Foucauldian analysis of educational videos for the Health Sciences: testing a methodology

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ABSTRACT
This paper takes the Foucauldian concepts of event (événement) and archive to make an exploratory exercise on the development of procedures to select and analyze two educational videos - “Heart: relationships and external morphology” (1977) and “Hypothyroidism in childhood” (1976) - produced at the Center of Educational Technology for Health, NUTES/UFRJ. We aimed to indicate the contribution of Foucauldian notions for the analysis of such material. In the analytical process, we have moved together with Foucault towards his late works, where we found elements that enabled an analysis of how individuals, exercising their freedom, may constitute themselves as political and ethical subjects, in the intersection of Education and Health, two highly disciplinary and normalizing fields.

Keywords: Educational Video. Discourse Analysis. Michel Foucault. Health Sciences. Methodology.

INTRODUCTION
The incorporation of the moving image into teaching and learning situations started in the first decades of the 20th century and today, in Brazil, countless spaces – schools, healthcare units, hospitals, among others – have at least one television set and audiovisual reproduction equipment. The presence of these apparatuses in these environments can be understood as the recognition of the value of the moving image in or for pedagogical actions, which justifies the increasing importance of studies that aim to investigate aspects related to this theme. In this sense, a considerable growth has been recently noted in the number of papers and publications focusing on the relationships between education and cinema or education and television.
The educational video has also been arousing the interest of researchers. It is understood by Xavier (2008, p.15) as a production that, structured as a communicative act, tends to present, “in one way or another, a demarcation, a teaching methodology, a pedagogical principle, targeted at a specific knowledge domain or the training of a practice”\(^1\). However, it is important to highlight the fact that the study of the educational video in itself, as the modality of audiovisual production that is most explicitly connected with pedagogical intentions, has not been the preferential focus of the investigations. In a survey of the intellectual production in Theses Collection of the Portal of Journals of Capes/MEC\(^2\), in which we used the terms “video” and “education”, we observed that the majority of the 20 doctoral dissertations that were defended on the theme between 1999 and 2007 refer to the use of the video as a research tool or to reception studies.

The research that subsidizes the present paper investigates the collection of educational videos of the **Laboratório de Vídeo Educativo** (LVE - Educational Video Laboratory) of the **Núcleo de Tecnologia Educacional para a Saúde** (NUTES - Center of Educational Technology for Health)\(^3\), aiming to analyze displacements in the discursive and non-discursive practices about education and health in the last three decades.

Video production centers in Brazilian universities started being created in the 1970s. LVE/NUTES was the first and the only one with preferential concentration on the Health Sciences area until the end of the 1980s (Bortoliero, 2002). Of the 219 titles produced between 1975 and 2008, the largest part is dedicated to the circulation of knowledge, practices and reflection proposals concerning biomedical teaching and the health field. In addition, researchers have evaluated and reflected critically on the produced material and the developed production processes (Rezende, Struchiner, 2009; Siqueira, 2006, 1998).

Any film and, therefore, also educational videos, create discourses and make them circulate, producing signifying systems. According to Aumont and Marie (2003, p.82), for example, the study of these signifying systems unfold in four big lines: the film’s semiology, taking the film’s discourse as object of study; pragmatics, analyzing “the several acts that a discourse realizes, the relationships between speaker and receptor”; psychoanalytical theory and sociology, analyzing “all discursive production through the unconscious and through ideology”; “the film’s linguistics, of generative inspiration, which understands the theory of discourse as a theory of the historical determination of semantic processes”.

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\(^1\) All the quotations have been translated into English for the purposes of this paper.

\(^2\) The Portal of Journals of Capes is a virtual library that contains and offers to teaching and research institutions in Brazil the best of the national and international scientific production. The Theses Collection provides information on dissertations and theses submitted to Brazilian postgraduate programs.

\(^3\) **Núcleo de Tecnologia Educacional para a Saúde** (NUTES - Center of Educational Technology for Health) was created in 1972 as a supplementary agency of **Centro de Ciências da Saúde** (CCS – Health Sciences Center), of **Universidade Federal do Rio de Janeiro** – UFRJ.
However, thinking about discourse and especially about discourse analysis takes us also to Michel Foucault. His formulations about this theme were developed in a tension network that included debates with grammar, linguistics and semiology, because the intention was to stop treating discourses as sets of signs (significant elements that lead to contents and representations), and start seeing them as practices that systematically form the objects they talk about. Certainly discourses are made of signs; but what they do is more than using these signs to designate things. It is this “more” that make them be irreducible to language and the speech act. It is this “more” that needs to be made visible and that needs to be described (Foucault, 2005b, p.55).

This “more” that Foucault talks about is defined as statement – “a function that crosses a domain of possible structures and units and that makes them emerge, with concrete contents, in time and space” (Foucault, 2005a, p.98) – and it is based on it that he builds his theory of discourse. In short, it is possible to say that, to the author, discourse is “a set of statements that can belong to different knowledge fields” (law, economics, politics, etc.), “but that obey common rules of functioning” which, in turn, “reproduce a certain number of historically determined ruptures” (Revel, 2005, p.37).

When we watched the educational videos that compose the collection on which we focus, we were concerned about the impression we had that those materials said and showed more than what they intentionally intended to say and show. Together with the contents, forms, representations, contexts, something “at the same time not visible and not hidden” seemed to announce its presence, to leave a vestige. How could we have access to it? How could we understand, analyze this “something” that seems to want to escape within the chain of elements that form an audiovisual production?

These issues ended up taking us to the ongoing doctoral research 4 from which we have extracted this paper. In the present text we outline a brief exploratory exercise that, based on the notions of event and archive as theoretical supports, selects and analyzes two videos – “Heart: relationships and external morphology” (1977) and “Hypothyroidism in childhood” (1976) –, aiming to indicate possible contributions of Foucault’s notions to the analysis of audiovisual materials.

**Event and Archive**

According to Revel (2005, p.13), Foucault proposes two distinct explanations to the notion of event: the first sees the event as a fact that, ____________

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4 Doctoral research entitled “Entre o governo de si e o governo dos outros: uma análise foucaultiana da liberdade e suas práticas em videos educativos do Nutes/UFRJ” (Between the government of others and the government of oneself: a Foucauldian analysis of freedom and its practices in educational videos produced by NUTES/UFRJ) (CAPES scholarship).
dealt with by the archeological method, will enable the reconstruction of “an entire network of discourses, powers, strategies and practices”; the second, aligned with the explanation “of discourse as a series of events”, conceives event as “a crystallization of historical determinations”, implying the “analysis of different networks and levels to which the events belong”, aiming at an investigation “of the relationship between ‘discursive events’ and events of another nature (economic, social, political, institutional)”. Foucault explains that the inclusion of the event in the center of his analyses and, more specifically, the conception of “discourse as a series of events”, situates it “automatically in the dimension of history” (Foucault, 2006a, p.256). Aiming to distinguish his notion from the idea of “event history”, which belongs to the field of traditional History, the author coins the term ‘eventification’ as “the consciousness raising regarding the ruptures of evidence induced by certain facts” or “the irruption of a historical singularity” (Revel, 2005, p.14). Based on this specification, two discourses were developed: the first consisted in saying that we repeat some events without noticing it. It directs the focus of attention to the permanences, that is, to the discourses, practices, behaviors, and institutions that inevitably cross us in the history of the present. The second aimed to search in the current times “the traces of an event rupture” and focuses on the identification of the possibilities of change that emerge from the “historical contingency, which makes us be what we are” (Revel, 2005, p.14-21).

Therefore, there are events of different levels – ordinary facts, that repeat themselves and seem to be common, or extraordinary, unexpected events, that promote ruptures. Either by repetition or eccentricity, the discursive and non-discursive events (the practices) are always loaded with marks, registers, that point to a historicity where events of several natures (political, economic, etc.) and temporalities (present and past) maintain relationships – are juxtaposed, superposed, question one another, realize one another and co-exist. To Foucault (2008, p.5), it is important to consider “that there is a scale of types of different events that do not have the same reach, the same chronological amplitude, nor the same capacity of producing effects” and that, precisely due to this, “the problem is, at the same time, distinguishing events, differentiating networks and the levels to which they belong, and reconstituting the threads that connect them and that make them engender one another”.

To tackle the study of events, Foucault develops archeology, a “[...] type of research that focuses on extracting the discursive events as if they were registered in an archive”, trying to “reconstitute a historical field in its totality, in all its political, economic dimensions”. The author’s problem was “to find the matter that is suitable for analysis, what constituted the very fact of discourse. [...] to discover why and how relationships between discursive events are established” (Foucault, 2006a, p.257-258).

The Foucauldian archive, however, does not correspond to the sum of all texts preserved by a civilization, or to the institutions that protect their storage and access. In “A arqueologia do saber” [The archeology of knowledge] (2005a), an entire chapter is dedicated to the description and
study of the relationships between statement and archive. In it, archive is conceptualized as

[...] the law of what can be said, the system that governs the appearance of statements as unique events. [...] The archive [...] is that which, at the very root of the statement-event, and in that which embodies it, defines at the very outset the system of its enunciability (Foucault, 2005a, p.147). 145-146

In summary, the notion of archive refers to the general system of formation and transformation of statements, that is, to the system of historical conditions of possibility of statements, or else, to the “set of effectively uttered discourses”. This set is not only a set of events that would have occurred once and for all and that would remain in suspension, in the limbos or in the purgatory of history, but also a set that continues to work and to transform itself throughout history, enabling the emergence of other discourses (Foucault, 2005b, p.145).

It is possible to notice that the expressions archive, event and statement are irremediably connected, and the first one occupies the place of master concept in archeology.

In the next section, the videos mentioned above are analyzed. In the first one, we analyze a scene understanding it as an ordinary, familiar event that evidences a permanence that will be appreciated in our analysis. In the other one, an unpredicted event that occurred during the video production process enabled an analysis of the notion of event as a possibility of change and a study of the meaning of archive as “the law of what can be said” (Foucault, 2005b, p.147).

“Heart: relationships and external morphology” (1977)

This video focuses on the morphological study of the heart and its relationships to other organs of the thorax. It lasts 40 minutes and the presenter appears on the screen for only 6 minutes during the entire film. However, his voice and the image of the resources employed to illustrate the descriptions are always present. These resources are called, in the video, “models” – live, plastic, child’s corpse, X-ray, anatomical piece. The choice of each of these “models” seems to be related only to their adequacy to illustrate the described content.

We selected from this video a fragment of 1 minute and 6 seconds for analysis. The scene is composed of one take5, with a single static shot, with

5Take: it starts at the moment the camera is switched on until the moment it is switched off.
frontal framing\textsuperscript{6}, directed from the feet to the head, slightly in \textit{plongée}\textsuperscript{7}, showing the superior third (thorax, shoulders and head) of the corpse of a child. A small baton interferes intermittently in the scene in consonance with a text uttered in voice-over\textsuperscript{8}, either locating in the corpse the elements about which the narrator speaks, or just accompanying his expressive movements. It is possible to observe the movement of his shadow in the scene, and the uttered text is composed of seven short phrases that explain or justify what was done, locating the elements in the thorax.

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{image1}
\caption{Image 1 – Analyzed frame\textsuperscript{9} of the video “Heart: relationships and external morphology” (1977).}
\end{figure}

The image of the child’s corpse led us immediately to a detail of the painting “The anatomy lesson of Dr. Joan Deyman”, by Rembrandt – 1656.

\textsuperscript{6} The lateral, upper and lower limits of the filmed scene. It is the image that appears in the camera’s display.
\textsuperscript{7} Camera focusing on the person or object from upside down; it is also called high angle.
\textsuperscript{8} The voice of a person that is present but does not appear on the screen.
\textsuperscript{9} Photogram or picture.
What makes a painting of 1656 be evoked and, in a certain way, repeated in an image of 1977? What enables a certain practice – the anatomy teaching practice – to be represented in a similar way (although in different materialities) despite the more than 300 years that separate the production of the painting from the production of the video?

The analysis of the selected fragment, understood as evidence of an event in the ordinary sense, that is, as something that, due to repetition, has continued to distinguish the medical discourse until today, may be useful for us to understand something about the “complex and mixed relationships” that exist between images and words (Foucault, 2005c, p.79-80) and, specially, how statements and visibilities inhabit them.
Following Deleuze’s suggestion, we broke open the only image of this frame to search for what else could be being shown – the visibilities – and said – the statements – and which we cannot “see” and “hear” directly. The hand holding the baton, the occasional shadow and the voice of the person who, in the fragment, conducts a teaching practice, do not point to a specific subject, but to a vacancy – at the same time offer (invitation), promise and condition – of a subject position within the order of a discourse, in this case the medical discourse. The offer for an individual to occupy the function of representative of the medical knowledge includes a promise of power that, however, to be achieved, imposes acceptance of and submission to the rules and procedures that produce and regulate the medical discourse, its knowledge-power, and also its representatives. About this, Foucault writes: “There is nothing surprising in this, as discourse [...] is not simply something that translates the fights or domination systems, but something why, for which we fight, the power we want to take possession of (1999, p.10).

When he reflects on the procedures of discourse control and delimitation, Foucault (1999, p.19) calls our attention to the “will to truth” which, according to him, is the least mentioned and the most “prodigious machinery” of the “exclusion systems that affect discourse”. Understood in a simple way as the set of operations destined to separate true from false, this “will to truth” presses our ways of knowing, learning and being. Thus, the use of the corpse as an illustrative resource, the evocation of Rembrandt’s painting, the use of the baton to indicate elements on the corpse, the subject’s anonymity in the frame, the voice-over that enunciates the explanations, the short phrases, the intimate relationship between what is said and what is shown, are destined to the delimitation and control of knowledge and of the subjects that produce and are produced by the medical discourse.

We have tried to demonstrate that in the analyzed fragment two levels of text unfolded: the first one, immediately apprehensible, teaches the location of the heart and its morphological relationships to other elements of the thorax by using a corpse as illustrative model; the second text, which belongs to the level of statements and visibilities, is developed in a “masked” form, destined to produce something that is more complex, that is, the permanent production of the medical discourse as a “discourse of truth”. And, once again using Foucault’s words:

[...] what is at stake in the will to truth, in the will to utter this true discourse, if not desire and power?
[...] the will to truth, which has been imposed on us

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10 Gilles Deleuze argues that the archeology conceived by Foucault “is an audiovisual archive”, constituted of statements and visibilities that, however, need to be extracted from “linguistic units” and from “visual elements”. To achieve this, it is necessary to “break words open” and “break things open”.

11 For further analyses of this theme, please refer to the book “The birth of the clinic”, written by Foucault in 1963.
for a long time, is such that the truth that it wants ends up masking it (Foucault, 1999, p.20).

“Hypothyroidism in childhood” (1976)

This video, developed to approach “congenital hypothyroidism, including the clinical signs deriving from thyroid insufficiency, the differential diagnosis through complementary tests, and also the appropriate treatment” (UFRJ/NUTES, 1997, p.69), has two editions. The first lasts 22 minutes and corresponds to what was in the original script: a didactic exposition about the theme, using, as supporting resources, written texts and graphs (image 4); physical examination of a patient who suffers from congenital hypothyroidism and comparative explanation of his characteristics in relation to those of a girl of the same age without hypothyroidism (image 5); consultation after the hospital discharge, aiming to illustrate the effects of the treatment.

Image 4 – Graph presented in the video “Hypothyroidism in childhood”. Text in voice-over that accompanies the image: “This is the growth curve of normal boys. It shows not only the average stature for each age but also the normal stature variations for a certain age”.

12 Information provided by the technical team of the Educational Video Laboratory of NUTES/UFRJ, responsible for the productions.
This first edition uses the same pattern observed in the video “Heart: morphology and external relations”: the text of the film is also composed of short and objective phrases, and visual resources – images of graphs and tables, live “models”, radiological images – and demonstrations of examinations are employed to support or illustrate what is said. However, the second edition of “Hypothyroidism in childhood” adds to the original script sequences that were filmed due to an unexpected event that occurred during the treatment – the patient Carlos Alberto\textsuperscript{13} did not attend the first consultation at the outpatient clinic, thirty days after hospital discharge. These sequences present: an interview that the assistant doctor, Dr. Maria Helena, gave to the doctor in charge, Dr. Solberg\textsuperscript{14}, about the visit she made to the boy’s family; Dr. Solberg’s testimony about the factors that determined the child’s absence; a conversation in voice-over between Dr. Maria Helena and Carlos Alberto’s mother, “covered” by images that were filmed at her residence.

The patient’s absence in the consultation abruptly interrupted not only the therapeutic process, but also the video production process. The need to continue with both mobilized the convergence of the different opinions and knowledge of the professionals involved in the situation – doctors, social worker and the team responsible for producing the video -, which resulted in

\textsuperscript{13} We used the same names mentioned in the video. The requirements related to the obtention of authorization for use of image, sound and identification were met in the video production stage.

\textsuperscript{14} The authorship of this video is attributed to Pedro Ribeiro Collet-Solberg – Solberg, P. in the Educational Videos Catalog of LVE – pediatrician, professor with the School of Medicine of UFRJ at the time the video was produced. Nowadays, he is considered one of the pioneers of Pediatric Endocrinology in Brazil. About this, please refer to “Jornal da Assex”, Dec. 2006, year 13, p.06 Available from: \texttt{<http://www.assex.org.br/jornal/arquivo/jassex52.pdf>}. Accessed on Jan. 14, 2011.
the search for the child at his home. This decision caused a reflection on the part of the doctor-professor in relation to the knowledge and medical practices concerning congenital hypothyroidism, explained below, and also a re-invention of the original video, adding a documentary dimension to the traditional format that characterized the educational video produced by NUTES at that time15.

The follow-up consultation and the completion of the video filming were delayed by two and a half months. The home visit to the patient and the consequent inclusion of information on the family’s socio-economic conditions in the clinical scene enabled Carlos Alberto’s return to the institution and to the treatment, the team’s re-signification of his absence in the scheduled consultation, and a reconsideration regarding what should also be taken into account in the diagnosis and treatment of congenital hypothyroidism.

Based on the sequences shot at the patient’s residence and on the information reported by the doctor who visited the place, the doctor – and professor – makes, in a testimony included in the final part of the video, considerations about aspects that should not be neglected in the understanding and treatment of congenital hypothyroidism:

In the first physical examination of Carlos Alberto I stated that all the fundamental factors for normal growth and development had been present except for one, the thyroid function. When Carlos Alberto did not attend the first visit scheduled in the outpatient clinic, we were obliged to look for him in the environment in which he lived, and we became aware that Carlos Alberto is not simply a case of congenital hypothyroidism, but a child who, as we will see, lives in an extremely poor environment, and this poverty and the malnutrition that derives from it may affect a child’s growth and development almost as much as a hormone deficiency. In addition, the difficulty in the acquisition of medicines may alter entirely the therapeutic plan. In Carlos Alberto’s treatment, we will have to take into account the family’s socio-economic condition; we will have to treat not an isolated case of a disease, as we tend to simplify it, but a human being, a child, living in extremely difficult conditions; living and returning to this environment after leaving the hospital. The true therapeutic success will only be achieved if all these data are taken into account.

The reflections that the doctor could make based on the search for the child and what he, as a professor, tries to teach in his testimony, point to the

15 About the matter, refer to: Rezende and Struchiner, 2009; Siqueira, 1998 and 2006.
theme of the neonatal screening of innate errors of the metabolism, which include congenital hypothyroidism. This disease started to occupy the international medical scenario in 1961, when the screening for phenylketonuria began to be performed in the United States.

In 1976 – the year of the video production – the first Pilot Program of Neonatal Screening for congenital hypothyroidism was implemented in the United States, while in Brazil, the first neonatal screening project for phenylketonuria was still being established. Testing for congenital hypothyroidism in Brazil started in 1986 – therefore, ten years after the video production – and, only in June 2001, the Ministry of Health published Directive GM/MS no. 822, creating the Programa Nacional de Triagem Neonatal (PNTN - National Neonatal Screening Program), with the participation of all the Brazilian states which, represented by the accredited Serviços de Referência em Triagem Neonatal (SRTN - Reference Services in Neonatal Screening), would be organized following the same principles and procedures: a structure of diagnosis, active search, treatment and follow-up of the screened diseases, paid with resources from the SUS (Sistema Único de Saúde – National Health System) destined to this purpose16.

The analysis of this video favors the understanding of the meaning of archive as “the law of what can be said” because it enables an appraisal of the tensions between the several levels of knowledge-power relations, and of these over choices, decisions and practices, apparently individual. To Foucault, any and every social or institutional relationship and, therefore, all discourses and practices, are produced within knowledge-power relations which, in turn, “are mobile relations, that is, they can be modified, they are not given once and for all”. This, in turn, implies admitting, except for relations in which one of the sides can “exert an infinite and unlimited violence” over the other, that “so that a power relation can be exercised, it is necessary that there is always, on both sides, at least a certain form of freedom”, and with it, always the possibility of resistance and production of singularities (Foucault, 2006b, p.276-277).

The doctor’s decision of sharing his considerations about the clinical practice that was in force at the time, and about his own practice, is important because it opens a field of reflection on individual and collective practices marked by the exercise of freedom, that is, of practices that are clearly defined based on the choice of one certain conduct among many possible others. However, freedom, to Foucault, does not correspond to the mere choice among distinct alternatives; rather, it refers to the development of creative, non-usual practices that take the subjects to a permanent reflection process about themselves – ethical practice – and about the world – political practice -, culminating in the possibility of production of new forms of subjectivity that are capable of resisting the political-discursive practices that are in force, and maybe, of transforming them.

Therefore, although the active search practice is part of the collection of biopolitical strategies that are destined to the management of human life, we do not consider the situation of search for the boy Carlos Alberto as a mere reproduction of them: it was the search for that child, in that situation, that enabled a critical-reflective exercise of all the people involved in the production of the video, in view of the difference introduced in the practices that characterized the clinic concerning the treatment of congenital hypothyroidism and the educational video, at that moment.

We considered evidence of the collective character of this audiovisual production, and of all the decisions that permeated the process, the passage of the use of the first person singular (I) to the first person plural (we) in the doctor’s testimony, signaling the shared authorship of the practices that we consider innovative, in view of the challenge represented by an unpredicted situation.

According to what has been exposed so far, it seems to us that the archive, far from being an armor that constrains the analysis of changes in force relations in the “fabrics of power”, can be understood as the best point of passage from the analysis of knowledge to the analysis of power and from this to the analysis of the subject, or, in other words, from the access of archeology to genealogy and from this to ethics, because, in fact, these analysis dimensions are intertwined in Foucault’s project.

If in the archive we can find evidences of the most enrooted permanence forces – like the disciplinary techniques, the normalization practices and the “will to truth” –, we can also find vestiges of changes experimented by subjects or groups of subjects, even if, at first, these vestiges do not seem valuable because they emerge from contingencies circumscribed to a specific situation, and because they have not been able to institute, once and for all, a considerable rupture.

CONCLUSION

Based on the notions of event and archive, we selected and analyzed two educational videos from the collection of NUTES/UFRJ. In the first one, “Heart: morphology and external relations” (1977), we focused on a small fragment of the video, composed of one single image and seven short and objective phrases in voice-over. We directed our attention to some aspects concerning the intimate relation, which still remains, between a certain way of showing (seeing) and of saying (hearing) in the order of the medical discourse.

In the second video, “Hypothyroidism in childhood” (1976), although the permanence emphasized in the previous video – the relation between showing/seeing-saying/listening – is present, we were interested in analyzing the effects deriving from an unexpected event that interfered in the process of the video production. These effects were understood as rupture events because they materialized alternative practices, which had not been habitual up to that moment, both in relation to the treatment of a child – of that child – with congenital hypothyroidism, and in relation to the practices that established the format of the educational video.
It is important to emphasize that the analyses were not developed in the same way because the videos were selected so as to promote, as signaled above, discussions about events of different levels, which required, therefore, different forms of approach. The analysis of these materials made us move along the Foucauldian project. Thus, we could revisit them, especially “Hypothyroidism in childhood”, having in hands elements that brought clues for the investigation of how individuals, exercising their freedom, can constitute themselves as political and ethical subjects, in the border of the highly disciplinary and normalizing fields of education and health. With the analyses, the impression that the videos said and showed more than what they intentionally intended to say and show corresponds, now, to the understanding that this kind of material transmits an amalgam of discursive and non-discursive performances - social practices, so to speak – that can, and should, be investigated and analyzed in three complementary perspectives: the analysis of knowledge, of power relations between individuals and institutions, and of the individual’s relations with him/herself.

CONTRIBUTORS

Marcia Bastos de Sá was responsible for the production of the manuscript; Vera Helena Ferraz de Siqueira was responsible for supervising and reviewing it.

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