allows us to distinguish them? What is the type of relationship between them? Why does one manifest itself as a condition of satisfaction for the other? Well, one way to know whether or not a statement denotes a type of action is to check whether it can be transposed into the imperative, using the example mentioned in the previous paragraph. This transposition occurs by replacing the intentional mode/modality of the statement: “I will be weighing one hundred and thirty seven pounds by the end of December” or “I will be weighing one hundred and thirty seven pounds by the end of December” in a classic imperative in which the subject is hidden in the sentence. (SEARLE, 1983, p. 80-1)

We call action or deliberative action the conditions of satisfaction of an intention – in the sense of intending, not Intentionality. Intending is a type of intentional state, while Intentionality integrates all possible intentional states. Intentions are the only type of intentional state that has a specific name for the conditions of satisfaction, while the other verbs do not. We also have a closer correspondence between action and intention than the other intentional states seen previously. (SEARLE, 1983, p. 81-2)

3.5.1. Intentional actions, unintentional actions, prior intentions and intention in action

It is impossible for an action to exist without a corresponding intention. But there are states of affairs in the world without corresponding beliefs or desires. These states of affairs may even have an event represented in the intentional content of my intention, but the state of affairs itself is not necessarily the satisfaction of my intention. For example, when I get up from my office because I have (x) the intention to have a cup of tea and, however, (r) I end up going to the bathroom. In this example, the second represented event was not part of the original intentional content of my intention to have a cup of tea. Therefore, the first intentional content (x) “I have the intention to have a cup of tea” is an intention that has an action as a condition of satisfaction and the second (r) “going to the bathroom” is a represented event that constitutes an intention, but does not have an action as a condition of satisfaction, because the event itself was not intended as an intentional state. (SEARLE, 1983, p. 81-4)

Let us focus on cases in which the individual has a prior intention to perform the action before the action itself, for example: (x) “he knows he will get the cup of tea because he intends to drink tea” is different from (r) “he suddenly went to the bathroom”. In both examples, the action was performed, but in the first (x) there is a prior intention manifested by intentionality – in the sense of intending – while in the second (r) there is no intention in the execution of the action, the intention is in the action itself. In both Intentional and Unintentional actions there is always an intention in the action, in the sense of the action being performed, while a prior intention only occurs in premeditated actions, as in (x). (SEARLE, 1983, p. 81-4)

In this way, an (x) Intentional action is one that has a prior intention and an intention in the action simultaneously, that is, I have the prior intentional state of intending to do something and, only then, I carry out the action deliberately – thus creating an intention in the action – and an (r) Non-Intentional action is one in which one acts suddenly or spontaneously and, consequently, there is no original intentional state of that action and, therefore, the intention happens within the action itself. Nevertheless, a prior intention happens when there is an original intentional state prior to the action itself, while an intention in the action is the moment in which the action is being carried out – even if there is no original intentional state:

> [...] a prior intention that the agent acts on his intention, or that he carries out his intention, or that he tries to carry it out; but in general we can’t say such things or intentions in action, becausethe intention in action justis the Intentional content of the action [...] (SEARLE, 1983, p. 84)

When we refer to (x) Intentional actions – which imply prior intentions – there are numerous background actions that are not represented in the prior intention, but that are nevertheless carried out intentionally. For example, if “he knows that he is going to get a cup of tea because he intends to drink tea”, in order to reach the conditions of satisfaction of his intentional object, before that, it is necessary that he has a series of background actions, such as remembering having made tea or where the bottle of tea is, making tea, looking for the items needed to make tea – if there is no tea –, moving to the place where the bottle of tea is – or the items needed to make tea and so on. Prior intention and intention in action are causally self-referential in relation to perceptual experiences, Searle (1983) admits that: “(...) their conditions of satisfaction require that the Intentional states themselves stand in certain causal relations to the rest of their conditions of satisfaction.” (SEARLE, 1983, p. 85)

Still referring to the example of (x), let us suppose that the individual performs the

movement of getting up to go and get his cup of tea. The intentional content of his action does not imply that he himself gets up, because for this to happen he needs an intention in the action, that is, to literally get up. In this sense, a prior intention can cause the state of affairs – represented by the condition of getting up to get the intentional object, in this case the cup of tea – which defines the intention – in the sense of intending – without this state of affairs in itself necessarily being the intentional action. After all, an intention in the action is needed to trigger the prior intention and the secondary actions so that the purpose of his prior intention is satisfied in relation to his intentional state. It is possible that the individual performs his movement of getting up without the purpose of his prior intention, that is, that he performs an unintentional action, or he himself may forget his prior intention, perform the movement of getting up and, (r) suddenly go to the bathroom. But, what does accomplishment mean in these previous examples? (SEARLE, 1983, p. 87-9)

We will use the example of anesthesia by William James (2013) in his text "What is an emotion?" to better elucidate the distinction between Intentional actions and Unintentional actions – which in the original text refers to expressing emotions through behavior or not expressing them. (NASCIMENTO, 2013, p. 99) Let us suppose that a doctor anesthetizes his patient and asks him to raise his arm. The patient, in turn, has the prior intention of performing the movement – through the illocutionary act of the doctor's suggestion –, but the intention in the action is not carried out. Now let us consider an inverse example, if the doctor inserts a number of electrodes in the cortex, cerebellum and central nervous system and activates these electrodes in specific regions with the aim of performing the movement in the patient's arm – without there being an illocutionary act of suggestion. In this second example, there is no prior intention – even if induced – to perform the arm movement, but the intention of the action is carried out, so there is no voluntary action because there is no intentional content or intentional state that gives rise to the performance of the movement. In both cases, the performance of a simple movement – of raising the arm – may seem the same, but in the first example there is an Intentional action and in the second example there is an Unintentional action. (SEARLE, 1983, p. 89-90)

What is the difference between both examples? How can the patient distinguish the Intentional action from the Unintentional action? The answer to the first question is that both examples convey different sensations and, consequently, different bodily perceptions to the patient, and the answer to the second question lies in the logical difference, since the conscious experience of performing the movement of one's own arm has conditions of satisfaction - which will be frustrated according to the first example, because the patient is

anesthetized. The main distinction between both examples is in frustrating their conditions of satisfaction, which can be applied in the first example because there is a prior intention and cannot be applied in the second example because the action is not voluntary and, consequently, the patient only observes while his body performs the movement of raising the arm:

> Because our aim is to explain the relations between intentions and actions; and since an action is, in some sense at least, the condition of satisfactionof the intention to perform it, any attempt to clarify these relations must make completely explicit how the Intention contentof the intention represents (or presents) the action (or movement) as its conditions of satisfaction. (SEARLE, 1983, p. 92)

We can, therefore, characterize the experience of acting as the sum of an intentional content – presented so far as prior intention – plus the action of movement – presented so far as intention in action. Every conscious action that we perform, from the simplest – such as raising an arm – to the most complex – such as flying a helicopter or playing the piano – necessarily requires a prior intention, and the performance of the action is the very manifestation of the intention in action. Therefore, the intentional component of an Intentional action is the experience of acting; its condition of satisfaction is that there is bodily movement; its direction of fit is world-to-mind – because for the experience of acting to exist, there must be intention in action –; and its direction of causation is mind-to-world – because for an Intentional action to exist, there must be prior intention – and its corresponding characteristic in the world is the performance of bodily movement. (SEARLE, 1983, 90-2)

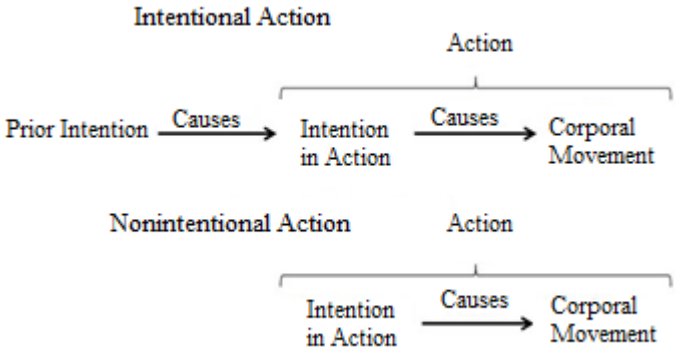
The general formula for Intentional actions can be explained as follows: if I intend to x, then I perform x. In this way, I perform the action of x by performing the intention of x. Note that “intending to x” represents the prior intention while “performing x” represents the intention in action. The formula in general represents a complete voluntary action, as well as its conditions of satisfaction – the performance of the movement. Note that when the components are separated, they are quite different in the sense that “performing x” represents the physical movement while “intending to x” represents the intentional state of the Intentional action. If we analyze the component “performing x” in isolation, we are addressing a situation in which the movement itself is the intentional object, similarly, if we analyze the component “intending to x” in isolation, we are addressing a complete situation of an intentional object:

> The intention in action, like the prior intention, is self-referential in the sense that its

> Intentional content determines that is satisfied only if the event that is its condition of satisfaction is caused by it. [...] the intention in action will be much more determinate than the prior intention, it will include not only that my arm goes up but that it goes in a certain way and ata certain speed, etc. (SEARLE, 1983, p. 93)

We will use **Figure 3.6** as a more didactic way of presenting the distinction between Intentional actions and Unintentional actions, as well as the role of prior intention and intent in the action – or the absence of the prior intention component, in the case of non-voluntary actions:

Figure 3.6 – Flowchart of Intentional Actions and Unintentional Actions



Source: adaptation of the image on page 94 of the book Intentionality by John Searle.

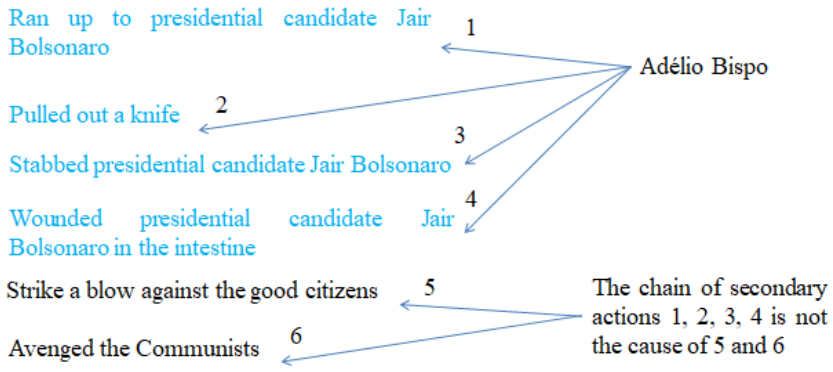
As shown in **Figure 3.6**, prior intention is self-referential and causal, and the representation of the experience of acting causes an action that results in two components, namely the intention in the action – which is also self-referential – and the bodily movement itself. Therefore, prior intention causes intention in the action, which in turn causes the presentation of my arm rising and the movement of my arm. Presentation comes before movement because if the movement is not performed – as is the case with anesthesia – the intentional content – or propositional content, if the action is premeditated to the point of being thought of as a linguistic entity – of the state becomes intensional-with-an-s – as we have already seen in 3.3.2.1. Extensional, intensional-with-an-s and intentional-with-a-t propositions.

3.5.2. Complex actions and accordion effect

Complex intentions are constituted by additional conditions of satisfaction in addition to the body movement, but by a chain of secondary actions of the main intentional action, the

entire set of the main intentional action plus the secondary actions represent the content of the complex intention. This peculiarity of having additional conditions of satisfaction is what characterizes it in its causation. The amount of additional satisfaction conditions characterizes the accordion effect in a complex action. Well, let's see in **Figure 3.7** an example of two examples of complex actions and accordion effects:

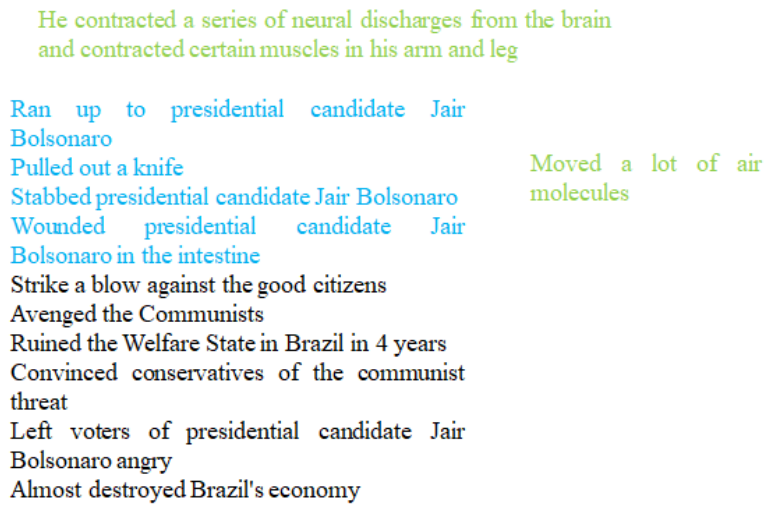
Figure 3.7 – First chain of secondary actions as an accordion effect of a complex action



Source: adaptation of the image on page 98 of the book Intentionality by John Searle.

The elements of the list plus the causal relationships between them define the conditions of satisfaction of a single intention in action of a complex action on the part of Adélio Bispo. Let us now see what the expansion of this list means, which serves as additional conditions of satisfaction so that this accordion effect is, hypothetically, characterized as an unintentional action, mixing the second example of anesthesia with the event that occurred in **Figure 3.7** in **Figure 3.8**:

Figure 3.8 – First chain of secondary actions as an accordion effect of a complex action



Source: adaptation of the image on page 99 of the book Intentionality by John Searle.

When we refer to Intentional actions, the limits of the accordion effect – elucidated by the list of actions – are equivalent to the limits of the complex intention. The accordion effect is present in Intentional actions due to the fact that we have complex intentions in a way analogous to the structure demonstrated in **Figure 3.7**. However, as demonstrated in the hypothetical example in **Figure 3.8**, a complex intention does not determine the limits of the prior intention in the action, because there may be non-Intentional actions that indirectly permeate the complex action itself. (SEARLE, 1983, p. 99)

Thus, we can distinguish a basic action from a complex action as follows. The general definition of basic actions is: x is a type of basic action for an individual if and only if the individual is capable of performing actions of type x and the individual intends to do x in such a way that he does not perform any other action through which he intends to do x. The general definition of complex action is: x is a type of complex action for an individual such that x has a, b, c, d...n secondary actions and the individual intends to do x in such a way that he can trigger the accordion effect of the secondary actions a, b, c, d...n, in addition to what he intends to do with x:

> Complex intentions are those where the conditions of satisfaction include not just a bodily movement *a*, but some further components of the action *b*, *c*, *d*, ..., which we intended to perform by way of (or by means of, or in, or by, etc.) performing *a*, *b*, *c*, ..., and the representation of both *a*, *b*, *c*, ... and the relations among them are included in the content of the comple intention. It is a remarkable and little-noted fact of human and animal evolution that we have the capacity to make intentional bodily movements wherethe conditions of satisfaction of our intentions go beyond the bodily movements. (SEARLE, 1983, p. 99)

It is important to remember that the definition of basic action is relative to the background capabilities of the individual performing it, in the sense that what is basic for one individual – such as tuning a musical instrument – may not be the same reality for another. If two individuals, with the same capabilities, are performing the same actions, then the physical movements become identical – musicals and dance performances can be enlightening examples. (SEARLE, 1983, p. 100)

3.5.2.1. Unintentional complex actions

We have already explained here that unintentional actions have two components, namely, an intention in the action and a bodily movement – see **Figure 3.6** for a reminder. The intentional object of the unintentional action is the action itself and its intentional object

characterizes its own conditions of satisfaction. And a complex action – as explained in the previous paragraphs – is one that has a sequence of secondary actions that form an accordion effect and, consequently, more than one condition of satisfaction. It was also explained, without further details, that unintentional actions can, eventually, be complex actions – as outlined in the hypothetical example in **Figure 3.8**. (SEARLE, 1983, p. 100-1)

Let us use an example from literature to clarify the notion of complex unintentional actions. Let us take the central idea of the tragedy of Oedipus. At his birth, his parents learned through an oracle that Oedipus would kill his own father in order to marry his mother. Upon realizing this, his father, Laius, the king of Thebes, decided to pierce the baby's knees – so that he would not be able to crawl in the forest – and gave him to a sheperd, ordering him to abandon the baby in the forest. Halfway there, the sheperd was unable to fulfill the agreement he had made with the King. He saw a family of middle-aged farmers and handed the child over. The farmers, being lonely, raised the baby as best they could. When Oedipus reached adulthood, he went to the oracle, who told him that his destiny was to kill his father and marry his own mother. Terrified of his destiny, Oedipus decided to abandon the farmers who had raised him and went out to live as a wanderer for fear of fulfilling his destiny. At the same time, King Laius decides to go hunting and stays away from Thebes for a while. The two meet and Laius is extremely arrogant towards Oedipus, the two start a confrontation and Oedipus kills Laius during the fight. He continues his journey and finds Thebes, the citizens inform him that the king is dead, he falls in love with Jocasta, the queen of Thebes - who, in addition to being queen, is his own mother - and marries her. (MURRAY, 1912, p. 41-71)

According to the central idea of the tragedy of Oedipus, King Oedipus performs the basic Intentional action of marrying Jocasta, but in doing so, he performs the Unintentional action of marrying his own mother. Marrying his own mother is neither part of the intentional content nor the intentional object of Oedipus' basic action. However, both conditions of satisfaction occurred simultaneously. Therefore, the condition of satisfaction of the Intentional action "marrying Jocasta" was satisfied and the condition of satisfaction of the Unintentional action "marrying his own mother" was also satisfied. We have an example of a Unintentional complex action, because the Intentional action itself provides us with a secondary action that is not Intentional, which expands the number of conditions of satisfaction of the action itself. The experience of acting itself has nothing to do with the represented propositional content; the Intentional content of Oedipus' action can be realized even if he does not express it linguistically:

> The sense in which one and the same event or sequence of events can be both an intentional action and an unintentional action has no intrinsic connection with linguistic representation but rather with Intentional presentation. (SEARLE, 1983, p. 101)

Indeed, how can we differentiate the aspects of the complex action of which it is constituted? How can we distinguish the conditions of satisfaction of unintentional actions if they are events that are not even actions? The answer is given in unison: there is no. There are no concise criteria or methods to distinguish or differentiate both actions in an accordion effect. (SEARLE, 1983, p. 101-2)

3.5.3. Absntentions and clairvoyance

An abstention from an action occurs when there is a prior intention to act as a mental act – or representation –, this representation causes the intention in action, but the bodily movement itself is not performed. In this way, only the mental act is performed and the intention in action causes the non-occurrence of the bodily movement. The abstention from bodily movement, in turn, can be characterized as part of the conditions for satisfying the intention in action or it can be the non-realization of the bodily movement:

> Mental acts are formally isomorphic to the case of physical acts we considered. The only difference is that in the placeof a bodily movement as a condition of satisfaction we have a purely mental event. (SEARLE, 1983, p. 103)

Clairvoyance in relation to Intention occurs when a third person knows that an action by another will have a certain consequence and this third person intends this consequence. We have knowledge, to a certain extent logical, that a certain event will happen as a result of a certain action. Using the tragedy of Oedipus the King as an example, by marrying Jocasta, Oedipus intended to become king, but in doing so, he also triggered the condition of satisfaction of his destiny. Therefore, it can be said that the content of his intention was satisfied – to become king –, but not that of his belief – to avoid killing his father and marry his mother –. Furthermore, there is a relationship of clairvoyance from the point of view of the oracle to Oedipus, because he categorically states the consequence of Oedipus' action. Similarly, there is also the mistake of assuming the existence of an identity between intention and responsibility. (SEARLE, 1983, p. 103)

3.5.4. Reduction of intentions to beliefs and desires

It is now time to analyze whether we can reduce previous intentions in the experience of acting to beliefs and desires, according to the following formula: “if x intends to do y, then x must believe that it is possible to do y and x must have the desire to do y”. In this formula, desire is sometimes secondary, when, for example, an individual wants to cut back on his expenses as a means to pay off his debts and not to cut back on expenses for its own sake. In this sense, it is not necessary for the individual to actually believe that he will be able to cut back on expenses, but he must at least believe that it is possible for him to do so. (SEARLE, 1983, p. 103-4)

This means that the desire for the state in question is self-referential and causes its conditions of satisfaction, and that the fact that the individual believes that the state of affairs will happen causally in the sense of producing its own conditions of satisfaction. Emphasizing that belief does not imply belief in the success of the state of affairs, but rather in the possibility of success of that state of affairs. It is worth noting that belief and desires are not primary forms of cognition and volition because both lack self-referentiality – because they can be representations of representations, as we have mentioned incessantly until now – an internal causality that connects cognition and belief or desire to their conditions of satisfaction. Primary forms of intentionality occur through perception and action, because they involve the individual in direct causal relations with the environment in which he is inserted and on which he depends for his survival. When cognition and volition are excluded from the causal self-referentiality of intentional states, only the beliefs and desires in question remain in relation to the intentional content itself. (SEARLE, 1983, p. 104-5)

As discussed in **3.3.2. Belief as representation** and **3.3.2.1. Extensional, intensional-with-an-s and intentional-with-a-t propositions**, a belief can refer to anything and not necessarily to the stimulus that could have caused it – as is the case in the example of “John T. believes he is a sorcerer” – and a desire can refer to any state of affairs, but this does not mean that its conditions of satisfaction are met – presidential candidate Jair Messias Bolsonaro has the desire to be reelected in the 2022 presidential elections, for example. In this sense, belief differs from memory, because a memory necessarily involves a perceptive experience of a sensory stimulus that has already happened to the individual in question – as when we remember that during the period of the Workers' Party in Brazil, the economy was stable due to the low cost of living in general – whereas this relationship does not occur with belief – I can, for example, believe that the earth is flat and this belief does not in fact have any self-referentiality with any external perceptive stimulus in the state of affairs of the world.

A similar analogy is valid for the difference between desire and intentionality, we use the example we used previously, the presidential candidate Jair Messias Bolsonaro may have the desire to be reelected president of Brazil in the 2022 elections, but this does not imply that the conditions of satisfying his intentional content will be realized, because, as we mentioned in **3.3.1.2. Truth conditions and conditions of satisfaction** – and we will address this in greater detail in **3.8. Intentional, Network and Background** – there is a Network of other adjacent intentional states and a Background of capabilities that may go against your desire to be re-elected as president of Brazil in 2022. (SEARLE, 1983, 105-6)

3.5.5. Perceptual experiences, memories, intentional action and prior intention

According to what was discussed in **3.4. Intentionality and perception** and throughout this chapter. In addition to intentional states composed of illocutionary forces and propositional contents, we have perceptual experiences and experiences of acting that can eventually become intentional states. In this context, a visual experience has two components, the visual experience itself and the state of affairs in the world that is the visual stimulus for the Intentional content of the visual experience; if, by chance, there is no stimulus for the visual experience, the conditions of satisfaction are not met – and it becomes a hallucination or a delusion. When a visual experience has the stimulus of the state of affairs in the world, it can be re-presented in your mind through memory; a memory, in turn, represents a visual experience and is a self-referential content of the visual experience itself. We have seen in this chapter that an action has two components that consist of the experience of acting and the movement itself that characterizes its conditions of satisfaction. Broadly speaking, an action is self-referential, because if the movement is not caused by the intention in the action, the conditions of satisfaction are not realized. Furthermore, actions are divided into Intentional and Unintentional. The basic difference between the two is that the Intentional content of Intentional actions is in the prior intention, while in Unintentional actions the Intentional content is found in the experience of acting itself. A memory is not essential for the individual to have a visual experience and, analogously, a prior intention is not necessary for the experience of acting. The direction of fit in each of these isolated cases is never accidental; they always have a specific form and direction:

> [...] When I try to make the world be the way I intend it to *be* (world-to-mind direction of fit) only if I *make* it be that way (mind-to-world direction of causation). Analogously, see the world the way it really *is* (mind-to-world direction of fit) only

> if the way the world is *makes* me see it that way (world-to-mind direction of causation). (SEARLE, 1983, p. 96)

The conditions of satisfaction of each of these cases vary according to the direction of fit and direction of causation in each case. Emphasizing that the direction of fit is always in relation to what we realize in our mind – whether through perceptions, actions, images or linguistic entities – in relation to the correspondence with the states of affairs in the world, while the direction of causation is always in relation to the stimulus of the state of affairs that exists in the world – which can be through actions, perceptions or speech acts – and the experience of what is realized in the world. We will use **Table 3.2** to demonstrate in a clearer and more concise way all the main aspects involving perceptions, memories, actions and previous intentions:

Table 3.2 – Main aspects of previous perceptions, memories, actions and intentions

	Visual perception	**Memory**	**Intentional Action**	**Prior Intention**
Realization	I see x	I remember x	I raise my arm	I intend to raise my arm
Nature of the intentional component	Visual experience	Memory of the visual experience	Intention in action or experience of acting	Prior intention
Presentation/ Representation	presentation	representation	presentation	representation
Conditions of satisfaction of the intentional state	The perceptive stimulus of the state of affairs in the world	Let there be a mental event of seeing x with two components: the visual experience and the mental event that causes the memory	Let there be the action of raising the arm caused by the intention in action	That there is an actionof raising the arm with two components: the prior intention of the arm to raise which causes intention in action and the bodily movement
Direction of fit	Mind-to-world	Mind-to-world	World-to-mind	World-to-mind
Direction of causation	World-to-mind	World-to-mind	Mind-to-world	Mind-to-world
Self-referencing of Intentional	Part of the conditions of things in the world	Being caused by the rest of the conditions of satisfaction:	Intention in action must cause the conditions of	It must cause the rest of the conditions to be satisfied

Content		the perceptual experience generating the memory	satisfaction	
Corresponding external stimulus in the world (intentional object)	The state of affair in the world	The mental eventof the state of affairs in the world	Arm movement	Arm movement and arm raising action

Source: Adaptation of the table on page 97 of the book Intentionality by John Searle.

3.5.6. Intentionality and collective actions

Collective actions occur through three factors that correlate, namely: intuition, the Network of intentional states and a Background of capabilities. It cannot be characterized as a primitive phenomenon – in the sense that x achieves y, as we intend to do y – like the act of speaking, experiences of acting or perceptive experiences, nor should it be interpreted as a sum of individual behaviors that generate the desired effect. Having presented the general definitions, is the role of intuition in relation to collective actions correct? How can we describe a collective intention in an orderly manner? (SEARLE, 2002b, p. 90-1)

The logic of collective intentional behavior differs from individual behavior in the sense that it is not reducible to a triggering followed by individual intentional states. How does collective behavior occur organically? How is it possible to say “we intend to x” without the effect of this action being a triggering of actions “individual a intends to x”, “individual b intends to x”, and so on? What are the intrinsic components of collective behavior? (SEARLE, 2010, p. 91-3)

Collective behavior is intuitive in the sense that it is a biologically primitive form of our animal life. It usually involves language, but this is not always necessary, or it is limited to conventional forms of behavior. Let us use a soccer example to better explain that a collective action is not equivalent to the sum of individual actions. If the (fb) full-back makes a pass to the left winger, the intention is for the left winger to run towards the pass made by the full-back; in this case, the left winger's intention to get the ball is independent of the other players who, if they play on the same team, perform other specific functions on the field or, if they are on the opposing team, try to intercept the pass. Let us now look at the example of a collective intentional action – or collective intention – using the same example from football,

(d) if in the same throw-in, the defenders decide to create an offside line, this intentional action is not individual, it is collective, in the sense that all defenders necessarily need to execute the intentional content of the collective action of the offside line at the same time, if one of the defenders does not carry out the command, the offside line does not work. In both cases – (fb) and (d) – people run and perform similar movements, the difference is that in case (d) the movement needs to be necessarily organic in order for it to be performed:

> [...] part of the difference is that the form of the intentionality in the first case is that each person has an intention that he could express without reference to the others, even in a case where each has mutual knowledge of the intentions of the others. In this case at least, it seems no set of "I intend"s, even supplemented with beliefs about other "I intend"s, is sufficient to get to the "we intend". Intuitively, in the collective case the individual intentionality, expressed by "I am doing act A", is derivate fromthe collective intentionality "We are doing act A." (SEARLE, 2002b, p. 92)

In example (d) each team member will share the collective intention to perform the action, however each player has a specific individual assignment to perform the action and this action will have a different content from that of the collective one. Still in example (d), the collective intention is to create the offside line, defender A has the intentional assignment to organize the offside line and give the command – running first – for the other players to imitate him, defender B intends to anticipate to try to intercept the throw-in to the left winger and defenders C, D and E – who make up the offside line – maintain the tactical scheme by simultaneously observing the movement of the other players on the opposing team and awaiting the command from defender A. (SEARLE, 2002b, p. 93-5)

Thus, collective actions can be understood as sets of individual attributions that share a specific belief – in example (d) the belief that if defender B does not intercept the ball, defender A will command the offside line, thus leaving the opposing left winger offside – about the actions of the other members of the group – and it is not a sum of individual actions because the set of actions of defenders A, B, C, D and E happen simultaneously, they do not wait for what will happen in the event of defender B, to see if he is successful in intercepting the ball and only then the offside line event happens. There is no collective unconscious behind all these actions, but rather an organic execution of individual attributions with the purpose of "we will do x" – we will carry out the offside line, as in (d). (SEARLE, 2002b, p. 93)

Therefore, still in example (d) defender A is a member of a group that has the collective action "we intend to enforce the offside line"; defender A believes that there are

preconditions for success for the situation and believes that the other members of the group will do – or will probably do – their part in enforcing the offside line and believes that there is a reciprocal belief among the members of the group that the conditions for success for the offside line will be met – in parallel, there is the belief of defender B that the ball will be intercepted. (SEARLE, 2002b, p. 93-4)

Now, using the example of (fb), the members of the group may satisfy all the conditions of the game and still not have a collective action. The full-back in (l) may believe that the precondition for success for the collective action in (d) is given by deciding to dribble past defender B of the opposing team, instead of making the pass to the left winger. The full-back may know that there is an individualistic predisposition among the members of his group to resolve situations on the field individually and simply not make the pass. In this expansion of the example of (l) there is still no collective action, for it to exist, there must be a set of individual attributions, for example, the full-back, the left winger and the defensive midfielder of (fb) believe that the precondition for success of (d) is given and organically carry out their own individual attributions, the left winger has the individual attribution of insisting on the throw-in, even knowing that he will be offside, the midfielder has the attribution of positioning himself as an attacking midfielder and infiltrating between the four defenders – A, C, D and E – and the full-back can use the individualistic predispositions to resolve the situations individually, dribbling defender B and making the throw-in to the defensive midfielder who is infiltrating the offside line. In this collective action for (fb) there is the collective action "we will anticipate the offside line", according to the belief "the preconditions of the collective action of (d) will be fulfilled". (SEARLE, 2002b, p. 94-5)

In a collective action there is always an intention-we added to individual attributions – each one doing his/her part. It can never be reduced to an individual action even if it is stimulated by reciprocal beliefs, because an individual action does not presuppose the notion of cooperation:

> One can have a goal, in the knowledge that others also have the same goal, and one can have beliefs and even mutual beliefs about the goal that is shared by the members of a group, without there being necessarily any cooperation among the members or any intention to cooperate among the members. (SEARLE, 2002b, p. 95)

This is due to the fact that a society is supported by individuals and for intentional actions to happen, mutual cooperation is necessary in favor of a belief and intuition so that the set of actions is carried out according to an intention we, as in the example of (d) of "we are

going to make an offside line". Furthermore, it always happens through an individual action, in the sense of doing my part within the set of assignments so that the collective action is carried out. Still in the example of (d) if defender A has the intentional assignment to organize the offside line and carry out the command – run first – so that the other players imitate him, this implies that he needs intuition and belief in the we-intention that the other individual assignments – of defenders C, D and E – will occur, so that the collective action is carried out.

3.6. Intention in meaning

Intentional states are part of our biological life. Both language and meaning emerged in the history of human evolution long after their existence in nature. Other organisms, besides humans, have perceptual experiences and experiences of acting and, at least the vast majority, have beliefs and desires. However, language and meaning as a linguistic entity is a characteristic that, perhaps, only humans possess. When we refer to meaning in this section, we are referring to speech acts, that is, what a speaker utters as an utterance that – as discussed in **3.3.1.1. Classes of speech acts: assertive, directive and compromising** – can be affirmations, negations, orders, commands, requests, vows, promises or guarantees. In addition, they can also be questions. In general, what has meaning is everything that a speaker utters with the purpose of signifying something in its utterance. (SEARLE, 1983, p. 160)

Searle (1983) uses the same logical structure of speech acts, perceptual experiences and acting experiences to construct notions of meaning and associates meaning with a form of intentionality. A successful intention of meaning is one that causes an effect on other individuals. When a speaker emits a sound, he produces a physical effect and his intention adds meaning to the physical world, but how can physical causes – sound effects – convey semantic content? Under what circumstances can a listener understand a language that is not his native language? (SEARLE, 1983, p. 161)

As we discussed in **3.5. Intentionality in action**, an intentional action happens according to a prior intention that causes an intention in action which, in turn, causes bodily movement. Moving a vocal cord, therefore, is performing a bodily movement, and thinking about a statement or a speech to be delivered to a listener or a group of listeners is, in effect, a prior intention that will be caused by the intention in action to move the vocal cords, which in turn will move the vocal cords with the purpose of performing the speech thought of in the prior intention. Similarly, imagining a painting, graffiti on a wall, thinking about a musical arrangement, a soccer dribble or a skateboarding maneuver all of these examples represent

prior intentions and each of them has a meaning – each in its own way:

> In order to get clear about meaning intentions, we must understand these various notions: the distinction between prior intentions and intentions in action, the causal and self-referencial character of both and the presence of both causal and non-causal conditions in complex intentions, whether prior intentions or intentions in action. (SEARLE, 1983, p. 163)

How can we define the conditions of satisfaction of intentions in action that have semantic properties? For example, when someone tries to emit sounds through their vocal cords, perform a skateboarding maneuver, or compose a song. In general terms, if someone intends to produce meaning through actions – whether speech acts or experiences of acting – this expression has a double level of intentionality, being one form of intentionality for the intentional state and another expressed in the performance of this act. (SEARLE, 1983, p. 163-4)

The conditions of satisfaction of an intentional state are identical to those for its expression – realization in the world. It is in the realization of an expression that the mind imposes intentionality on the physical expression of the intentional state, and its realization implies the conditions of satisfaction. Therefore, the mind imprints intentionality on the expression itself – whether through the utterance of sounds, arrangements of musical instruments, paintings, graffiti, among others – and the realization of the expression itself imposes the conditions of satisfying of an intentional state in the production of the physical effect of the intentional state. (SEARLE, 1983, p. 164)

This double level also occurs between the psychological mode and the intentional content – it is possible to have a better understanding of both concepts in **Table 3.1** and in **3.3. The ontological character of intentional states** – that the expression is the one realized, in the sense that the truth conditions – we address this conception in a better elaborated way in **3.3.1.2. Truth conditions and conditions of satisfaction** – represent the intentions of signification:

> [...] our account of the meaning intention must explain how it comes about that, though the conditions of satisfactions of the meaning intention are not the same as the condition of satisfaction of the speech of act or of the expressed psychological state, nonetheless the content of the meaning intention must determine both that the speech act and the sincerity conditions have the conditions of satisfaction that they do and they have identical conditions of satisfaction. (SEARLE, 1983, p. 165)

What we have established here is the difference between representation and communication – or representation and expression, in the case of other forms of expressing a

meaning. What we represent in our mind does not always symbolize what we want to communicate, in an analogous way, nor can we always convey what we imagine in a painting, execute in a maneuver or perform on a musical instrument. Communicating – or expressing oneself – always produces some effect on other individuals and an expression can occur without the slightest concern for the effect reproduced on the individuals. Therefore, an expression may not have the intention of producing beliefs or convictions in the individuals who perceive it and the individual who expresses it may perform the expression without believing in the meaning expressed or having the intention that other individuals understand it – as if someone, in their own country, were to converse with other native speakers in another language, for example. (SEARLE, 1999, p. 117-9, 1983, p. 165-6)

3.6.1. Intention to represent and Intention to express

Meaning intentions therefore have two elementary traits: the intention to represent – and this means to represent in our mind – and the intention to communicate or express – and this means to transmit what is represented in our mind to other individuals. Emphasizing that the meaning of what is represented is not always the same as the expression that is transmitted by an individual. (SEARLE, 1999, p. 119-20) Meaning, in turn, is described in the expression:

> Part of what one communicates is the content of one's representations, but one can intend to represent something without intend to communicate. And for speech acts with a propositional content and direction of fit the converse is not the case. One can intend to represent without intending to communicate, but one cannot intend to communicate without intend to represent. (SEARLE, 1983, p. 166)

Regarding speech acts, there are categories among illocutionary acts: assertive acts express something true or false about a state of affairs in the world; compromising acts express commitments or changes about a state of affairs in the world; and expressive acts express feelings and attitudes. The way language represents the world is an extension of the way the mind represents it, and intentionality not only creates the possibilities of expressing a meaning, but also limits the ways of expressing it through language. Therefore, the possibilities and limitations of a meaning are derived from intentionality. (SEARLE, 1983, p. 166-7)

We will use the example that has been used extensively throughout our approach: if an individual performs the basic action of raising his arm. Such a basic action can express different things and, consequently, have different conditions of satisfaction according to each

local Background – we will address the concept of local Background in **3.8.1. General aspects of the Background of capabilities, aptitudes and know-how**. In the military context, this same basic action of raising one's arm can mean the retreat of enemy troops. In this sense, the individual raises his arm as a result of the intention in action, the body movement produced represents his conditions of satisfaction and his direction of mind-to-world fit – or expression-to-world – expresses that the enemy has retreated. The conditions of satisfaction of this basic action imply that the individual's arm is raised and the truth conditions imply that the enemy troops retreat:

> The problem of meaning is how does the mind impose Intentionality on entities that are not intrinsically Intentional? [...] the utterance act is performed with the intention that the utterance itself has conditions of satisfaction. [...] The key element in the analysis of meaning intentions is simply this: For most types of speech acts, meaning intentions is simply this: For most types of speech acts, meaning intentions are at least in part intentions to represent, and an intention to represent is an intention that *the physical events which constitute part of the conditions of satisfaction (in sense of things required) of the intention should themselves have conditions of satisfaction (in the sense of requeriment)*. (SEARLE, 1983, p. 187-8)

As we have already mentioned, the intention of expression consists in the recognition of the expression – in the case of raising one's arm as the retreat of enemy troops – by other individuals. In this case, the intention in action causes the action of raising one's arm, the production of bodily movement represents the conditions of satisfaction, and the direction of fit of the expression is mind-to-world – or world expression – because the individual's aim is to represent to others – through the intention in action – that the enemy troops have retreated. The meaning itself of the intention in action, therefore, is correlated with the representation – and, subsequently, the expression.

3.6.2. Expression utterance and truth conditions

The utterance of a meaning through the intention of expression does not imply that the statement is true, that there is commitment or that there is some guarantee. When someone emits an expression, most of the time certain beliefs are produced in their audience – that is, for the other individuals who interpret it –, but the intention of expression does not imply the truthfulness of the meaning itself. (SEARLE, 1983, p. 168-9) Therefore, it is possible to make an expression and, at the same time, not be committed to the truthfulness of the expression; it is possible to make an expression and fail to be understood and, also, it is possible to make an expression without caring whether your audience will believe or understand it:

> [...] the notion of literal meaning of the sentence only has application relative to a set of background assumptions. The truth conditions of the sentence will vary with variations in these backgrounds assumptions; and given the absence or presence of some background assumptions the sentence does not have determinate truth conditions. (SEARLE, 1983, p. 125)

Thus, the intention of expression implies only the attempt to emit the intention of representation. Whether the expression is auditable, that is, whether it is recognized by other individuals who perceive it, is another question. If the expression symbolizes commitment or guarantees, the guarantees and commitments that I express must have an effect on the world, that is, that I carry out what I expressed. If the expression symbolizes assertions, the affirmations or negations expressed must correspond to reality, otherwise they become intensional-with-an-s. If the expression symbolizes expressives, it simply expresses an intentional state and the truth condition lies in the very emission of the expressive. (SEARLE, 1995b, p. 170-3)

3.6.3. Intentionality and the institution of language

Since organisms are capable of possessing intentional states, they are also capable of relating intentional states to states of affairs in the world. To affirm that an organism has intentional states implies affirming that the organism is aware of the conditions under which its interests are satisfied. Therefore, if an organism has beliefs, desires, or intentions, it can either fulfill or be frustrated in fulfilling that state. Now, in what way do organisms—and I am referring here to the possibilities of animals—possess language and transmit it in the realization of their intentional states? (SEARLE, 1983, p. 177)

Expressive intentions are therefore a way of realizing the intentional states of organisms and eventually becoming understood. Each class of speech acts – discussed in **3.3.1.1. Classes of speech acts: assertive, directive and compromising** – is used for social purposes that symbolize something greater than the truth conditions of the expression itself – including cases in which the individual does not want to express something or does not care to want to express it:

> The first thing that our beings need to perform illocutionary acts is some for externalizing, for making publicy recognizable to others, the expressions of ther Intentional states. A being that can do that on purpose, that is, a being does not just express its Intentional states but perform acts for the purpose of letting form of speech act. (SEARLE, 1983, p. 178)

Expressive intentions have extralinguistic purposes, that is, purposes that have a social function that go beyond language itself, in general. According to each class, the purpose of directives is to make other people perform actions, the extralinguistic purpose of assertives is to transmit reliable information and the purpose of compromisings is to create expectations of behavior. All of these extralinguistic purposes have an effect on the audience – that is, on the way in which individuals perceive the emission of the expression – of the intention in action itself and these effects are not always achieved. (SEARLE, 1995b, p. 178-9)

3.7. Intentional causation

As discussed in **2.5. Mental Causation**, **2.4.2 The Irreducibility of Consciousness**, and **3.3.2.1. Extensional, intensional-with-an-s, and intentional-with-a-t propositions**, how can our neuronal synapses cause intentionality in its most varied forms—that is, speech acts, perceptual experiences, and experiences of acting—that we have been mentioning so far? What is the causal relationship between the neurophysiological processes of our brain and intentionality-with-a-t, if the latter is the capacity that organisms have to represent states of affairs in the world? What we know so far is that causality is the mutual relationship between events in the world, and intentionality, in general, is our capacity to impregnate our will in the states of affairs of the world through intentional states manifested in our mental representation. (SEARLE, 1983, p. 112-3)

To better present the conception of causality, we can mention David Hume's famous billiard ball example in which a billiard ball A makes its way until it collides with a ball B and, subsequently, ball B begins to move while ball A rests. What we can take from this example is that the event of ball A colliding with ball B caused the action of ball B to start moving and the rest of ball A. In this traditional view of causality – which was already discussed in **2.5 Mental causation** – when observing the scene of a person playing billiards and performing the action described in the example, we do not see causal connections between the movement of ball A, the collision between ball A and B and, from this collision, the causation of the movement of ball B and the rest of ball A. The observer of this scene will only observe successive events in an orderly manner, but not the causal connections themselves. The constant repetition of these same successive events – or similar successive events – provides us with elements to find a regularity for these pairs of events that are, in principle, causally related:

> [...] billiard ball A makes its inevitable way across the green table where it strikes billiard ball B, at which point B starts to move and A ceases de move. This little scene, endlessly re-enacted, is the paradigm of causality: the event of A's striking B caused the event of B's moving. (SEARLE, 1983, p. 112)

From this example we can draw three general conclusions. The first is that the causal link – discussed in **2.5. Mental causation** as a necessary connection – is not in itself observable. What can be found are causal regularities, regular occurrences in successive events, but the causal link between the events is not observable. The second conclusion is that there are always successive events in which we call the first the cause and the second the effect, and the more we observe these successive events, the more these events are interpreted as a form of universal regularity. For each similar individual case observed in which one event causes the next event – as in the billiard ball example – there must be some description of each event and a causal law that correlates both events. The third conclusion admits that every particular causal relation that has been exemplified implies a universal regularity or – as we saw in **2.5 Mental causation** – this is the conclusion of the Humean theory of causality. (SEARLE, 1983, p. 113)

Thus, there are three different views regarding the second conclusion. From a metaphysical point of view, every particular causal relationship is an example of a universal regularity or universal law. The linguistic point of view infers that it is part of the concept of causation that particular causal statements are arguments for the existence of a causal law that relates to certain successive events. The contemporary point of view does not affirm that a particular causal statement can generate a form of general law, but that there is a general law and that it necessarily needs to be stated through observable statements – alluding to Hume's example, the collision between both balls caused the phenomenon of the movement of ball B and the inertia of ball A – even if there is no causal relationship, the general law can be true if it is described. The third conclusion admits that the regularities of cause and effect are different from the regularities that we find in logic. There are regularities that are not considered as causal regularities because the phenomena are logically related. Where there is a relationship between cause and effect, both events must be logically independent. (SEARLE, 1983, p. 113-4)

There are also five objections – we have already mentioned some of them in **2.5. Mental causation** – to the three conclusions expressed in the previous two paragraphs. First, the conviction that we see causal relationships all the time is based on common sense. We do

not perceive this relationship between cause and effect between two events; this experience happens through regularity. Second, there is no way to differentiate causal regularities from other types of contingent regularities; this objection is associated with Hume's famous statement that the sun will not rise tomorrow. Third, it is not because we perform human actions that we are causally affecting the environment around us. There are two distinct forms of causation, one that involves individuals and the other that involves the state of affairs in the world. Fourth, causes are not actually present in the external world; it is we who imbue the states of affairs in the world with language to denote things. The relationship between cause and effect, in this way, is an association that habit provides us in our mind with the state of affairs in the world, and the more we observe a given state of affairs, the more we become accustomed to that state of affairs until, through habit, we find regularities. And fifth, causality does not differentiate between relationships between cause and effect in which one effect causes another and causal relationships that may exist in permanent states of affairs – such as consciousness in our brain – and the characteristics of objects – or the relationship that gravity exerts on billiard balls. They do not have a relationship between cause and effect in relation to objects; they exist independently of observers. (SEARLE, 1983, p. 114-6)

In this case, the statements that involve causal relationships consist of event x causing event y, as in the example of the billiard balls. Now, the relationship in which gravity exerts on the billiard balls is not a causal effect, it is a permanent state of affairs in the world that exists independently of the possible causal relationship between the billiard balls. Therefore, in the billiard ball example, there is a causal event – the movement of ball A – that initiates the causal relationship – the movement of ball B and the inertia of ball A, while the relationship between gravity and both billiard balls has a causal relationship, but there is no causal event that gives rise to the effect of gravity on the billiard balls:

> I believe it is because they confuse cause relations with causings that adherents of the standard view are inclined to treat causal relations as holding only between events but causal relation exist between things which are not events, e.g. billiard balls and planets. (SEARLE, 1983, p. 116)

Statements that have causal explanations, that is, that infer x caused y, only have a relevant explanatory power to the extent that they are described under causally relevant aspects. The action of x caused the phenomenon seen by y are not aspects on which two events are related – remember in cases where there is a deviation between the perceptual experience and the sensory stimuli and illusions or delusions occur, this aspect is better

addressed in **3.4.1. Representation, perception and belief**. What can be causally related are statements such as “the weather cooled until the stream froze”, because these are causal relations that are independent of observers and, therefore, do not have any causative event as their origin – this example follows the same logic as the explanation of gravity. We can still use the example “the water was heated and boiled” to refer to linguistic entities, this statement has, at the same time, a causative event – the individual who heated the water – an event that is independent of the observers and does not depend on another event as its origin – the heating of the water. (SEARLE, 1995b, p. 116-7)

The explanatory power of statements that do not have a causal event as their origin is much greater than those statements that depend on a causal event as their origin. Because, “being seen” is not in itself a characteristic of the causal event of the association between both events. Thus, it can be admitted that in situations where “x caused y” as in the example of “the cold weather caused the creek to freeze” are extensional while “x causally explains y” can be intensional-with-an-s – because they may not correspond to reality. (SEARLE, 1983, p 117)

3.7.1. The relation between intentional causation, speech acts, perceptual experience, and the experienceof acting

There are explanations related to speech acts, perceptual experiences and the experience of acting, in general, that do not fit the conventional interpretation of causation, the explanation itself about delirium, the illusion of when there is no perceptual stimulus expressed in **3.4.1. Representation, perception and belief** and **3.4.2.2. Interference of the external environment in the presentation of the visual experience**; about unintentional movements and the experience of acting we address in **2.5. Mental causation** and **3.5.1. Intentional Actions, unintentional actions, prior intention and intention in action**; and about speech acts the general approach of when the linguistic entities themselves do not have correspondence with reality – that is, representations of representations – addressed in **3.3.2.1. Extensional, intensional-with-an-s and intentionality-with-a-t propositions** consist of clear elucidations about the non-adaptability of causation in the theory of intentionality, in general. (SEARLE, 1983, p. 117-8)

A causal explanation that has a first event as the cause of a subsequent event – not in cases where we refer to pre-established Laws in the world, such as gravity – when stated can be characterized as a counterfactual statement, what is something counterfactual? It is a

statement that has no correspondence with reality and its intentional content is a presentation of a representation – in the sense of being intensional-with-s, we are referring here to speech acts and not perceptual experiences, presentations in perceptual experiences are the visual stimuli that are presented to our representation; on the other hand, the presentation of a representation, in speech acts, happens in fictional discourses where the intentional content of the belief has no commitment to the state of things in the world. (SEARLE, 1983, p. 117-8)

All described explanations – whether of speech acts, perceptual experiences or experiences of acting – are potentially counterfactual because they are descriptions of events that have already occurred and, except for cases in which the state of affairs remains the same, it may be that there is no longer a correspondence with reality – or that it never existed. There are cases in which described explanations need a general law to be justified, as is the case of the statement "the water was heated and boiled". The non-causal explanation – that is, a general law – that justifies this proposition is the boiling point – which is different for each liquid or solid and has an adverse effect on each of them –, while there are counterfactual statements that do not need a general law such as "I was thirsty, so I drank water":

> Part of my difficulty in giving affirmative answers to these questions that I am much more confident of the truth of my original cause statement and the corresponding causal counterfactual that I have about the existence of any universal regularities that would cover the case. (SEARLE, 1983, p. 118)

In the case of perceptual experience and acting experience, there are two types of causal relations: that of the intentional states that intend each respective experience and the causal relation of the state of affairs in the world. For example, as we have illustrated countless times with the example of the golden cooperative bakery, such a visual experience is usually caused by the encounter with some object in the world – that is, if the visual experience is not a delusion or hallucination. In the case of the acting experience, my intentional state causes the movement of my body; if it is an intentional action, the intentional object of the intentional state is in the prior intention, and if it is an unintentional action, the intentional object of my acting experience is in the intention in action. A comprehensive universal law is not always necessary to support the causal statement of such experiences – although there are universal laws that apply in the experience of perceiving and in the experience of acting. Therefore, one can infer such causal statements without commitment to universal laws. (SEARLE, 1983, p. 118-9)

What differentiates intentional causation from **2.5. Mental causation** is that the form

of its explanation is different from the traditional theory of regularity and causation. In each case mentioned in the previous paragraph, both the causal experience and its counterfactual truth depend only on the experience of the stimulus corresponding to each experience – if it is perceptive, the perceptive stimulus, if it is an action, the stimulus of the action, that is, a prior intention or an intention in the action. These statements in themselves do not commit to the existence of causal laws – because they are descriptions of the events corresponding to each experience. The fact that there are causal laws corresponding to these events – as in the case that the visual stimulus of the golden cooperative bakery itself causes the perceptual experience of the visual experience of the individual who observes it – does not imply that one event causes the other – in this case the visual stimulus causes the perceptual experience which, in turn, causes the individual's experience. Similarly, as we saw in **3.4.1. Representation, perception and belief** and **3.4.2.2. Interference of the external environment in the presentation of the visual experience**, one cannot insist on the truth of these causal explanations – through statements – without there being a belief in the corresponding causal laws, even because if it is a delusion or an illusion, the statement becomes intensional-with-an-s because there is no correspondence of the stimulus – be it perceptive, of prior intention or intention-in-action. (SEARLE, 1983, p. 119-20)

The existence of counterfactuals is not related to the possible events themselves or even the existence of causal laws, in the sense that there is a specific law that implies the validity of the experience of perceiving the golden cooperative bakery and another causal law that implies the perceptual experience that the observer has of the golden cooperative bakery. According to the Humean point of view, the intrinsic characteristic of causation is regularity and for every true causal statement there must be a regularity of causal events that overlaps. (SEARLE, 1983, p. 120-1)

3.7.2. Strutural aspects of intentional causation

In both cases – perceptual experiences and experiences of acting – there seems to be a logical and necessary connection between cause and effect, but this connection remains in the universe of appearances. The phenomenon itself that constitutes each experience, especially if this experience is described by statements and not the phenomenon itself, the cause will be a presentation – here we refer specifically in the sense linked to perceptual experiences – or a representation – in the sense of the intentional state not having a correspondence to the state of things in the world, I repeat, we are not referring to speech acts, specifically – of a cause:

> The reason that there is a logical or internal relation between the description of the cause and the description of the effect in our examples is that in every case there is a logical or internal relation between the cause and effect themselves, since in every case there is an Intentional content that is causally related to its conditions of satisfaction. (SEARLE, 1983, p. 121)

In relation to speech acts, intentional content and conditions of satisfaction are, respectively, cause and effect in a causal regularity. Intentional causation has a structure – when we refer to descriptions of perceptual experiences and experiences of acting –, a self-referential intentional state and the form of self-reference – whether it is prior intention or intention in action – for experiences of acting it is that it is part of the intentional content – as we mentioned at the beginning of the paragraph – and that it causes its conditions of satisfaction. Thus, if I raise my arm – whether through an intention in action or prior intention – it is necessary that the intention causes the raising of the arm, in an analogous way, if there is a flower present, its visual stimulus causes the conditions of satisfaction which, in turn, causes the presentation – not in the sense of speech acts – of the flower and the conditions of satisfaction of this perceptual state cause the presence of the visual stimulus – because if there is no stimulus, there is no presence, if there is no presence, there is no presentation:

> In each case, cause and effect are related as Intentional presentation and conditions of satisfactions. Direction of fit and direction of causation are asymmetrical. Where the direction of causation is world-to-mind, as the case of perception, the direction of fit is mind-to-world; and where the direction of causation is mind-to-world, as in the case of action, the direction of fit is world-to-mind. (SEARLE, 1983, p. 122)

Intentional causation does not always involve self-referential intentional contents. For example, a desire to perform an action can cause an action, even if this action has correspondence with reality, such as the desire to pick an illusory flower that has no visual experience or sensory stimulus as a reference for its intentional content; even if there is no intentional content of the desire, the desire causes the action of the arm movement. Therefore, an intentional state causes or is caused by its own conditions of satisfaction – in the case of the flower, the desire to pick it –, even if there is no intentional content and, therefore, no possibility of realizing or not the conditions of satisfaction. Presenting the formal aspect of intentional causation that we tried to describe:

> [...] if *x* causes *y*, then *x* and *y* stand in a relation of Intentional causation iff
> 1. Either (a) *x* is an Intentional state or event and *y* is (or is part of) the conditions of satisfaction of *x*
> 2. or (b) *y* is an Intentional state or event and *x* is (or is part of) the conditions of

> satisfactions of *y*
> 3. if (a), the Intentionalcontent of *x* is a causally relevant aspect under which it causes *y*
> if (b), the Intentional content of *y* is a causally relevant aspect under which it is caused by *x*. (SEARLE, 1983, p. 123)

We can say that the intentional content is the causally relevant feature of intentional causation statements, because if it does not have conditions of satisfaction – in the case of perceptual experiences a sensory stimulus and in the experience of acting an intention in the action or a prior intention – the statement becomes intensional-with-an-s. Causative statements have the common characteristic x causing y, for example, "the presence of the flower is the cause of the perceptual experience in the observer who observes it". Therefore, causative statements are, roughly speaking, the event of a certain state of affairs causing the occurrence of a presentation for an individual. (SEARLE, 1983, p. 123)

3.7.2.1. The experience of intentional causation

Every appearance of experience of perception or experience of acting is in itself an experience of causation. When we have intentional states and these intentional states have a correlation with the state of affairs of the world, the experience of intentional causation is part of the content that links the intentional content to its conditions of satisfaction – not of the intentional object. In the case of the experience of causation being determinant in the state of affairs itself – as in the example of the golden cooperative bakery –, this experience is shared so that all observers, under the same conditions of observation, perceive it:

> [...] whenevere we perceive the world or act on the world we have self-referential Intentional states of the sort have described and the relationship of causation is part of the *content*, not the object, of these experiences. If the relationship of causation is a relationship of making something happen, then it relationship we all experience whenever we perceive or act, that is, more or less all of the time. (SEARLE, 1983, p. 124)

The experience of causation, therefore, is present all the time in an intrinsic way as part of perceptual experiences and action. Thus, when we perceive a flower or reach out to pick one, we do not see the experience of intentional causation itself, we simply act according to our volitions or have a perceptual experience. Neither the movement nor the presence of the flower are part of the content of their respective experiences; rather, they are both intentional objects of their respective experiences, and the experience of causation is part of the content of the experience of the intentional object. (SEARLE, 1983, p. 124-5)

In effect, the experience of intentional causation has three aspects to be highlighted: (i) it is not in observation or movement, but in the realization of experiences that the experience of causation occurs, because part of the intentional content of the experience – whether perceptive or acting –, when carrying them out intentionally, is that the experience of causation happens and causes the desired effect – whether bodily perception or bodily movement. What we seek to emphasize here is that the experience of causation is part of the phenomenon of the realization of the experience – perceptive or acting – in itself; (ii) we have an awareness of the experience of intentional causation of both our actions and our bodily perceptions, in our actions the experience of intentional causation causes bodily movements and in perception the events and states of affairs of the world cause our perceptual experiences and (iii) the experience of causation is not observable and knowledge of the experience of causation happens through the regularity between events, in the case of the experience of acting it is the action itself – intentional or unintentional – and whatever happens in the world; in the case of perceptual experience it is the event or state of affairs in the world that generates the perceptual experience that is captured by our act of perceiving. (SEARLE, 1983, p. 125-6)

3.7.3. Regularity and intentional causation

If regularity does not play a predominant role in intentional causation, how can we find purpose within the experience of causation? How can we trace regularity beyond the regular recognition of similar events that are eventually associated? Furthermore, is intentional causation a property of the mind's perception and not something we find in the state of affairs of the world? (SEARLE, 1983, p. 126-7)

As we mentioned in **2.5. Mental Causation** and at the beginning of this segment, causation is not a relationship that occurs in the real world. When we associate a certain event as a cause and another certain event as an effect and name it, all we do is produce a belief about a certain state of affairs and denote the meaning of this thing in the real world – as we had already mentioned in **2.5. Mental Causation**, words are not in the world; we are the ones who create the meaning for the states of affairs that exist in the world. In this way, what there are are regular events. Now, how can something devoid of intentionality – such as objects and natural phenomena – interact with our intentional states? (SEARLE, 1983, p. 127-8)

Let us use an example that takes into account regularity in the experience of action. If a child discovers that throwing a stone at a glass window can break it, the child discovers that

the intention in action results in the movement of the hand or arm to throw the stone, which in turn results in the movement of the stone and results in breaking the glass of old Richard's window. It is in these types of events that regularity comes into play, because when the same events are repeated – when he throws the same stone to play target shooting, for example – he can come to the conclusion that the movement of the stone can break the glass of the window. Once the child reaches these conclusions, it becomes part of the conditions of satisfaction of the intention in action that the intention is to break the glass of the window through the regularity of these other events. Searle (1983) admits that: "(...) causation is part of the content of the intention in action, for if the intention in action does not cause the rest of conditions of satisfaction, the intention is not satisfied." (SEARLE, 1983, p. 128)

If we put the example according to the theory of experience of action, the child has a prior intention to break the window pane by hitting it with a stone – this prior intention was born due to the regularity of the events of the child throwing the stone at other objects. The intention in action causes the movement of the arm to throw the stone with the aim of breaking the window pane of old Richard. The movement of the arm causes the throwing of the stone and the movement of the stone causes the window pane to break. In this example, the child's intention for his conditions of satisfaction is not to move his arm and then see what happens; the fact that the movement of the stone causes the window pane of old Richard to break is part of the experience of action and the experience of intentional causation is found in the successive events from the prior intention to the event of the window pane of old Richard being broken in a by-means-of relation:

> It is often said the causality is closely connected to the notion of manipulation; [...] this is correct, but manipulation stands in need of analysis. Manipulating things is precisely exploiting the by-means-of relation.
> One of the points at which the regularity account of causation and the Intentional account of causation come together is the manipulation. (SEARLE, 1983, p. 128)

We have come to the conclusion that the world has causal regularities that can be discovered and become part of the intentional content of an intentional state. The regularity of the events that are in the world allows us to discover them and take them as intentional objects of the content for our intentional states. All these relations are manipulable until we discover their causes through successive events and trial and error of these events until the intentional object of an intentional state occurs. The child does not only have the ability to discover regularities in the events of the world that exist independently of him, in addition, he discovers new instances of regularities in the world. These new discovered instances can be

summarized in the following question: what did the child who could break the glass of old Richard's window with a stone discover? That the rigid object can actually break glass and the experience of having broken the glass. In other words, the child, when carrying out the experience of acting, stops interpreting the events as successive events and begins to interpret them as causally related events. (SEARLE, 1983, p. 129-30)

Therefore, causation is a component of the content of intentional states – whether they are the experience of acting, perceiving, or speech acts. The difference is that in the case of the experience of acting, it is causation that causes the performance of the action as part of the conditions of satisfaction, and in the case of the experience of perceiving, the presence of the perceived object is the cause of the rest of the conditions of satisfaction, that is, the act of perceiving the state of affairs. (SEARLE, 1983, p. 130-1)

3.7.3.1. The relation between the experience of itentional causation and the regularity of the state of affairs in the world

We argued in the last pages that there are two elements that make up the interpretation of causality, the first of which is our experience of intentional causation and the second are the regularities of the states of affairs that exist in the world. During our lives, we have experiences of intentional causation and we make things happen through regularities of intervening events. In this sense, there are regularities in the world that we are able to perceive and incorporate into our experience of acting through our experience of intentional causation and our ability to find patterns in the world. When x causes y, this action promotes an accomplishment of the individual – or of two events that are mutually related. The fact that the individual experiences causation in his action or perception, but this causation in itself does not imply any regularity, especially in relation to the state of affairs in the world:

> A world in which somebody makes something happens but where the event sequence does not instantiate any general of occurence relation is a logically possible world. Yet, at the same time we feel that there must be some important connection between the existence of regularities and our experience of causation. (SEARLE, 1983, p. 132)

How does regularity influence our perception, action or speech acts? If the child moves his arm, then the movement of his arm throws the stone and the throwing of the stone breaks the window of old Richard. The child's action of moving his arm determines the breaking of the window. The regularity of facts, that is, the perception that rigid objects, when

thrown, shatter window panes. This means that a correlation between events of states of affairs in the world – the throwing of rigid objects and their hitting window panes – can change the intentional object of the intentional content of an intentional state. Expressed in another way, the child is no longer moving his arm or moving his arm to throw the stone to see what happens, but moving his arm to throw the stone with the aim of breaking the window of old Richard:

> [...] a condition the possibility of my applying the notion of making something happen is my ability to make some distinction between cases where something really made something happen and cases where it only seemed to make something happen; and a condition of the possibility of that distinction is at least the presumption of some degree of regularity. (SEARLE, 1983, p. 133)

Of course, all this experience of intentional causation applied to the experience of acting and the experience of perceiving only happens according to trial and error, and the more the child uses his intentional state and generates the experience of intentional causation, the closer he will be to satisfying his conditions of satisfaction. All of this involves the principle of the capacities of a Background – we will see this in greater detail in **3.8. Intentional network and Background**. In addition to our capacities to interpret regularities between successive events in the world and to put them into practice through trial and error, the individual's point of view is also a question of Background capacities, and the very idea that there are regularities in the world is part of the Background capacities. (SEARLE, 1983, p. 133)

The idea that regularity exists goes beyond the child's attempt to throw the stone at old Ricardo's window glass, and it is also not a theoretical foundation that explains the action itself. What we would like to make clear is that individuals' background capacities to find regularities in the world are intrinsic to themselves; the only modification that exists from individual to individual is their familiarity in interpreting a given state of affairs in the world. What we emphasize here is that the experience of intentional causation that involves both the intentional action and the throwing of the rigid projectile or the event of breaking old Ricardo's window glass – that is, this entire causal chain – exists as expectations that the conditions for satisfying the intentional state will be realized. (SEARLE, 1983, p. 133-40)

3.8. Intentional network and Background

As we discussed in **3.3.1.2. Truth conditions and conditions of satisfaction**, **3.3.2.**

Belief as representation, **3.4.2.1. The different ways of presenting the same visual experience or the gestalt-form of the visual experience**, **3.4.3. The problem of the particularity of the intentional object**, **3.5.2. Complex actions and the accordion effect**, **3.5.4. Reduction of intentions to beliefs and desires**, **3.5.6. Intentionality and collective actions** and **3.7.3.1. The relationship between the experience of intentional causation and the regularity of the state of affairs in the world**, all intentional states – no matter how simple they are – are correlated to a Network of other intentional states and a unintentional Background that consists of a set of capacities, aptitudes and know-how intrinsic to the individual. Both the Network of Intentional States and the Background of Unintentional Capabilities are tied to the individual's intentional meaning, even if that meaning is not linguistic. (SEARLE, 1983, p. 143-4)

Recalling the example of the elections presented in **3.3.1.2. Truth conditions and conditions of satisfaction**, intentional states have in their own intentional content their conditions of satisfaction and these conditions of satisfaction can sometimes be linked to a Network of other intentional states. Therefore, if an individual has the intentional state of running in the second round of the Brazilian presidential elections, his intentional state alone is not enough for the conditions of satisfaction to be achieved. Before that, it is necessary to have a Network of other intentional states that serve as support for his intentional state, such as: Brazil being a democratic republic, having periodic elections, candidates from several parties running in the elections; the individual who possessed the intentional state receiving the nomination of his party, other individuals must engage in his candidacy, citizens must vote for him and, in effect, he must be elected in the second round. Note that all these conditions described configure the Network of other intentional states that serve as support for the intentional state of the individual who believes he can run in the second round of the presidential elections. In addition, there is a second Network of other smaller intentional states that involve psychological states such as hopes, fears, frustration and anger that involve the choice of which candidate to choose for the second round. (SEARLE, 1983, p. 141-2)

In general, the Network of intentional states involves all unconscious states as minor intentional states, and these directly influence the intentional states of the Network that support the intentional state of the individual who believes it is possible to run in the second round of the presidential elections in Brazil. This entire set of intentional states in the Network is also supported by another set of mental capacities that are not intentional and constitute the Background. These unintentional mental capacities function as preconditions for the intentional states to be realized; for example, the individual will not be able to realize

his belief of going to the second round of the presidential elections if he does not have a great capacity for rhetoric:

> [...] Intentional phenomena such as meanings, understandings, interpretations, beliefs, desires, and experiences only function within a set of Background capacities that are not themselves intentional. [...] whether in language, thought, or experience, only succeeds in representing given a set of nonrepresentational capacities. (SEARLE, 2002a, p. 175)

Therefore, intentional phenomena – whether acting experiences, perceptual experiences, speech acts or thoughts – have their satisfaction conditions determined by a Network of other intentional states Background of non-intentional capacities. A given intentional state does not determine its satisfaction conditions unless it is directed to an appropriate Background and the same intentional state may need different Background capacities to determine its satisfaction conditions. (SEARLE, 2002a, p. 175-6)

3.8.1. General aspects of the Background of capabilities, skills and know-how

O *Background*, de grosso modo, é um conjunto de capacidades mentais que dá condições de possibilidades a um estado intencional – uma representação. Ele em si mesmo não é um estado intencional ou um estado representativo. Os estados intencionais – ou fenômenos intencionais – só são sobre um *Background*, no sentido de que quanto maior for o *Background* de um indivíduo em questão, maior será sua possibilidade de atingir as condições de satisfação de um determinado estado intencional. Somente uma Rede de estados intencionais não é o suficiente para determinar as condições de satisfação de um estado intencional, necessitando assim de um *Background*. (SEARLE, 1983, p. 141, 2002a, p. 175-6)

The non-representational – or unintentional – capacities and abilities of the Background are also known as know-how or practical knowledge. Know-how represents the skills an individual has on how to do things – be it playing the guitar, speaking to crowds or making marshmallow. Furthermore, know-how is different from know-what – knowing that. For example, if I do not have a know-how on how to play the guitar and sing, I will use the know-what that I would not play the guitar in public until I develop this know-how aptitude. Thus, using the logic of the experience of acting, I, hypothetically speaking, would have the prior intention of improving my know-how on how to play the guitar until I have a know-what that it is possible to play the guitar in public. This prior intention, in turn, causes the intention in the action of picking up the guitar and playing it, which, in turn, causes the

simultaneous movement of my fingers, hands and wrists. (SEARLE, 1983, p. 141-2)

The exercise of these capacities and abilities involves presentations – in the sense that we addressed in **3.4.2. Perceptual experience as conscious mental events and presentation of the state of affairs in the world** – and representations. Thus, I need to see the guitar to pick it up and play it, but the ability to recognize and pick up the guitar and the ability to play it are distinct representations. The ability to recognize and pick up the guitar are biological capacities referring to the abilities that normal individuals, under normal conditions, have due to their biological characteristics of thumb and index finger dominance and, in the case of recognition, familiarity with the object. It is this presupposition of Background that is not included in the literal meaning of the statement in question, just as it is not part of the intentional state of the individual who thinks it. The ability to play the guitar consists of a know-how, that is, a practical knowledge that is not intentional, it needs to be developed and, the more familiarity the individual in question has with this ability, the better he will perform the songs in his repertoire. Finally, there is also a local Background that is summarized in the habits, customs and cultural practices of a region. Using the example of the guitar, if I were living in Rio Grande do Sul and played the guitar, it would be common to develop the language of fandango on the guitar, and if I were living in Bahia, it would be common to develop the language of baião on the guitar. Of course, the example of the local Background changes according to the skills, abilities and know-how that will be developed. The three forms of Background – that is, unintentional, basic and local skills, abilities and know-how – in themselves correlate and represent a geography of the Background:

> Now within both the deep and the local Background we need to distinguish those aspects which have to do with "how things are" from those aspects that i have to do with "how to do things" althought it is important to emphatize that there is no sharp dividing line between "how things are for me" and "how I do things". (SEARLE, 1983, p. 144)

Know-how, in turn, represents the way things are – for example, I play the guitar in public because I have dedicated time to mastering its techniques and now I have this aptitude – and know-what represents the way of doing things – for example, I decide not to play my guitar in public because I am aware of my lack of aptitude on the guitar to the point that I dedicate myself at home to mastering its techniques. (SEARLE, 1983, p. 144)

What we seek to explore in order to understand what Background is, is that there are pre-intentional states, in the sense that they are not part of the literal meaning of intentional states. Changing this pre-intentional Background changes the conditions of satisfaction of the

intentional state, even if the meaning of the intentional state does not change. Let us return to the example of the guitar in relation to know-what or the way of doing things: if my pre-intentional aptitude for know-how changes in relation to my intentional state of "I want to play the guitar for the public", the meaning of the intentional state may not change, but if my aptitude for playing the guitar decreases, consequently, the conditions of satisfaction that I expect when playing the guitar in the square will not be realized. (SEARLE, 1983, p. 145)

3.8.2. Literal meaning and Background

When we refer specifically to speech acts, the notion of literal meaning – as was indirectly addressed in **3.4.1. Representation, perception and belief**. The same literal meaning can be associated with different Background presuppositions and, consequently, can determine the truth conditions of a statement itself. These Background capacities are not included in the literal meaning. Let us use two pairs of examples, (i) when I state "x gave y", I use the term "give" in different semantic contexts in such a way that the same term is understood in completely different ways in each case, thus, I can say that "I give alms" and "I give a 'tork'". In the second pair of examples, (ii) I can say that "Giovana took the cup of tea" or "Giovana took the flu". (SEARLE, 1983, p. 145-6, 2002a, p. 178-9)

In each case, the truth conditions of the statements change. The examples demonstrate cases in which understanding is different from grasping the meaning of the term "give", because what is understood, especially in the second example, goes beyond the standard meaning of the term. The same analogy is valid for statements that have the same literal meaning, but are in different languages; for example, saying "Giovana took the cup of tea" is different from saying "Giovana pegou uma xícara de chá". This is an inverse case, but it also does not have the same truth conditions, because we understand the statements in opposite ways. The answer to the same statements would be "yes, she does" and "sim, ela pegou".:

> [...] The same literal expression can make the same contribution to the literal utterance of a variety of sentences, and yet although those sentences will be understood literally – there is no question of metaphor, ambiguity, indirect speech acts, etc. – the expression will be interpreted differently in the different sentences. Why? Because each sentence is interpreted against a Background of human capacities (abilities to engage in certain practices, know-how, ways of doing things, etc.), and those capacities will fix different interpretations, even though the literal meaning of the expression remains constant. (SEARLE, 2002a, p. 179)

From these two pairs of examples there are two sets of facts that we can elucidate:

first, we can understand the same literal meaning differently in each case – as expressed in (i) – and, consequently, have different intentional objects and conditions of satisfaction; and – as expressed in (ii) – we may not understand the statements at all and have no difficulty in grasping the literal meaning of their components. Regarding the statements in (i), it is understood according to a Network of intentional states and a Background of social capabilities and practices – for example, "I give a 'tork'"[31] is a dialect of office boy and motorcycle boy[32] to speed up the motorcycle – in such a way that the understanding of these social practices requires another Background for their comprehension:

> On the conception presented here, it does not come to an end with the grasp of semantic content in isolation or even with semantic content together with a set of presupposed beliefs, but rather the semantic content only functions against a Background that consists of cultural and biological know-how and it is this Background know-how which enable us to understand literal meanings. (SEARLE, 1983, p. 148)

Podemos concluir que, em relação aos atos da fala, o sentido de um enunciado não determina o seu conteúdo intencional do que é dito e que não se deve interpretar termos em seu sentido literário, tal como foi exposto em (i) e que podemos não compreender dois enunciados que possuem o mesmo conteúdo intencional e as mesmas condições de satisfação, tal como foi exposto em (ii). Há sempre um *Background* de práticas sociais que envolvem hábitos, costumes e uma cultura local. (SEARLE, 2002a, p. 181-2)

3.8.2.1. Literal meaning and metaphors

There is a set of rules for understanding metaphors, but these do not work mechanically. There is no formal way to discover – in relation to computer software algorithms – when a given statement is a dialect, as in the pair of examples (i) in the previous section, or when the statement was not understood at all, as in the pair of examples (ii). As was indirectly addressed in **1.7.1.1. The Turing test and the imitation game** and directly in **2.3. Chinese Room argument**, the most that can be done is a redirection by means of algorithms and an expansion in the storage of information so that the information in dialect is redirected and reinterpreted by means of syntax. The set of rules is relatively simple, for a

[31] It is a dialect for "I speed up".
[32] Office boy and motorcycle boy – or moto boy – are underemployment in Brazil in that a person with a motorcycle delivery some things or persons in a final destination – as a department or a place that the person informs the motorcycle boy.

native speaker of a language to discover that x is y – that catch means took in English, for example – in relation to characteristics of c. The problem, as we have already emphasized, is that the emission of a statement is never understood metaphorically, without a local background. (SEARLE, 1969, p. 79-81, 1983, p. 148-9)

When we refer to individuals, there is a set of rules and principles that make it possible for them to associate and distinguish the literal meaning of a statement from a metaphor. This set of rules, which is the same as in the previous paragraph, allows individuals to be able to produce and understand metaphors. Therefore, the application of these rules, combined with a local background of social practices, helps individuals to distinguish when a statement is being made in its literal meaning or in the form of a metaphor. There are also metaphors in relation to personality traits and emotional traits in which the similarity between the literal meaning and the extension of the term y is not based on both terms, such as synesthesia if, for example, we replace the formal figure with statements such as “the person is bitter”, “the reception is warm”, among others:

> There are indeed principles of similarity on which certain metaphors function; but the point of the present examples is that there are also certain metaphors, and indeed whole class of metaphors, that function without any underlying principles of similarity. It just seems to be a fact about our mental capacities that we are able to interpret certain sorts of metaphor withoutthe application of any underlying ‘rules’ or ‘principles’ other than the sheer ability to make certains associations. (SEARLE, 1983, p. 149)

The fact that there is no algorithmic redirection through a set of rules suggests that a local background is necessary for the interpretation of these statements, in the sense that if there is no know-what knowledge, the meaning of the statement itself is lost, this is clear in the pairs of examples (i) of the previous sequence with the statement “I give a ‘tork’”. (SEARLE, 1983, p. 149)

3.8.3. Background and physical abilities

Let's now consider an example of learning a role in soccer. Imagine a youth player learning to position himself as a defender on the field. This player needs to learn how to jump and head the ball; mark the opponent by delimiting a safe space so that he does not receive the dribble and can intercept the ball; anticipate the opposing player so that the ball does not reach him; determine who goes out to fight the opponent and who waits to help win the ball; be aware of where the offside line is in his defense; know that there should always be four

defenders forming the line while his team is attacking; use the slide tackle from behind only as a last resort on the field and go up to attack as an element of surprise only in corner situations, if there is someone to replace him on the offside line. (SEARLE, 1983, p. 150)

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The position of defender is one of those skills that is learned through rule representation, once the youth player learns these rules, he does not need to remember them to perform actions on the field through his intentional states. In this way, the instructions about the set of rules of what is necessary to learn the position of defender are internalized and happen unconsciously:

> The rules do not become ‘wired in’ as unconscious Intentional contents, but the repeated experiences create physical capacities, presumably realizated as neural pathways, that make the rules simply irrelevant. “Practice makes perfect” not because practice results in a perferct memorization of the rules, but because repeated practice enables the body to take over and the rules to recede into de Background. (SEARLE, 1983, p. 150)

Every skill – which can also be interpreted as a capacity – is supported by repeated training in the most diverse situations and this fact makes the causal functioning of the representation of the rules of the skill itself unnecessary, as they are internalized as a background capacity. It is worth noting that this analogy does not only apply to physical skills, but also to mental and social skills. The more familiar an individual is with a specific skill, the greater the possibility of him or her performing unexpected actions – and emphasizing that the reason unexpected actions occur is because the set of rules of a specific skill is internalized to the point that it ceases to be a representation and becomes a background capacity that happens in the background, that is, that serves as a backdrop for an intentional state. (SEARLE, 1983, p. 209-10)

3.8.3.1. Background, mental properties and social fact

The capabilities and aptitudes of a Background configure mental phenomena of know-how – practical knowledge. It constitutes a social fact and can be characterized as a product of social interaction, intrinsic biology in the constitution of the organism or in the interaction with real objects – or state of affairs in the world. Therefore, biological, social and physical relationships have effects on the neurophysiological properties of an organism's brain:

> The Background, therefore, is not a set of things nor a set of mysterious relations between ourselves and things, rather it is simplya set of skills stances, preintentional assumptions and presuppositions, practices, and habits. (SEARLE, 1983, p. 154)

The Background usually comes into play in cases of collapse of the realization of an Intentional state or in cases where eventually the Intentional states fail to reach their conditions of satisfaction due to some failure between the Background and the intentional state itself. Thus, we can use the example of football from the previous segment, if, by chance, the muscles fail when trying to run to intercept a ball, the capabilities of the rule set can come into play and reverse the intentional state so that, instead, it composes the offside line. (SEARLE, 1983, p. 155)

In this new example applied to the youth player, he still has the Background of capabilities related to the position of defender internalized, but is unable to perform his action. His intentional state is frustrated and, the greater his familiarity with the set of rules for developing the Background capability, the greater will be his ability to reverse the situation. When the intentional state is frustrated, the intention to perform the action is frustrated or the belief that the individual has to perform the action is frustrated. If the intention in action is frustrated, this is a failure in the know-how – the way things are and if the belief that the individual has is frustrated, this is a failure in the know-what – the way of doing things. In both cases there is a failure in some of the Background capabilities that support the intentional state. (SEARLE, 1983, p. 155-6)

3.8.4. The Network of other intentional states as part of the Background

Podemos admitir, então, que as propriedades mentais são constituídas por consciência – ato de representar –, inconsciência – o *Background* de capacidades e aptidões não-intencionais e não-representacionais – e a intencionalidade – os estados intencionais – e o

Background faz parte dos estados inconscientes porque eles acontecem em segundo plano e servem de suporte para os estados intencionais. A interação desses três elementos constituem a mente, e consciência, inconsciência e intencionalidade interagem entre si como em um inventário de estados mentais que se correlacionam. (SEARLE, 2002a, p. 185-6)

In effect, the Network of other intentional states is part of the Background of non-representational capacities and aptitudes. But what exactly is the distinction between the two? The capacities and aptitudes of a Background configure states that are not intentional – returning to the example of the youth player, either he has the set of rules for the defender position internalized or he does not, there is no way to associate intentional modes of beliefs and desires in this set of rules – and the Network is a set of other intentional states of other individuals or social institutions that interact with a given intentional state in question – returning, again, to the example of **3.3.1.2. Truth conditions of and conditions of satisfaction**, regarding the intentional state of an individual who believes he/she will be able to contest the second round of the Brazilian presidential elections, the Network of other intentional states is symbolized by the social institutions that define Brazil as a democratic republic, which hold periodic elections, as well as its set of rules for participating in the elections, the individual himself/herself receiving the nomination of his/her own party and intentional states of other individuals, such as other individuals engaging in his/her candidacy, citizens voting for him/her and all these conditions configure intentional states that act in the Background of the intentional state of the individual who wants to contest the second round of the Brazilian presidential elections:

> On the view of the mind as containing an inventoryof mental states, there must be a category mistake in trying to draw a line between Network and Background, because Background consists of a setof capacities, and Network is not a matter of capacities at all, but of intentional states. (SEARLE, 2002a, p. 187)

In this context, our memory is not represented as a database for storing information, as we discussed in **3.8.2.1. Literal meaning and metaphors**, but as a device that performs a general performance that has in its background past experiences in relation to an object, other individuals or state of affairs in the world. Therefore, conscious and unconscious mental states are performed according to the organism's memory. If an individual has a Background capacity, then he or she has an unconscious ability to cause conscious behaviors. The Network of other intentional states is also conscious and is part of the Background in the sense that it is not part of the intentional state itself and it also happens in the background, as a

support for a given intentional state. (SEARLE, 2002a, p. 188-9)

A Rede de outros estados intencionais é uma intencionalidade inconsciente que age como suporte para o estado intencional, enquanto o *Background* de capacidades consistem em habilidades não-intencionais e não-representacionais – por mais que para aprendê-las é necessário representa-las na consciência até que a habilidade em questão aconteça em segundo plano. O que gostaríamos de enfatizar neste seguimento é que os estados intencionais não atuam de forma independente para conseguir alcançar suas condições de satisfação, mas atuam com o suporte de outros eventos que acontecem em segundo plano – a Rede e o *Background* – e um mesmo conteúdo intencional pode determinar diferentes condições de satisfação quando é realizado segundo diferentes capacidades de *Background*. (SEARLE, 2002a, p. 187-91)

3.9. Final considerations

We can conclude that intentionality is the intrinsic characteristic of mental states that directs the individual's will in the world. If a mental state is intentional, it means that it is "of" something or "about" something, and both the words "of" and "about" imply intentionality. Therefore, a belief or a desire is always "of" something or "about" something. Intentionality manifests itself through speech acts, perceptual experiences, or actions. When individuals intend their will with respect to a state of affairs in the world, they manifest an intentional state about that same state of affairs. Every intentional state has two characteristics, namely: a psychological or intentional mode and an intentional content. Intentional states represent the will that an individual has to cause actions in the world. Human actions have two aspects, a physical component that consists of the action being caused in the world and a mental component that consists of the individual's intentionality to perform that action.

Every intentional state has conditions of satisfaction, an intentional object, and a direction of fit. In general, the conditions of satisfaction represent whether or not the intentional state is realized according to the state of affairs to which it is directed in the world; the intentional object refers to the state of affairs in the world itself to which the intentional state is directed, and the direction of fit represents whether that intentional state has a mind-to-world relationship – in the sense that it is our mind that is intending realizations in the states of affairs in the world, as is the case with previous intentions, memories, and speech acts – or a world-to-mind relationship – as is the case with intentions in action and perceptual experiences. Intentional states only concern the state of affairs in the world when there is an

intentional object in the physical world, when not, the intentional state is merely a representation of a representation.

Speech acts are verbalized intentional states. They occur according to an illocutionary force – which is the form of the intentional mode expressed through statements – and a propositional content – which is the form of the intentional content expressed through statements. There are three standard classes of speech acts, namely: the assertive class, which are observable descriptions that can be true or false; the directive class, which is composed of orders, commands, and requests; and the commissive class, which is composed of promises, guarantees, and vows. In addition to these three, there is a fourth special class, which is composed of emotions, feelings, apologies, and gratitude, called the expressive class. The directive class has a word-to-world – or mind-to-world – direction of fit; the directive and commissive classes have a world-to-word – or world-to-mind – direction of fit; and the expressive class has no direction of fit because it usually does not concern the state of affairs in the world. A truth condition of an intentional state concerning a speech act concerns the truth of the utterance itself and is internal to the intentional state itself.

The realization of an intentional state is irrelevant from the point of view of logic and this means that if it is not realized – or does not correspond to reality – it will be treated as a linguistic entity. Linguistic entities are statements that do not have extensionality. If a statement has extensionality, this implies that it has a corresponding intentional object in the world. When the statement does not have a corresponding intentional object in the physical world, it is called intensional-with-an-s and is treated as a representation of a representation. In addition, there is the concept of intentionality-with-a-t which consists of the brain's ability to represent things in the world, even if thoughts do not have extensionality. The propositional content of any statement consists of a presentation of a representation, even if such content does not have satisfaction conditions, the statement itself, as a linguistic entity, is interpreted as a representation of a representation.

Beliefs and desires are original forms of representation, and all other emotions and feelings derive from these two forms. Beliefs demonstrate conviction about something, while desires are related to two aspects: states of things in the world that have already happened and states of things that we would like to happen. From these two original forms follows the combination for all other feelings and emotions, such as: fear, expectation, disappointment, regret, grief, remorse, guilt, pleasure, pride, hope, shame, panic, joy, disgust, terror, admiration, happiness, and sadness.

Perceptual experiences are forms of intentional states. We describe perceptual

experiences mostly using examples of visual experiences, but the same analogy is valid for other bodily perceptions. The general formula for inferring perceptual experiences is: “X perceives Y.” The verb can be replaced by the intentional mode of what is perceived. For example, if it is a visual experience, the verb “to see” is used; if it is an auditory experience, the verb “to hear” is used, and so on. In relation to visual experience, it can be characterized as a presentation of a representation – when the experience itself has an intentional object –; a memory – when there was an intentional object in the past, but it no longer exists –; a hallucination or delirium – in cases where there is no intentional object that originated the visual experience and, therefore, it does not have extensionality. Reports of visual experiences in the third person, when inferred, can be presentations of representations – in the sense of intensional-with-an-s, that is, not having extensionality –, here it is worth highlighting the difference between the formula “X sees Y” and “X saw that Y”.

Perceptual experiences, in general, have a mind-to-world direction of fit and a world-to-mind direction of causation. This means that if there is a failure in the conditions of satisfaction and there is no intentional object, it is our representation that is at fault with the world, and this fact alters the direction of world-to-mind causation – that is, the intentional object of the conditions of satisfaction itself. Visual experiences – especially when inferred – are not true in the literal sense and this means that, for example, when I see rain falling, I do not have a wet visual experience – the same analogy applies to the other senses.

Perceptual experiences, when experienced by the individual who possesses them, are presentations of representations, in the sense that they present themselves to our representation – intentionality-with-apt –, in this sense they may or may not have extensionality and, when they do not, they are hallucinations or delusions – intensional-with-an-s. The same perceptual experience may have different conditions of satisfaction and, therefore, have different intentional objects. Using visual experiences as an example, we can see the same visual stimulus and interpret it in different ways, as in Wittgenstein's famous duck-rabbit example. Every perceptual experience is interpreted according to a Background of capacities and a local Background.

Regarding visual experiences, Searle is a supporter of the representational theory approach, which states that there is a vertical line between the horizontal line of the individual who perceives the object and the object that is perceived, and this line promotes a relationship of similarity between the object presented and the sensory data captured by our perceptive stimuli. If there is distortion in the similarity, there is also distortion in the capture of sensory data. The conditions for satisfying a perceptive experience consist of the object that produces

the phenomenal experience of the perceptive experience actually existing. An intentional object needs a context to become something particular, that is, an indexicality in which the intentional object of the intentional content causes familiarity to the observer. This familiarity is promoted by a Network of other intentional states and a Background of capacities and aptitudes. The stimulus of the object and the visual experience itself are two distinct things.

Intentional and unintentional actions are forms of intentional states and are called experiences of acting. Intentional actions are composed of two components, namely a prior intention and an intention in action, both components causing body movement. An unintentional action is composed only of the component in the intention in action that causes body movement. The sum of the intention in action plus the body movement defines the concept of action, while a prior intention is a presentation of a representation that, if it does not correspond to reality, that is, if it does not have its realization in the physical world, the prior intention itself does not have extensionality if it is realized through intention in the action that generates body movement, then the action is realized. Several actions – which can be intentional and unintentional – trigger a complex action. Every complex action has an accordion effect of events that demonstrates which actions happen first for the realization of the complex action. An unintentional complex action is a complex action that does not have prior intentions as its origin.

Collective actions do not occur through the sum of the experience of acting individually, on the contrary, they are the sum of the intuition, network of other intentional states and background of capabilities and abilities of each organism involved in the collective action. Collective actions can be described in logical terms through the sentences; “we intend to do x”. In general, collective actions are a set of individual attributions that have a common belief as their objective, these individual attributions are carried out with the sole purpose of satisfying the shared belief – or we-intention.

All intentional states have meaning, whether these intentional states are perceptual experiences of action or acts of speech. The purpose of meaning in relation to the intentional state is to produce an effect on the individual who perceives the intentional state. Whenever an individual intends to emit a meaning through actions, its realization will be defined as the expression of the intentional state. This expression has two forms of intentionality: that of the intentional state itself – the intention to represent – and the realization of this act – the intention to communicate. Every intention in meaning, when expressed, becomes auditable – it can be perceived by other individuals who will interpret the meaning of the realization of the action. Other individuals will not always interpret it in the same way as the individual who

performed the act had the intention to represent his communication, and the individual who communicates does not always commit to the truthfulness of what is communicated.

Our intentional states are transmitted into the world by means of causality, causality being a mutual relation between the stimuli of the external world and the intentional states in our mental representation. If there is no mutual correspondence between the two, causation does not occur. Every causal relation has a direction of fit and a direction of causation. The direction of fit is always in relation to the intentional state and the stimuli of the external world – or state of affairs in the world – and a direction of causation that acts in relation to the external stimulus to our mental representation. Both conceptions of direction of fit and direction of causation can have a world-to-mind or mind-to-world relation, depending on the circumstances themselves – whether the intentional state is a speech act, a perception, a memory, an intention in action or a prior intention.

Intentional causation manifests itself in the realization of an intentional state in itself, because of this it is not observable or found in movement, but it is between the intentional state and the stimulus of the external world, it is a component of the realization of an experience – perceptive, acting or speaking. Intentional causation is present in all of our intentional states. Regularity is not an intrinsic characteristic of intentional causation, regularities in the world are discovered and apprehended by individuals to, only then, be used as part of the intentional content of our intentional states. The greater the apprehension of a regularity, the greater the individual's capacity to incorporate it as part of their Background capabilities.

Last, but not least, intentional states are always acting according to a Network of other intentional states and a Background of capabilities, aptitudes and location. A Background of capabilities and aptitudes consists of a set of capabilities to perform an action in itself. These capabilities and aptitudes are not representational or intentional in themselves. Every Background has a know-how – practical knowledge – which is related to the ability that an individual has to perform an action and a know-what – knowing how – which is related to the awareness that he himself has in relation to his ability – or lack thereof. The aptitudes represent the biological capabilities inherent to individuals and the local Background represents the practices and language of a given region – which can change according to the culture. All the forms of Background presented form a geography of the Background. The local Background is subject to changes in literal meaning related to the different ways that individuals use language. The Network of other intentional states is part of the Background and happens in the background, it consists of other intentional states that serve as a support to

an individual's intentional state.

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