

# Chapter 5

## Psychological Knowledge in Educational Treaties



### 5.1 The Person as *to Become* and Education as a Process, from the Perspective of the Luso-Brazilian Jesuit Alexandre de Gusmão and the Society of Jesus

#### 5.1.1 Education from a Jesuit Perspective

From the second half of the sixteenth century, due to the demands of European society and the missionary territories, the creation of schools for the education of children and young people became the main way of missionary action of the Society of Jesus (O'Malley 1999). The emphasis on education as a ministry of the Society of Jesus goes back to its origins. Ignatius of Loyola recounts in his Autobiography that in 1524, he saw the need to devote himself to study in order to help souls. According to him, there is a close correlation between the acquisition of virtue and the study of letters. In a letter sent through secretary Pedro Ribadaneira to Emperor Philip II of Spain, Loyola justifies the Company's commitment to the foundation of colleges. He affirms that all the welfare of humanity and of Christianity depends on an adequate education of young people.

In Brazil, the pedagogical commitment of the Jesuits, together with the children, is based on the humanist conviction of the religious that the cultural inferiority of the native peoples is due to the lack of education and not to a structural anthropological or psychological diversity. This is what was stated by Manuel da Nóbrega in the text *Diálogo sobre a conversão do gentio*. The passage from the conversation between two Jesuits representing two different emerging positions in the Society about the methods and objectives of missionary work has already been mentioned. In comparing the "rudeness" of the Indians to the civilization ("police") of ancient pagan peoples, one of the interlocutors states: "to have the Romans and other Gentiles more police, that these, did not come to them from naturally having a better understanding, but from having a better creation, and creating themselves more

politically” (Nóbrega 1988, p. 240). José de Anchieta states in a letter of 1557 that the children of the Indians raised in the colleges of the Society “will become firm Christians” (Anchieta 1988, p. 159).

In this way, through the Jesuits, the conviction about the possibility of man “doing himself” through the educational process, characteristic of Humanism and the Renaissance, finds in Brazil, recently discovered by the Europeans, a great laboratory of experimentation. Through education, the religious intended to act in the transformation of the natives, of their culture and society, into members of the “Christian social body” of the colony.

From this perspective, the important role of Jesuit schools should also be highlighted. The first schools built in Brazil were intended to teach reading and writing. In the various places of missionary presence in Brazil, the Jesuits created primary schools for teaching catechism and literacy; Latin and grammar schools; schools for the study of classics and for the practice of theater and rhetoric; courses in philosophy and arts, mathematics and physics, moral and dogmatic theology. The studies in these schools were governed by precise norms promulgated by the Society of Jesus and condensed into the *Ratio Studiorum* (1559). The *Ratio* recommended that studies should be free, schools should accept students from all social classes, pedagogical methods should take into account the psychological characteristics and character of each student, there should be a balance between humanistic and scientific instruction.

The great commitment of the Company in the pedagogical area explains the fact that the first author who, in Brazil, used the genre of the treatise to refer to the art of educating children and disciples is a Jesuit: Father Alexandre de Gusmão. Gusmão, founder and director of the Colégio do Menino Jesus de Belém in Cachoeira do Campo, a place near Salvador da Bahia, was born in Lisbon in 1629 and died in Bahia in 1724. Gusmão came to Brazil at the age of 10, joined the Company at the Colégio da Bahia in 1646, and graduated from this religious institution. He held several important positions in various colleges: master of novices, professor of humanities, mayor of studies in Rio de Janeiro, rector of the college of Santos and Bahia and, finally, Provincial of Brazil (Leite 1945).

The school created by Gusmão called the Seminary of Belém. It appeared near the city of Salvador, on the banks of the Paraguaçu River, near the urban center of Cachoeira. Established as a provincial school in 1686, it was the first boarding school in Brazil. Over 73 years, it has received the first education and taught about 1500 Brazilian students. The school was subsidized by the Portuguese government and also had the support of some benefactors. It was initially intended for the children of the poor, inhabitants of the sertão, in order to teach them the first elements of learning to read, write, count, study music, and Latin. But later, it began to receive students from all over Brazil, especially from the Recôncavo baiano, be they poor or the children of supplied farmers. The children of wealthy families paid a pension that supported the poorest in school.<sup>1</sup>

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<sup>1</sup>Pitta states that “from all parts of Brazil they sent him many wealthy people, children and rela-

In 1693, the College had 50 students, and in 1710, it had 500 (Gusmão 1715).

Gusmão elaborated a Statute that gives the Colégio de Belém its own brand (Freitas 2011): students should learn to read, write, tell, grammar, humanities, Latin (including rhetoric), and music.

The treaty *Arte de criar bem os filhos na idade da puerícia* (*Art of raising children well at the age of childbearing*) by Gusmão was published in Lisbon in 1685, since in Brazil there was still no press because of the prohibition of the Portuguese Crown. The work is the result of the pedagogical experience carried out at the Seminar. At the same time, it is part of the extensive work of Father Gusmão as a writer. In fact, this Jesuit was attentive to the value of writing for the transmission of values and for the Christian formation of the new generations and employed different kinds of writing in his works. Among them, he used the genre of the allegorical novel, of which he was a precursor in Brazil. This novel and the psychological knowledge it conveys will be dealt with in a chapter of this book.<sup>2</sup>

The objective of the composition of the voluminous treatise *Art of raising children at childbearing age* is pointed out in Proêmio: the formation of a “perfect boy” (Gusmão 1685a, p. II). The author intends to explain to parents and teachers what “good upbringing” consists of and “how to do it properly” (Gusmão 1685a, p. III). It should also be noted that this book is also intended for women: “daughters and mothers of families”. (Gusmão 1685a, p. IV). Something innovative at the time. Gusmão defends the right of women to receive training in the first letters and liberal arts, the same as men. This statement was innovative and challenging if we consider that, at the time, education was forbidden to women in Brazil and Portugal (Massimi 1990).

Awareness of the importance of the work of the Society of Jesus for the educational work of society runs through this entire treaty, from the Prologue to the Reader where Gusmão writes: “It is so proper to the Company of Jesus to attend to the good institution of children in the early years of their childhood that it makes special mention of it in the form of his profession; because his Institute is to teach the good arts, and to inculcate good morals to all for the greater glory of God and the good of souls, in this particular matter of instructing children, his Founder, enlightened by the Holy Spirit, wished that there be a special obligation in the Company. (...). If the parents are careful to read and practice this treatise on their children, and the children are curious to study what belongs to them, I hope (...)

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tives, to whom they assisted with a moderate annual congruous for his support” (Rocha Pitta, 1976, vol 7, pp. 67–68). Some of these students continued their higher studies in Coimbra. Among these students, the Caligrafo de Corte, the Brazilian Manoel Andrade De Figueiredo, born in the State of Espírito Santo, may also have studied at the Seminary: according to his biographies, his first training took place in Brazil at a Jesuit college.

<sup>2</sup>Gusmão was the author of numerous other works that were widely disseminated in Brazil at the time: a *Escola de Belém, Jesus nascido no Presépio* (Évora, Oficina da Academia, 1678), o *Menino Christão* (Lisboa, Deslandes, 1695), *Maria Rosa de Nazaret nas montanhas de Hebron*, a *Virgem Nossa Senhora na Companhia de Jesus* (Lisboa, Deslandes, 1715), *Eleição entre o bem e o mal eterno* (Lisboa, Oficina da Música, 1720), *O Corvo e a Pomba da Arca de Noé no sentido Alegórico e moral* (Lisboa, Bernardo da Costa, 1734).

there will be much improvement in the families, in the Republics much reform, in the Church many Righteous, and in Heaven many Saints”. (Gusmão 1695, p. I).

In the treatise, the pedagogical experience acquired by the Society of Jesus in the two centuries of life is cited, by means of numerous examples. In fact, the treatise does not aim to present a mere pedagogical theory but to discuss the results acquired through practice: in this sense, the works of many educators of the Society are cited. The method of argument used by Gusmão to support his positions interweaves the doctrines of the ancient with the experiences of the modern.

### 5.1.2 *The Importance of the First Years of Life*

In considering the first phases of the educational process, Gusmão emphasizes the need for parents to take care of their children in the first person from the first months and years of life.

Gusmão warns mothers about the importance of breastfeeding their own children and dedicates the entire third chapter to this need. The reasons given are several: first, the fact confirmed by the authority of Galen and Avicenna that “the mother’s milk is healthier for her child” (Gusmão 1685a, p. 80); second, a psychological reason, extremely interesting: the fact that with milk one communicates the “inclination” (Gusmão 1685a, p. 184). In fact, the humors would also be transmitted through milk, and this transmission could modify the original individual complexion. The question becomes important in a social environment where it used to be the case that breastfeeding children were handed over to milk nannies, usually slaves.

The book’s thesis on the “importance of good upbringing of children” from the early years of life is also based on Aristotle’s conception of Ethics to Nicomachus (basic text of Renaissance Aristotelianism). Gusmão states that “all the good of the children depends on their good education”. In fact, at birth, “the children’s spirits are like a shallow board. He uses the metaphor of painting to explain how the educational process can shape the personality: it is such that “an outstanding painter has the equipment to paint any image on it. what he wants to paint on it will represent, if Angel, Angel; if Demon, Demon will represent. Just as a picture comes out well, or badly painted, depends on the first lines that the painter drew, so the fact that the son is bad or well educated, depends on the first dictates, which in the child, as in shallow board, the father inspired”. (Gusmão 1685a, pp. 2–3).

The plasmability of the human being, the infinite possibilities of being that he can choose for himself, was a common Aristotelian place taken up by the humanist philosophy and pedagogy of the fifteenth and sixteenth centuries. As Cassirer points out, Pico della Mirandola’s famous *Oratio de hominis dignitate* had reversed the traditional sense of the relationship between being and acting. Human dignity will no longer reside in the place that man occupies in the cosmos and which once and for all prescribes the direction of his path of formation (Cassirer 1977). On the contrary, the being of man is born from his doing. In this way, man created “neither

angel, nor devil, nor heavenly nor earthly” will be able to give himself, as a “free craftsman,” the form that he himself chooses for himself. The educational process is an expression of this “making of himself” of man, paraphrasing an expression of the Spanish humanist Luis Vives (Delumeau 1994).

Gusmão emphasizes that the diversity and the result of the “paintings” possible in the shallow tablet, that is, man in his birth, depend on the “first lines, the first blurs”. And he affirms: “the same happens in childish moods, which, like shallow tablets, are disposed to form any images in them. According to the first doctrine, which you give to your children, you will be able to know what is to be. They will be good children if they are well brought up in childhood, and bad children if they are badly formed in the beginning. For as well as going out well, or badly painted, the panel depends on the first lines, which threw the officer’s hand into it, so the fact of going out well, or badly raised the son, depends on the first raising, which his father gave him”. (Gusmão 1685a, b, p. 4).

The development experienced by the child in his early years of life has, over time, a decisive social impact: “From ordinary children know how to raise their own, when they become parents, and these to their own; and so all the other offspring come to form a good generation and good procedures. From this comes that in some generations certain virtues and certain vices are reigned as hereditary” (Gusmão 1685a, b, p. 31).<sup>3</sup>

### 5.1.3 *The Dimensions of Psychic Dynamism*

#### 5.1.3.1 **The Sensory Power**

Gusmão begins the treatise “*Art of raising children well at the age of childhood*” (1685a) with this statement: “By the teaching and education you give to your children at the beginning of their life, they will be able to know what they will become”. It has already been said that the art of raising children well is inspired by the conception that the human being as a child is arranged in such a way that any image can be formed in him. This statement refers to the aforementioned Aristotelian theory of knowledge that we saw shared by the Jesuit philosophers of Coimbra. This theory considers that the psychological powers that provide knowledge have their foundation in the activity of the senses. Therefore, the changes that occurred in them in the early stages of life would have the effect of shaping the cognitive processes of the adult.

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<sup>3</sup>The theme of the social and political usefulness of education and the importance of the Jesuit mission in this area is amply developed by Gusmão in the fifth chapter of the treatise: “The good upbringing of children in childbearing age is of such use to the Republic that all its good depends on it, and all its ruin follows on its lack” (Gusmão, 1685a, b, p. 38).

### 5.1.3.2 The Cognitive Powers

A particularly interesting chapter of Gusmão's treatise is dedicated to "as if there are to be parents with children in poor condition" (Gusmão 1685a, pp. 134). Gusmão defines as "children of bad condition" those who "are not docile in nature to discipline. He attributes this situation to three different causes: the "bad understanding," that is, lack of intellectual capacity, the "rebellious will," that is, difficulty at the level of motivation, and the whole of the previous causes (Gusmão 1685a, p. 135). All three conditions are "disciplinable," for "no child is in such a bad condition that he cannot be corrected, and domesticated, if in the father or the master there is vigilance and prudence to raise him while he is little" (Gusmão 1685a, p. 137). A very important consequence of this statement, on the pedagogical level, is that "the parents should not forsake their children, who have felt bad conditions, distrustful of making fruit in them, because none can be of such natural evil, that indoctrinated and tamed cannot be of benefit through good education" (Gusmão 1685a, p. 139).

When parents feel unable to perform this training task, they should seek the help of those who are competent in the matter. In this case, the father is recommended to "consult the politicians foreseen in this matter, i.e. those who have written children's policies, or as experienced may give him advice". (Gusmão 1685a, pp. 141–142).

### 5.1.3.3 The Punishment and the Playing

Among the resources available in the educational process indicated by Gusmão, we highlight here those that seem to us to have more relevance from a psychological point of view: punishment and play.

The use of punishment, moral and physical, is admitted, but in a moderate way, that is, inspired by the rational consideration of the pedagogical objectives to be achieved. For this reason, Gusmão reproves the excessive severity of the punishment and warns about the need to punish children at the appropriate time. Thus, it is necessary to consider the psychophysical reaction caused by the child's grievance in the father, or in the master. Punishing cannot be the effect of this reaction, but rather the means to achieve the formative objective. Gusmão bases himself on the humoralist medical doctrine of hypocratic-galenic derivation to affirm that punishment should be administered at specific times of the day: "To avoid these disorders it is good advice not to punish the children in the fragrant offense, when the deformity of the guilt naturally alters the anger, and causes the anger to break out; otherwise he keeps the punishment for the night, or for the dawn. (...). For at dawn are the moods quieter. (...) The mind is quieter to punish him with the rigor that asks for the offence, and not with the excess to which anger compels". (Gusmão 1685a, p. 323).

Play is considered an important practice in the process of formation of children's personality, especially because it takes children out of "idleness". This is defined as the principle of all addictions. Gusmão says it is "so proper and natural for children to play and play, that the same Latin word *puer* that in the vulgar means child, in

Hebrew it sounds playful, or playful”. So it would be “to take away the nature of children to forbid them to play” (Gusmão 1685a, p. 368).

In short, the pedagogical proposal of Gusmão and the Jesuits, in general, is part of a person’s conception that he realizes his destiny through the good use of his personal, including psychological, dispositions. Among these dispositions, the life of the soul has a fundamental function of articulation between the corporal and the spiritual dimension. The knowledge of the psychic life provides the practical objective of their ordination, to which the Jesuits dedicate all their efforts. In their pedagogical action, the Jesuits aim at the incorporation of the person to the whole, mobilizing, and exercising senses, affections, judgment and will, body and soul, according to a path oriented to the achievement of the ultimate goal. In Brazil, we have seen the project of the creation of the “Christian social body”, according to the expression often used by Manuel da Nóbrega in his letters, where Portuguese, Indians, slaves, and half-breeds would all be integrated. Therefore, the formation of the “Christian Republic” will be the objective of the pedagogical commitment of the Jesuits, as Gusmão emphasizes in the *Arte de criar bem os filhos na idade da puerícia* (Art of raising children well in the age of childhood). (Gusmão 1685a, Prólogo ao leitor).

## 5.2 In the Wake of the Jesuits: Education and Individual Psychic Abilities by Manoel de Andrade de Figueiredo

Manoel de Andrade de Figueiredo was born in 1673 in Espírito Santo, son of a Portuguese man, Captain Antônio Mendes de Figueiredo. Possibly Manoel attended a Jesuit school, but he remained there for a short time, because his father, not having been reinstated as captain, returned to Portugal with his family. We have no news of Manoel’s formation in Portugal, but we know that, as an adult, he dedicated himself to teaching the first letters and handwriting and was a member of the Court, where he taught.

The book *Nova escola para aprender a ler, escrever e contar* (New School to Learn to Read, Write and Tell), was published in Lisbon in 1722, offered to King D. João V. A large part is dedicated to calligraphy, the book being the first of its kind in Portuguese language. But there are also chapters containing pedagogical, didactic, methodological norms and psychological observations.

The references cited in the treatise are from the Portuguese and Christian cultural and pedagogical tradition: Plato, Aristotle, Augustine, Dionysius, Jerome, Cicero, Plutarch, Seneca, and Marco Aurelius. Figueiredo does not mention modern authors such as Comenius and Clenardo; nor does he mention the educator and fellow author Alexandre de Gusmão SI. Nevertheless, he seems to follow tips from the Jesuit *Ratio studiorum* (for example, the rule about moderation of punishment; and the use of monitors called “decurions”). Figueiredo, as the biographers say, had studied at a Jesuit school in his initial formation in Brazil.



### 5.2.1 *The Human Being in Becoming and the Educational Process*

Figueiredo shares with the Jesuits the vision about the formability of human beings through educational work. For this reason, in his book he insists on the importance of the choice of Masters because of their influence on the intellectual and affective life of children: “because on this good creation (as Aristotle says) depends all the good of the children” (Figueiredo 2010, p. 2). And further: “The spirits of the children are like a new field, where the master as a farmer casts the first seeds of doctrine. As is his science, so is the fruit that the children reap. Therefore, knowing the parents what their children’s numbers are in this settling, they must seek for their teaching virtuous, wise, honorable teachers (...). For if nature is powerful to persuade, more powerful is doctrine; for good doctrine amends bad nature, so says Cicero: *res efficax est natura sed potentior est institutio, quae malam naturam corrigit.*” (Figueiredo 2010, p. 2).

As for the psychological aspects, in a similar perspective to Gusmão’s, Manoel de Andrade de Figueiredo highlights the importance of learning in the first years of life: “what you learn in the first years lasts in others, and especially the vices”. (Figueiredo 2010, p. 5). In addition, he warns that in learning, one must pay attention to individual differences: “Good is knowing, but there are subjects that are not for the sciences/, and there are sciences that are not for subjects. Hence Cicero rightly says that the first care of those who teach is to know the genius of those who learn” (Figueiredo 2010, p. 3). And, further: “The lesson should be according to the child’s ability. For, being of tender age, although of good and easy apprehension, it is always convenient for him to be taught a moderate lesson, for he lacks perfect speech; and with greater reason being of rude intelligence. In this case, he should only be given the lesson that he can learn by the quality of his memory. And with this child, the prudent master should use less rigor in his punishment, which can intimidate and mortify him. Rigor and punishment can confuse the child’s understanding so much that the child, confused and distracted, often happens that following only natural fear, is absent and runs away from school. And since these children are better off, the master is more respectful than fair, taking them with moderate punishments, and sometimes pretending, applying to them the greatness of the lesson, according to the capacity of the talents, until they are purified from the mists of intellectual rudeness, and achieve with the exercise, more clarity of ingenuity” (Figueiredo 2010, p. 11). Figueiredo reproaches those parents who “imprudently insist with the masters that their children go forward to them, not wanting to admit the inconvenience of youthfulness, or intellectual rudeness” (Figueiredo 2010, p. 11).

Another important point is the insistence on the teaching method rather than the content. For example, when teaching arithmetic, the master must explain the rules to the boys, “so that the boy understands and perceives the foundation of what he learns” (Figueiredo 2010, p. 15).

In short, the pedagogical approach of the Brazilian calligrapher and master seems to be inspired by the same ideals that permeate Gusmão’s texts. Therefore, it



is aligned with the same perspective: the psychic processes are considered in function of an ideal of formation of the human person molded by the vision of the world of Christian Jewish matrix.

### **5.3 A Conceptual Twist: The *Tratado de Educação Física dos Meninos* (Treaty on the Physical Education of the Children) of Francisco de Mello Franco and the Proposal of Medicine as an Integral Science of Man**

At the end of the eighteenth century, another treatise on children's education was written by a Brazilian author, with the aim of instructing parents and teachers in the laborious task of educating the new generations. However, very different from the authors analyzed above is the focus of his proposal. The author, physician Francisco de Mello Franco, was born in Paracatu (Minas Gerais) in 1757 and died in Ubatuba (São Paulo) in 1823. While still a medical student at the University of Coimbra, he became famous for having written a book of satirical verses: *Reino da Estupidez* (The Kingdom of Stupidity 1785) whose aim was to criticize the counter-reformist and anti-pombaline tendencies present in that University. (Martins 1978). The text triggered the reaction of the academic authorities and the Inquisition, and the authors were condemned in 1781. Mello Franco finished the course in 1786 and settled in Lisbon where he worked as a clinician and from 1793 as an honorary doctor of the Royal Chamber. He became a correspondent member of the Royal Academy of Sciences of Lisbon and began to collaborate regularly with that institution in matters of medicine and natural sciences. In 1817, he moved to Brazil, in the city of Rio de Janeiro, where the Portuguese Court had also taken refuge to escape the Napoleonic invasion of Portugal.

#### **5.3.1 *The Proposal of a New Vision of Man and Medicine as the Science of Man***

Francisco de Mello Franco's position has been shaped by the Enlightenment ideals since the period of his university education. His treatise *Medicina Theologica* (Theological Medicine 1794) is very expressive of this adherence to the vision of man conveyed by the Enlightenment: despite its apparently confessional and innocuous title, it aims to bring about a profound cultural revolution. In fact, it proposes to replace the traditional figure of the Confessor with that of the Physician. In this way, transforming Moral Theology into a Medical Psychology, Mello Franco intends to establish the bases of a new conception of man and a new modality of knowledge of human subjectivity. He performs a radical inversion of objects and

methods, opposing a naturalistic anthropology to the traditional anthropology of religious inspiration. Therefore, more than a scientific text, Theological Medicine is a treatise of a philosophical nature and of a polemic character and, as such, has triggered a heated debate and numerous critical reactions.<sup>4</sup>

The construction of a new medical knowledge, focused on the apprehension of the human being in its totality, also appears in another work, written by Mello Franco, already in Brazil, in 1813: *Elementos de Hygiene ou Dictames Theoreticos e Practicos para conservar a Saúde e prolongar a Vida* (Hygiene Elements or Theoretic and Practical Dictames to Conserve Health and Extend Life 1813).

From this perspective, which takes the human being as essentially corporeal and considers medicine as the science of man, Mello Franco also addresses the education of children. He writes a treatise indicating a normative framework with regard to the necessary care that parents and teachers should take so that they grow up healthy, inspired by the anthropological vision proposed by the Enlightenment philosophers: *O Tratado de Educação Física dos Meninos para uso da Nação Portuguesa* (The Treaty on the Physical Education of Children for the Use of the Portuguese Nation 1790).

The transformative character of Mello Franco's pedagogical proposal is made explicit by the author in several points of his work. In the Foreword, the author himself states the awareness of the novelty and originality of his work: "As a doctor and as a father of a family I have revolutionized how many books I have been able to discover about the physical or corporal education of children. I read carefully, observed with gliblets, and meditated for a long time. From the lesson I concluded that the authors were not only at many essential points wanting each one its own thing, but that none had made a treaty on this subject that omitted anything essential and that gave the subjects the proper extension... Through meditation I made a system of my own, using everyone's ideas, without following any more than my reason and observation confirmed, increasing, altering and innovating" (Franco 1946, p. 95).

In these words, the author's innovative intent is evident: he advocates the use of reason and observation as the foundations of new knowledge, a system of its own, where the contribution of the classics is critically reworked and overcome.

Such a vision is something new in the Brazilian cultural universe which, as we have seen, had been shaped by the Aristotelian, Tomist, and Augustinian conceptions brought and spread by the Jesuits and accommodated to the indigenous cultures.

Another nod to the revolutionary value of the treaty is present in the Preface to the Treaty and refers to awareness of the social and political significance of intellectual work. Mello Franco starts from the observation that "in Portugal, there are abuses and madness in the way children are treated" and that this fact is one of the main causes of the political and cultural backwardness of the Nation. So he pro-

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<sup>4</sup>Frei JOAQUIM DE JESUS, *Juízo Critico sobre a Medicina Theologica*, 1795; Frei MANOEL DE SANTA ANA, *Dissertações Theologicae Medicinae, dirigidas a Instrucção dos Penitentes... para que não se contaminem com os abomináveis erros de um livro intitulado Medicina Theologica... cujos erros refuta nesta obra*, 1799.

poses to draft the first text in Portuguese on education. The pragmatic vision of science is also evident in the following statement, formulated at the end of the book: “Nature has condemned us to ignorance in everything that is for us of mere curiosity, that is, that does not compete for our real usefulness” (Franco 1946, p. 256).

From a methodological point of view, the emphasis is on the option for observation over knowledge through introspection. For example, when discussing the phenomenon of sleep, the author declares that his conception “is not taken from the intimate knowledge that we have of sleep, but from what we observe daily” (Franco 1946, p. 255). The author also rejects philosophical methods of speculative theory and points out the inconclusive character of “philosophers’ theorizations”: these “have only succeeded in establishing new hypotheses in contradiction to those already received which are successively destroyed, and their lesson only serves to entangle and never to illustrate our understanding” (Franco 1946, p. 256). Thus, the methods of experimental medicine, among them observation, are considered more reliable than traditional philosophical methods.

### 5.3.2 *The Education and Psychic Development of Children*

The observation data are the essential pieces of the building of scientific knowledge, knowledge that, according to Mello Franco, would have a normative character also in the pedagogical field. This also explains the very title of the Treaty on the Physical Education of Children for the use of the Portuguese Nation: to approach the education of children implies in the first place to privilege the corporal (physical) dimension, since on the good development of this depends the growth of the other dimensions of the individual. This area is the competence of medicine. Therefore, the physician stands out over the other figures who traditionally occupied themselves with education, such as the Jesuit priests in the case of Brazil.

The reference model that Mello Franco uses to define education, its criteria, rules, and objectives, is that of “Nature” itself. Thus, from the very first pages of the text, he states: “All animals, guided only by simple instinct, at every step are giving us lessons about the obligations of fathers and mothers” (Franco 1946, p. 96). He cites the care of the cow with her calf as an example of the behavior that all mothers should follow. Respect for the laws of nature is the guarantee of the success of the educational work: “Every mother who, without a very just cause, stops raising her children, outrages nature, which is in this part obeyed by all the other animals that constantly and lovingly raise their own” (Franco 1946, p. 155).

On the basis of this parameter, Francisco de Mello Franco proposes to question and refute what he defines as “prejudices” present in the educational system of Catholic culture, or in common sense. For example, he refuses theories about the influence of the mother’s imagination on the constitution of the fetus. He states: “Organizational vices are not more frequent in animals than in vegetables, and does the earth with its imagination have an influence on these monsters? No one will say so” (Franco 1946, p. 115). Just as Alexandre de Gusmão had done, Mello Franco

also condemns some habits that are very widespread in Portugal and Brazil, such as giving your children to the milk nannies so that they can nurse them. But the arguments that justify the criticism are different: “Nobody thinks that it’s indifferent to the child to be raised with the mother’s milk or with that of another strange woman. (...) After having been fed for so many months by the mother’s own blood, it is clear that there is a perfect analogy between the two, and that the milk prepared by the organs of the same body from which it was fed is the only suitable one, given by nature, and preferable to any other” (Franco 1946, p. 157).

Another habit criticized by Mello Franco is the excesses in the care for children: the use of bands and tight clothes, keeping them locked inside the houses and other similar habits that repress the freedom of their movements: “It is no less pernicious the excessive care of their conservation. This is what is common in the homes of the rich and large. The fear that anything will upset them, always puts them in a state of fright, so that they do not allow the children free and convenient exercise, and they are so afraid that the cold and the air will damage them, that they will be locked in glass houses, always dressed in winter. But they do not warn that this is the best way to make their children valiant and miserable”. (Franco 1946, p. 222).

Mello Franco also disapproves of the system of instruction of the time. First of all, he criticizes schooling too early: “and what moral as well as physical harm this does not follow from such reckless custom both to individuals and to the State. A child should not be taught to read until he is five years old” (Franco 1946, 223). Secondly, he criticizes traditional methods of literacy: “it is harmless to use only the right hand, without any foundation in reason. (Franco 1946, 224). On a very controversial page, it is stated that teachers “do exactly the job of jailers”, forcing children to work beyond their strength” (Franco 1946, p. 242).

In short, this text contains an innovative concept of pedagogy. It will be developed with great amplitude in Brazil from the end of the nineteenth century by doctors and the first psychologists. According to this conception, pedagogy must acquire scientific bases and distance itself from its philosophical origins. Its objective must not be a metaphysical ideal of man to be pursued, but the scientific knowledge about the human being as a natural organism, provided by medical sciences. This vision will give impetus to the introduction in Brazil of the new scientific psychology as the foundation of educational practices, from the nineteenth century.

### ***5.3.3 The Dimensions of Psychic Dynamism***

According to Mello Franco, “the causes of the infirmities of the soul, both in the medicine of the body and of the spirit, are all corporeal, because either in the body it has its seat, or it depends on it” (Franco 1794, p. 24). In fact, “physical illnesses (for example, inflammatory changes of the brain), climate, food and drink, geographical conformation, different ways of life, sex, work, age and in general all bodies, which have action on man, are capable of modifying the moral state of man.

All this changes the dispositions, and habits of our organs, and this change will influence the moral state” (Franco 1813, p. 315). Because of this, of “man, this visible machine which enchants us with all its Laws, and individuals, only the Physician has a profound knowledge of it” (Franco 1794, p. 21).

### 5.3.3.1 The Senses

Mello Franco emphasizes the importance of the development of the senses in childhood. In *Tratado para a educação dos meninos* (Treaty for the education of children, 1790), he states that the basis for the intellectual and moral development of the individual is the development of the physical organism: “Let us let the child mature first, and then, with the health of the body, we will have the strength of the spirit” (Franco 1946, p. 225). In these words, the influence of philosophy and medicine developed by the French Enlightenment, on which Mello Franco is inspired, is evident. He quotes several times the philosopher Pierre Cabanis, who considers the spiritual dimension (especially the cognitive) of man as a correlate of his physical organization.<sup>5</sup>

The influence of English empirical philosophy is also evident in Mello Franco’s conception. The empirical assumption appears in the affirmation of the priority of sensory education: “No one, reflecting, will fail to know how important the perfection of the senses is to the perfection of men. As we are now sitting among philosophers, the first and only source of our knowledge is the senses, it is clear that the more perfected they are, the less wrong our ideas will be” (Franco 1946, p. 233).

In another text written by him, *Elementos de Hygiene* (Elements of Hygiene) (1813), Mello Franco states that the action of external agents on the organism takes place mainly through the sensory apparatus.

In short, sensory activity is recognized as the foundation of the relationship that the child establishes with reality and of the adequacy of its emotional reactions to objects.

From the affirmation that the senses are the source of all psychic life, Francisco de Mello Franco proposes to build a deterministic science of the human being: “observation and common sense can with time enlighten us so that, given the knowledge of the impressions made on such or such organs, we can foresee the moral results, which must be their consequence” (Franco 1813, p. 355).

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<sup>5</sup>CABANIS, Pierre-Jean George. *Rapports du physique et du moral de l’homme*. 1802. [Available at <http://gallica.bnf.fr/ark:/12148/bpt6k77029t.r=cabanis.langFR>]. From the perspective of the physician-philosopher Pierre-Jean-Georges Cabanis (1757–1808), the soul tends to disappear from the discourse of the science of man.

### 5.3.3.2 The Hygiene of Appetites and Passions

In *Tratado de Educação Física dos Meninos* (The Children's Physical Education Treaty, 1790), Mello Franco addresses the emotional life of children. Emotions are considered as a phenomenon that places itself at the interface between body and psyche.

Mello Franco points out that the child's lack of emotional control is induced by education and by environmental circumstances that favor the split between imagination and sensory experience. One example is the emergence of excessive fear. In discussing the subject, Franco proposes a procedure for "disengaging the child from fear", very similar to the process of deconditioning by successive approaches elaborated by the behaviorist J. B. Watson in 1928: "Objects are painted in our eyes inside out, and according to the greater or lesser intensity of light, and according to the different distances. In this way, it happens that some objects are depicted at night with a frightening appearance. This is largely due to the frivolous tales with which many people often cherish children. I say that for the most part because on dark nights I have seen that some animals are frightened by things that they don't care about during the day. So you have to get children used to seeing objects at night, even taking them to dark houses. If they are naturally intimidated, it is convenient to get them off their fears by having them examine the object that caused them. Only in this way can they come to have real ideas of things, becoming familiar with seeing them in all circumstances". (Franco 1946, p. 240).

In a text from 1794, *Medicina Theologica* (1794), the author had already dealt with the intense emotions that he calls passions. In this text, he already highlighted the relationship of dependence of the soul on the body. Passions are a product of sensitivity and nerve movements, which transmit to the body the impressions of external objects. The excess of passion that determines an internal imbalance of the organism can lead to illness. Love, for example, can generate madness: "Madness originates from the decomposition of nerve fibers, which enter into the texture of the brain. It is for this reason that love causes this madness: it fixes the thought about the beloved object, decomposes the inner factory of the brain, raises the turmoil of nervous fluids and disorganizes the connection of ideas about which it occupies itself" (Franco 1794, p. 94).

Further analysis of the concept of passion and a theoretical reworking of the psychosomatic doctrine can be found in the text *Elementos de Hygiene* (Hygiene Elements or Theoretical and Practical Dictames to Conserve Health and prolong Life). Section Six ("The influence of the physician on morals and of morals on the physician") is devoted to the topic. Passions or "affections of the soul" are classified into two main categories: those that excite organic activity and those that inhibit it. A very interesting aspect is the study of emotional expressions. Starting from the consideration that "passions are painted on the semblants, which serve as a display to those who know how to observe them", the author describes the expressive movements of the human face characteristic of each emotion (Franco 1813, p. 317). "Indignation, for example, is recognisable by the frowning of the eyebrows, the wrinkles on the forehead, the dimness of the eyes, the pallor of the countenance, and

a certain prolongation of the lips. Joy is manifested by the half-closed eyes, the retraction of the corners of the mouth, by a certain distance from the azure of the nose, and by small pits, which in some people are formed, one on each face between the large and small zygomatic muscles, which embellish the countenance remarkably” (Franco 1813, p. 318). The observation of the facial expression and behavior of individuals and the corresponding physiological alterations makes it possible to detect emotional phenomena and even stable traits of the human personality: “By these signs, and still others, which the sagacity of the observer can discover, one recognizes not only the affections, which dominate on certain occasions, but even the same habitual characters”. (Franco 1813, p. 328).

The knowledge of the dynamism of emotions has a practical and therapeutic purpose. If, on the one hand, passions are necessary for the conservation of the individual and of society, on the other hand, their excess intensity can be harmful. Therefore, it is necessary to contain them in “their just limits”, through three resources: “a well directed education, both private and public”; “a known system of legislation”, Hygiene; and “a serious reflection, which each one must make about himself” (Franco 1813, p. 332). Hygiene is a practical science that proposes to follow the dictates of Nature “that never deceives us”. The objective is to maintain the state of health of the individual, establishing “a system, because it governs itself in all its functions” (Franco 1813, p. 258).

From this stems, the importance of prevention at a child’s age of possible future disorders of adult life. Therefore, the standards suggested by Hygiene should be applied to the education of children and especially to the emotional states they experience.

### 5.3.3.3 Temperament and Education

In *Elementos de Hygiene* (Elements of Hygiene 1813), Mello Franco proposes an interpretation of temperament theory modified by an understanding of the human body as a mechanistic matrix.

Mello Franco warns about the difficulty of achieving an exact knowledge of the individual psychosomatic complex, “if not by approximation”, due to the fact that “the constitutions differ as much as the different semblants”. (Franco 1813, p. 17).

In defining temperament, he frames it within a kind of (measurable) physics of the human body: “We will call temperament a certain particular disposition to each individual, which results from the properties and reciprocal actions of solids and fluids, and causes the body to exercise its different functions with greater or lesser ease. It is absurd to want to derive the difference in temperaments solely from solids without taking account of liquids, whose proportion for those is 6 to 1. It is also absurd to want to deduce it solely from liquids. This difference therefore results from the reciprocal action of one and the other, according to their predominance and degree of vigor; it also results from the susceptibility of the nervous system and the strength and porosity of the muscles” (Franco 1813, pp. 17–18).



According to the author, the classical theory of temperament did not have the possibility to “calculate the various degrees of strength and sensitivity of solids”. For this reason, he limited himself to a qualitative view of the differences in temperament, “without entering into the intricate [quantitative] analysis of solids”. However, “temperament depends on the original arrangement of our machine” (Franco 1813, p. 18). Thus, Mello Franco proposes a classification of temperament based on the composition between the humoral elements and the mechanics of the body (“the liquids and the solids”) (Franco 1813, p. 21).

Mello Franco establishes five classes of temperament: blood, phlegmatic, choleric, nervous, and muscular. It eliminates the melancholic (“attractive”) temperament, with the justification that it is only a degeneration of the choleric. Therefore, melancholy would be “much more an illness than temperament”. (Franco 1813, p. 22).

To the four temperaments of traditional galenic hypocratic theory, Mello Franco adds the nervous and muscular temperaments. To these, he dedicates a wide description. The nervous is portrayed as having “delicate fiber, soft and thin skin, flexible limbs, a tender and attractive way of looking, an enormous number of living sensations aroused by very slight causes” (Franco 1813, p. 22). Many individuals endowed with this temperament have “wonderful ingenuity both in the sciences and in the fine arts” (Franco 1813, p. 22). Mello Franco considers the nervous temperament to be the most widespread among city dwellers: their lifestyle is disorderly and stimulates emotional life. The nervous temperament can be inherited or acquired. Although it appears more often in women, men are not exempt either. A regular and active life conduct is recommended to correct the disturbances arising from this constitution: “regulated, then, the way of life, will take place all the means to force the debilitated machine” (Franco 1813, p. 24).

The muscular temperament is characterized by the following elements: a small head in proportion to the body, thick neck, broad chest, wide shoulders, and all bulky muscles, unmeasured physical strength. As far as the psychological dimension is concerned, individuals with this temperament “are short and slow to understand and therefore make little progress in the career of letters and fine arts” (Franco 1813, p. 24). They are described as apathetic and introverted, cowardly and submissive, more difficult to regress and take care of because they tend to live “the way of the brutes without ever paying attention to the rules of hygiene” (Franco 1813, p. 25).

Mello Franco also proceeds in the characterization of other temperaments. The blood temperament is the result of the predominance of viscous blood; somatically well disposed, moderate and active, of good memory and lively imagination, given to pleasures and the arts; very widespread among the French. In the bilious or choleric temperament, bile predominates; it is robust, with dry skin and ground color, of mediocre stature, endowed with strong passions, good imagination and solid and reflected judgment, pertinent, and predisposed to insomnia. The phlegmatic temperament is endowed with soft and greasy meats, with white and cold skin, pale

semblance and inexpressive eyes, obtuse senses, and weak intellectual functions, disposed to sleep and not very apt for intellectual works, peaceful.

Mello Franco dwells on the affirmation of the plasmability of temperaments, providing several examples. If the individual is robust with elastic and active blood vessels, the blood and moods are denser and he is more sensitive, agile, endowed with a lively memory and imagination. However, if by accident or disease, he has a lot of blood loss, his temper changes completely: from blood becomes phlegmatic.

From this comes the fact that temperaments can be modified by both physical and moral education, especially in the early years of life. In addition, they are subject to the influences of climate, eating habits, age, social relations, and professions. Mello Franco attaches great importance to the climatic factor as a determinant of temperamental dispositions: “Hippocrates, with his particular sagacity, had already observed how much the climate and the place contribute to the formation of habits and temperaments not only of individuals, but also of peoples” (Franco 1813, p. 315). Indeed, climate and geographical location induce the inhabitants to “certain jobs and occupations that making sudden changes in their organization, establish particular proportions and habits. In warm countries, for example, those chance with: those of indolence reign, because nature is prodigal in creating them, how much is needed to maintain life, and the same climate competes, effectively, because they regulate themselves. It is true that abundance and idleness weaken the forces of the body; but as they give more time for reflection and meditation, the spirit rapidly develops, and customs become more polished and human” (Franco 1813, p. 317).

According to the mechanistic paradigm adopted by Franco, the constitution of temperaments defines less the state of the individual than the determining factors of the body machine. Among them, especially important are the sensory stimuli that the body machine receives from the external and internal environment and which can profoundly modify it. The “impressions made” on certain organs are responsible for the individual’s “moral state” (that is, psychological and spiritual), much more than the temperamental dispositions of humoral origin. It is on these impressions that psychic dynamism depends. For this reason, the organic impressions experienced in the first years of life are determining the future development of the person, also with regard to the psychic and moral aspects.

According to Mello Franco, individual temperaments can be transformed from childhood by Hygiene.

Thus, in nineteenth-century Brazilian medicine, a mechanistic epistemology, allied with sensualist philosophy, supplants humoral theory, resulting in the languishing of one of the longest-lasting paradigms in the history of science.

#### 5.3.3.4 Hygiene and Public Policies

The holistic medical science proposed by the Minas Gerais physician Francisco de Mello Franco seeks to promote a reform of individual and social life, in terms of public hygiene in which the education provided in the first years of life becomes

decisive. Brazil, newly affirmed from the colonial condition, presents itself as a propitious territory to carry out this social experiment of transformation.

Some pages of *Hygiene Elements* dedicated to physical exercise are particularly significant to understand the author's posture in relation to Brazilian reality. He recommends that in schools in the country be introduced "all the qualities of masculine exercise, with which those lazy and valetudinary inhabitants already by the climate, and already by habit of indolence would make themselves vigorous and active since their youth. In fact, weak people, who have always been educated in effemination, of little use to the State, because they are incapable of arms, and unsuitable for letters, but not so for vices, companions of inertia" (Franco 1946, pp. 248–249).

The concern for the formation of new generations who can adequately serve the state is reflected in the pages of Mello Franco. According to him, climatic excesses and vicious habits united, "completely destroy the languid organization of those weak, and ruined machines with which the energy of spirit, the firmness of character, inseparable qualities of the useful, and true citizen are not compatible. The properties, however, of essentially weak people are superstition, inconstancy, concealment, and credulity" (Franco 1946, p. 249).

The author reiterates the need that "in the Empire of Brazil a global reform in the physical education of the youth be carried out, because only in this way will the constitutions be able to be in force, and men will find themselves full of health, and activity capable of all the masculine virtues. Let physical and moral education be changed, and people will be different" (Franco 1946, p. 250). Mello Franco puts his point of view as that of an external subject to such a reality and in this his condition as a foreign intellectual is evident. If on the one hand it is evident in these pages the aspiration of the author to contribute with his studies on hygiene and education to the construction and organization of the new state of Brazil, it is remarkable, on the other hand, his distance from the problems of the Brazilian people and land.

In any case, according to Mello Franco's vision, hygiene would have the objective of maintaining the state of health of the individual and of society, establishing "a system, because it governs itself in all its functions" (Franco 1813, p. 258). In fact, the study of hygiene was widely spread throughout the nineteenth century, especially within the medical schools of Rio de Janeiro and Bahia (Massimi 1990).

The study of the work of Francisco de Mello Franco shows that in Brazil at the end of the eighteenth century and the beginning of the nineteenth century, there was a significant transformation in the way education was conceived and its interfaces with psychological knowledge. Education remained conceived as something decisive for the constitution of the social and political life of the country. However, the understanding of its fundamentals changed, and as a result, the way it relates to psychological knowledge also changed.

## 5.4 Conclusion

In the treaties of Gusmão and Figueiredo, inspired by the conception of humanist pedagogy, education was discussed as the great instrument to provide care for the individual and social being, with the assumption that “all the good of children depends on their good education”. In this perspective, the knowledge of the psychic dimension of the human being is articulated to that of personal dynamism in its entirety which includes, together with the psychic aspect, the corporal and the spiritual. A network of knowledge and competencies linked to each other provides this knowledge, presupposing collaboration and interaction between these competencies: theologians, philosophers, doctors, help educators.

As for Francisco de Mello Franco and the new perspective that he inaugurates in Brazil, medicine is science capable of providing the well-being of the human being as a whole. The basis of this statement is a philosophical anthropology of a materialistic nature inspired by the French Enlightenment and English empiricism, which reduces the human being to the terms of his corporeality. In this sense, medicine inspires the norms of pedagogy, and the doctor can gather in himself the competencies of an educator. A specific medical science, Hygiene, is proposed as the most appropriate place to guide pedagogical practices. This science, in turn, conceives the psychic dynamism as linked to the constitution and physiology of the body and points out the importance of physical development in the educational process.

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