

Stress as Mediator between Social Formation and Occupational Illness^{*}: A Methodological Inquiry

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Summary

The personal stories of individuals are not isolated from the social context in which they occur. They can only be understood and explained within given, concrete historical circumstances. Stories derive meaning from their historical context; individuals make sense of events from a subjectivity that emerges from their own experiences in diverse social spaces and their varied cultural backgrounds. The combination of both elements gives rise to a personal identity subject to historical transformation. In the course of their lifetimes individuals design—and redesign—the meaning of past events. Institutions play a role in this process by ensuring that each individual has been prepared to be a functional member of society, to accept social norms, and to exercise self-control. It is important to understand how humans create meaning over the course of a lifetime as this allows us to understand how historical processes impact individuals.

Production processes affect both health and wellbeing. For example, prolonged stress can lead to chronic diseases. The personal story of Magaly, a seamstress, illustrates how experiences in diverse social spaces determined her perception of situations. Her story highlights the need for a methodology to describe this form of subjectivity which mediates between the social context and those individual responses which lead to suffering.

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* This paper reports on reflections that were assembled by the authors during the development of the doctoral thesis research in the Sciences of Collective Health of the first author and supervised by the second.

Introduction

Magaly^{*} was born in Huatusco, Veracruz in 1954, the eldest of seven children. Her father worked in the fields of her maternal grandfather. Her mother dedicated herself to raising the children, frequently delegating domestic responsibilities to her oldest daughter who—in her “free” time—has to help her father in the fields.

Magaly wants more for herself than a life of abject poverty dedicated to domestic and farm duties. She takes a correspondence course in sewing. At the age of 16, with the permission of her father, she migrates to Mexico City. She wants to work in a factory but finds a post as a domestic worker instead. She doesn't see this post as the best way to improve her economic situation; on her free days she continues to look for a position at a sewing factory. During one of her searches she meets an older man, who ultimately deceives her, rapes her, leaves her pregnant. The resultant son is taken away by her parents to be raised as their own. She has two more children, the fruit of complicated relationships that are also permeated by lies and deception.

She passes through various temporary jobs characterized by poor working conditions and low salaries. Some time later she obtains employment for several years in a maquiladora[†] where conditions still leave much to be desired. Thus, her life passes in poorly paid jobs with terrible working conditions.

Magaly's narrative allows us to examine the way historical circumstances affect the development of individual life stories. Our understanding of her life can not be limited to her personal experiences. To fully understand her as a whole person requires a constant back and forth between the individual and the environment, between the social and the personal.

Her social condition as part of the working class highlights the difficult circumstances that she encounters. Nonetheless, she continues her dual exploration to both encounter the means to survive and to find meaning in her existence. Magaly is a

* The pseudonym Magaly was chosen by the interviewee herself.

† Factory dedicated to assembling clothing for export.

woman who finds herself travelling between two, very different worldviews: that of the Mexican countryside and that of Mexico City. Within her sphere of experience, excessive work is the norm. She lives with a sick mother and a father who watches out for her, although with the *machismo* characteristic of rural areas. Within this world, she dreams that with effort, tenacity and hard work – she was always singled out at school for her participation and work ethic – she can achieve a better life for her family. She aspires to work in a factory, which she sees as a way to improve both her social position and her standard of living.

Her ignorance of the big city and its ways has harsh consequences for her. She works in alienating jobs where, as she comes to realize, the realization of her dreams remains in the distant future. These jobs make her aware of her vulnerability as a worker and as a woman. She suffers rape, exploitation, and numerous romantic disappointments. Her earlier hopes of realizing the urban dream are replaced by skepticism.

As her dreams and foundational myths confront the crushing reality of oppression, she resists. But this resistance has neither direction nor open expression.[‡] A sense of malaise develops which expresses the constant stress and tension that working people know so well. It takes on many forms, including chronic fatigue, digestive problems, irritability, restlessness, and uncertainty.

Although her personal story is somewhat independent of her social context, it is nonetheless typical of the working class. It can only be understood and explained by the concrete historical circumstances that comprise Magaly's world. To understand Magaly's world, one must seek meaning from the historical context and make sense of her subjective experiences. Her story derives from both inside her own experiences in different social spaces as well as from the outside culture; these combine to create a particular identity subject itself to historical transformation.

Over the course of Magaly's life, meanings are designed and redesigned as she tries to make sense of her life. Institutions such as the family, school, and factory also play a role in this process by ensuring that each individual has been prepared to be a functional member of society, accept social norms, and exercise self-control. It is important to understand how humans create meaning over the course of a lifetime; this allows us to understand how historical processes impact individuals.

[‡] She was denied the possibility of obtaining the resources needed to even minimally satisfy the most immediate needs of her and her family.

The preparation of individuals to function within a capitalist society is not a benign process. On the contrary, workers must be controlled. An iron discipline is necessary to instill the necessary norms and codes of conduct.* This process plays a central role in their subjective experiences and comprises a fundamental link between social processes and forms of disease.

Exploring this link requires a methodology that incorporates the links between subjectivity, perception, and stress, while taking into account the workers' reality as confirmed by their experiences and not by the interpretations of others.

The purpose of this study is to discuss conceptual ideas that clarify the need for a methodology examining stress** as a mediator between socioeconomic formation and the manifestations of occupational illness in the working class.

* Both biology and psychology consider stress as a problem located within the individual, i.e. the ability or inability to control responses to stress and confront stressful situations. Both disciplines consider stress as a given in our modern world, as something which cannot be altered. Consequently, the subject must come to understand that he or she must "adapt" to the situation and develop strategies to control his or her responses to stress. Failure to do so is stigmatized as evidence of being "inadaptable." This means that—in addition to the initial stress provoked by a particular situation—the individual now faces the stigma of his or her "inability" to "adapt" and confront problems; he or she now feels even worse. Faced with this situation, the individual learns to suffer in silence, hide his or her discomfort or uncertainty, resist, and reject stressful conditions. The hegemonic approach to stress as a personal problem further worsens the situation of the working class. The Marxist perspective considers that reality is more complex than it appears. Stress must be understood not just in its superficial manifestations but also as it is socially determined. The essence of stress can be found—listed here in increasing importance—in history, in social structure and in the capitalist mode of production.

It would not be out of place to note that during a recent factory visit, deafening amounts of noise—levels as high as 110 db—were encountered. The head of security explained that these noise levels did not affect the workers. He had discussed the matter with them, and the best workers had learned to adapt and overcome any discomforts they felt. These were the workers with a good attitude and a desire to meet production goals and earn bonuses. The security chief called over a worker and asked the worker if he was bothered by the noise. The worker responded in the negative. The chief noted that this worker's good attitude had been rewarded recently with a salary increase. When the chief left, we asked the worker how he felt when he left work. He explained that he was so irritable and aggressive during the rest of the day that "even hearing a fly buzz" would make him upset.

** This is one of the names given to stressful processes.

Methods

Subjects and Interview

128 sewing factory workers were interviewed regarding their socio-demographic characteristics, living conditions, work history, health, life circumstances, and the relationship between work and health. 112 were women and 26 were men. All worked in informal shops in Mexico City where conditions were quite similar to those of the *maquilas*.^{††}

The interviews explored how the subjects' health was affected by their working conditions.

Selection of Magaly's story

Magaly's life experiences were selected for analysis in this paper because they embody certain themes which are key to the research project. Magaly is a woman, a migrant, and a mother. She has had several different jobs, all of which have been very demanding and presumably stressful. This creates the frustration and resistance typically seen in those who occupy subordinate positions. She was also chosen for her extensive work experience as a seamstress.

The following section on methodology introduces the concept of subjectivity as a social construction which forms a fundamental link between socio-economic formation and the manifestations of sickness and death. We then present the lived experiences of Magaly.^{‡‡} Her subjective reality and sense of identity are imprinted by her interactions with others in a specific historical context, a situation that is considered to be "representative" of a working person's experience with stress. The contradictions of a society that undervalues human beings are materialized in both Magaly's mind and body.

Both her social history (understood in Marxist terms) and her oral history serve to rescue her life experiences from oblivion. Both attempt to make audible the footsteps of those "who walk barefoot" on the paths of history; the unknown and the unheard who, nonetheless, are the driving force be-

hind both historic transformation and historical continuity.

Methodological Considerations

On the most abstract level, this paper proposes that the human capacity to use symbols, find meaning in the external world, and generate abstract thoughts is a central link between social structure and the individual experience of health and disease. More concretely these abilities are studied here as mediators between stressful work processes and biological responses in workers. A constant tension invades the worker's body and is expressed in the individual's subjectivity as a specific entity. This tension plays a role in the development of the most common occupational ailments.

At first glance, the harm from current capitalist productive processes might not always seem to affect workers' health. But in reality, the capitalist system treats workers as objects. Workers are given no opportunity to attend to the needs of their body, doing so would interrupt the assembly line. Ignoring their body and any signs of illness becomes an imperative for workplace survival.¹

To study the relationship between capitalist production and illness it is necessary to reconstruct this subjectivity. This does not mean a mechanical affirmation that work processes cause changes to workers' health, rather it underlines the importance of subjectivity. We do not intend to reintroduce the individualistic approach that isolates health/illness from social determinants. Concepts like *objective* or *subjective* cannot really address the relationship between social formation and individual health/illness. Here we attempt a dialogue between phenomenology and Marxism^{2,3} which, in the vocabulary of dialectics, is used to understand how the particular and the universal form one.^{§§} Phenomenology provides the opportunity "to clarify the real perceptual connections of the world"² within which consciousness develops. The Marxist approach is valuable in the sense that perception is conditioned by class and history; it is determined by the individual's place in the social relations of production.

In order to explore these connections, it is necessary to know an individual's everyday reality, to hear the living voices[#] of those who have been affected by the social processes of their time. Gilberto Giménez⁴ has spoken of shifting the lens towards

^{††} These shops were part of a cooperative project promoted by the Mexican City government called "What fine needlework" (Que buena puntada).

^{‡‡} Magaly was interviewed five times (three recorded with her permission) in 2009. For reasons of space, the complete transcripts are not reproduced here, but can be found in the first author's thesis. (Pulido, M. (2010). "No resentía tanto el cansancio". "Magaly", el trabajo de costura y su salud. La enfermedad como expresión de despojo-sufrimiento. El estrés en la interrelación mente-cuerpo. Tesis de Doctorado en Ciencias en Salud Colectiva. Universidad Autónoma Metropolitana, Unidad Xochimilco).

^{§§} Other authors deny the possibility of developing a dialogue between phenomenology and Marxism. See Lyotard.⁵

[#] In their narratives, our subjects discussed the fingerprints left on their bodies by society.

the subject* while not neglecting historical structural determinants. These determinants are the stage on which the individual lives his or her daily life and constructs an individual subjectivity.

Methodological questions are central to this type of research. A better approach to the perceptions of individuals inevitably brings up questions of the relationship between the mind and the body and how stress is related to each. These are philosophical and epistemological questions which attempt to define reality before worrying about how to measure it. A discussion of these questions cannot take place without prior reflection concerning how reality itself is conceived. Only after we establish this can we begin to approach the question of how to understand reality.⁷ As Marx⁸ noted in his criticism of Proudhon, all philosophy is summarized by methodology. A philosophical approach is defined by its approach to the nature of reality.⁹

Wright Mills¹⁰ criticized mainstream research for its positivism. Rather than posing questions, it seems preoccupied by presenting problems, variables to measure, instruments to use, populations to be surveyed, and the controls to be chosen. It is centered on a "methodocracy" that eventually births a stunted methodology:

In practice the new school usually takes as the basic source of its 'data' the more or less set interview with a series of individuals selected by a sampling procedure. Their answers are classified and ... used to make statistical runs by means of which relations are sought. Undoubtedly this fact, and the consequent ease with which the procedure is learned by any fairly intelligent person, accounts for much of its appeal. The results are normally put in the form of statistical assertions ... There are several complicated ways of manipulating such data, but these need not concern us here, for regardless of the degree of complication, they are still manipulations of the sort of material indicated.

Mills notes that the hegemonic method provides security where there is uncertainty. It prefers to follow a beaten track in order to avoid new problems, new methods, and new ways of understanding reality. In this regard the comments of Santiago Ramirez⁹ concerning the Marxist method appear germane:

The dialectical method adopts a viewpoint distinct from that of traditional natural sciences. It

* The need for a materialist theory of the "subject" has been pointed out.⁶

does not try to isolate or purify the facts by tearing them away from their vital context or conceptualize them in an environment devoid of problems. Marx affirms that the traditional viewpoint of natural sciences is that of the dominant class of capitalist society. The dialectic method, far from adopting the illusions of the traditional method of natural science, differs from it by impeding efforts to "succumb to social appearances...in order to see the essence behind the appearance." For the dialectic method, the facts are not initially clear. They become so via their elaboration. As a result, the methodology of Marx does not accumulate facts but instead provides them with greater detail. It does not isolate them but instead places them in vital context. The Marxist method is this: an elaboration and re-elaboration of the facts.

Hampden-Turner¹¹ notes that Marxist methodology attempts to break-up the repetitive habits of "mechanistic, reactive, and physicalist treatment of man" that results from the social sciences having to "borrow" from the "toolbox" of the natural sciences. He points out that:

... the demand for precision and invariability attracts the investigator to the more trivial and repetitive activities of man, that empiricism focuses on stereotyped externalities, ignores depth of experience and emphasizes the status quo above visions of the future. We have seen that analysis fragments without being able to integrate, looks to the past instead of facing forward, regards man in the light of animals and fails to respect his complexity.

Kosik⁷ sees Marxist methodology as a decision to go beyond an incomplete understanding of workers' health/illness limited to statistical associations between different variables and a phenomenological approach restricted only to the observable immediate reality.

Marxist methodology, by moving beyond the immediate context, provides a richer understanding of how the worker's situation is structured and the origins of his or her material circumstances. Cuéllar and Peña¹² criticize positivist approaches that reduce economic, political, and social phenomenon to a mere "biographical and chronological framework within which their role as determinants is lost." Positivism converts the health/disease process into a "something alien to society." But, as these authors point out¹², the health/disease process is a historical one, a social biological process which is

ultimately expressed in the individual. Its characteristics depend on "the specific development of each socio-economic formation" as it is determined by the specific historic context.

The goal is to view particular situations as historical products. The historical context explains the realities of everyday life as well as the ideas that individuals form about their experiences. Confronted by the contradictions inherent in their lives, individuals can either accept the dominant ideology or rebel.

It is necessary to start by stating how we understand "reality." Is it the here and now? Simply the phenomenon we experience? Or is it better understood as what lies "behind," an essence found in the relationships creating the phenomenon?

As Lukács states:¹³

In order to progress from these "facts" to facts in the true meaning of the word it is necessary to perceive their historical conditioning as such and to abandon the point of view that would see them as immediately given; thus they must themselves be subjected to a historical and dialectical examination. ... If the facts are to be understood, the distinction between their real existence and their inner core must be grasped clearly and precisely. This distinction is the first premise of a truly scientific study which in Marx's words 'would be superfluous if the outward appearance of things coincided with their essence'. Thus we must detach the phenomena from the form in which they are immediately given and discover the intervening links which connect them to their core, their essence. In doing so, we shall arrive at an understanding of their apparent form and see it as the form in which the inner core necessarily appears. It is necessary because of the historical character of the facts, because they have grown in the soil of capitalist society. This twofold character, the simultaneous recognition and transcendence of immediate appearances is precisely the dialectical nexus.

These are the philosophical-epistemological foundations underlying an alternative (non-hegemonic) scientific project. It is not merely a question of whether or not to use a quantitative or qualitative method. Instead—following the Marxist tradition (beginning with Marx himself¹⁴) Kosik⁷, Lukacs¹³, Ramirez⁹, the authors of the *Annales* and English social history¹⁵, among others—the alternate project seeks to understand the reality of social groups by rescuing the words of those people usually relegated to second class by the hegemonic sci-

entific community and whose versions of reality are often collected indirectly from what others say about them.

Furthermore, the alternative approach diverges from the hegemonic method in that the body and the mind are not considered separate entities in the individual. To the contrary, they both form one articulated unit, where the configuration of the body and its actions have an impact on thinking; thought, in turn, impacts the physical constitution and the health/disease process. It studies the inter-relationships between biology and society and the body and the mind.[†]

There is disagreement concerning Descartes' position with respect to mind-body duality. Cassier argues¹⁶ that individuals are not only affected by the material world but also by what they perceive, symbolize, and signify about the world that surrounds them. The position of Fromm is also pertinent. In his research on the mind-body relationship, he noted that:

We all know that the body expresses our state of mind. When we are furious blood rushes to our head and flees from it when we are afraid. Our hearts beat faster when we become angry and our entire body maintains a different energy when we are happy than when we are sad. (...) The body is actually a symbol of the mind. Every emotion is deeply and truly felt and as with all genuine thoughts, expressed by our body.¹⁷

To borrow from Marx and his method of inversion[‡] (borrowed in turn from Hegel) when we speak of domination we also speak of resistance. This is the dialectic method of understanding the problem of stress and its impact on health.

The Lived Experience of Female Seamstresses

These premises regarding the dialectic method were used to explore the historical and social reality of workers in order to understand which societal and particular circumstances shape their social context and how their reality obliges them to act in certain ways. In short, how they are affected and conditioned by the mode of production.

Workers' illnesses can be studied in a comprehensive way using this methodology. Historically, the study of occupational illness demonstrated the

[†] One can question if "interrelationship" is, in fact, the correct term. If the apparent distinction between mind and body is simply a Cartesian dichotomy of the modern era, would it not be better to speak of mind and body as a single unit?

[‡] See Ramirez⁹ concerning this issue.

need to study how structure and superstructure are merged into a subjectivity that is divided into a certain identity in which representations, meanings, and beliefs interact and are expressed through a corporal entity that externalizes the health-disease process.

This study is part of a current trend in social history which sees a need to identify what happens to oppressed workers whose working conditions place them in highly stressful conditions. It seeks to understand what happens to human beings who suffer in silence.

The principal objective is to establish the relationship between production processes and the health/disease process. This is done through the study of subjectivity in relation to the processes of workplace tensions or work-related stress. Tension and stress are seen as forms of resistance or a means of rejecting the harmful working conditions that prevent an individual from realizing his or her full potential as a human being.

We used the story of a female worker as a way of understanding different social spaces and the mechanisms through which—at different times and in different social processes—Magaly either internalizes or resists culture and subjugation. Her life story provides a way to understand how she builds, transmits, and reproduces culture and subjugation at distinct moments of her personal history which unfolds within a larger scope of the history of her society.

We seek to understand the identity of an individual as something continuously constructed in differing social spaces. This requires awareness that identity is not something fixed, eternal, or forged once and forever.¹⁸ It is shaped by interactions with others as well as by changing and historical circumstances. What is called *the culture of gender*¹⁹ plays a transcendent role in identity formation. Society, in its various historical moments, assigns distinct gender roles. These roles involve implicit ways of understanding reality, developing oneself, and existing.

Interrelationships among individuals allow the exchange of symbolic forms³ reflecting patterns of meanings that are incorporated into their culture and shape identity, beliefs, customs, dispositions to act, and images. Interrelationship implies contradiction and internal conflict; these can be overcome in diverse ways and may hold the key to the development of poor health and medical disorders.

The conceptual approach developed by Villoro²⁰ is extremely useful in understanding the relationship between the structural and super-structural. It identifies the position of each group in the produc-

tion and reproduction cycles which shape their social situation. This position establishes the most important needs of the group's members that must be satisfied. These needs give rise to impulses and values which, in turn, foster dispositions to act either favorably or unfavorably toward social objects. This disposition to act (or attitude) determines particular beliefs.

To clarify how the production process affects the lives of individuals and the health/disease process we examined the meanings that Magaly developed concerning the relationship between her health/disease experiences on the one hand and her work experiences and her social integration in capitalist production on the other.

Oral history and the technique of unstructured interviews offer the ability to understand a life history—not in the abstract or isolated from the real world—but with a historical social approach that is centered on “the underdogs.”[§] As a result, the way in which societies organize themselves to produce their material life determines^{**} all other aspects of social life; in other words, the economic production of livelihood determines the changes, continuities, and ruptures of social life.

Speaking of her life experiences, Magaly describes how she forms part of a capitalist society that structures her daily life and places her in a role of subordination, in the class of the dominated that suffers from oppression. But, understood dialectically, everything has internal contradictions. Within this subordination there exist possibilities for resistance. This resistance, however, is expressed silently and enters unnoticed into Magaly's physical body. This resistance also appears in her narrative, in the processes she uses to form meaning.

The study of subjectivity, therefore, is crucial to understanding how adverse working conditions may or may not permanently affect the psyche, physiology, and health of individuals. There exists a great potential for the concept of subjectivity if it is understood as a tool for accessing the meanings and feelings that individuals give to their experiences, lives and to their work in particular. It provides insight into how individuals are or are not affected by stressful conditions stemming from their work.

With the story of Magaly it is possible to appreciate how the capitalist organization of work (directed not at the satisfying of needs but the accu-

[§] We borrow here the title of Mariano Azuela's famous novel *Los de Abajo* (1916)²¹ (translated into English as *The Underdogs*).

^{**} “*In the final analysis*” (última instancia) as Engels would say.²²

mulation of capital) leads to chronic degenerative illnesses. The relationship between these illnesses and working conditions has been hidden. Prolonged stress plays a central role in this interrelationship.

A dialectical approach is needed to understand the subjectivity of an individual, to understand the worker's identity, how he or she has developed a way to see the world, form meaning, create symbols, and understand what affects him or her and causes him or her stress and constant discomfort. It helps decode how he or she lives, feels, perceives, assimilates, and formulates the meaning of the events of his or her life.

Magaly's Story

Magaly's story allows us to decipher which parts of her social context she incorporated into her daily activities, internalizing them into her body. This "incorporation" is part of the mind-body interrelation (described above) which is mediated by stress. It is an expression of resistance to domination. The internal conflict expresses contradictions between her crushing daily reality and what ought to be, between what she is and what society forces her to be, and between the two worldviews operating within her.

When she migrated from the countryside to the city, Magaly brought with her not just memories, but also a way of being; this included certain beliefs, and attitudes toward life and people that were influenced by patriarchal relationships that included guilt as a central element. Magaly does not tell us in her account that she was raped because men are bad. Instead she points to her clothing when she first arrived from the countryside dressed in the humble attire of the "provinces." In her own words, these clothes highlighted her humble origins as a rural peasant. As she assumes blame for the assault, the victim becomes the offender.

This clash of two cultures and two identities leads to a series of events that are imprinted on her body. The rape is not the only result of this clash. She also suffers from disease. She moves from the ways of the countryside—based on the rhythms of nature—to an urban life. In a sense, she has jumped from the pre-capitalist world to that of capitalism. In the city she is dominated by despotic bosses, obeys strict schedules, and learns that speed is the most important value. She is stripped of her personal time to the point of imposing time constraints on her physiological needs.

In her narrative we see the early signs of resistance against the control exercised by the supervisors at the sewing factory. When the powerful establish rules for the oppressed, the workers even-

tually sense that the bosses' total dominion over their bodies is unjust, arbitrary, and absurd.

As noted by Marx,²³ the capitalist buys labor power, and the worker is just a vehicle for needed labor. For the capitalist, he or she does not exist as a person. Capital wants full use of the worker's body and mind. If it could, capital would prevent the worker from thinking about anything that is not related to production. Even speaking with other workers is prohibited, as it could be a distraction from the labor that now no longer belongs to worker since he or she has already sold it to the capitalist.

This absurdity is captured by Magaly when she states:

I was not even allowed to speak. If I ran out of thread I could only raise my hand. Their rules were very strict and made our work very difficult. There wasn't even time to turn around. We had to always be at our machines, constantly working.

The subjugated, in this case, Magaly, nevertheless hide their rejection²⁴ of their working conditions. They tolerate strenuous days, unjust treatment, and constant demands. There is a conflict between what is understood to be just and the reality that obliges them to abide by the rules of the game.

Humans have an inherent capacity for rational thought; this capacity allows them to understand and interpret the injustice of those situations which impede their full development and force them into a life of misery designed only to generate wealth for others. The contradictions of their daily lives lead to internal contradictions that emerge despite all efforts to cover them up.

As individuals adapt to their social environment and to a particular job, their body responds physiologically, psychologically, and behaviorally.²⁵ Although the physical response is individual and differentiated, it is not the result of a defect in the individual. Although mainstream science would have it otherwise, one should not forget that the vulnerability to stress stems from and is expressed by social class.

The individual response to stress depends not on innate abilities or skills but rather on the social reality within which individuals are forced to live. This reality is incorporated into the psyche in symbolic form. Thus the interpretation of individual perceptions and meanings is a matter of utmost importance.

In a situation of constant tension, the body does the best it can. Some systems get more energy while others – such as the immune system – are neglected. This paradigm is reflected in Magaly's case by her increased risk of developing cervical cancer.

This example allows us to deepen our understanding of the interrelationship between mind and body.^{26,27,17,28,29} With this simple illustration we hope to show how the social is expressed in the bodies of individuals, how mental processes and the body's response to the constant stress of the working and living conditions created by capitalist society are linked. Capitalist society robs individuals of their opportunity to be alive and robs them of the time needed to develop as human beings and express themselves in their fullness. Instead, this society forces them to work tirelessly and live only for a job which creates wealth for the few while the unbridled drive to produce leads only to suffering and illness.

Human beings who are forced to accept unpleasant social conditions learn very quickly to shut off their true feelings, emotions, discomfort, anger, and disgust. The constant need to suppress their true feelings, and to express and assimilate as their own those actions which are presented as "natural" but which in fact are highly unnatural, results in internal conflicts.

These conflicts present as a clash or confrontation between two internalized worlds. One world stems from the worker's own ability to continuously create meaning from life experiences. The other is decreed from outside and then assimilated into the worker's interrelations with others. It does not allow dissent on pain of seeing oneself as "abnormal,"²⁷ a response that plays a large role in how the powerful induce guilt and the need to be obedient.³⁰

This confrontation can lead to neurotic anxiety and other disorders. A conscious sense of guilt is embedded into each moment of the day and is the probable explanation for why workers renounce the pursuit of knowledge. The worker internalizes a fear of responsibility. The desire to be under some external authority becomes something "natural." The more authoritarian the boss, the more "capable" and "confident" he appears in the eyes of others.²⁶

Concluding Thoughts

Stress is understood as an organism's adaptation to an emergency situation. In modern times this has come to be seen as a "problem." Unlike all other modes of production, capitalism has converted

stress into something harmful. By making stress a constant presence, it is translated sooner or later into disease. Although it evolved as an adaptive phenomenon vis-a-vis the external world, when stress becomes continuous, it becomes something harmful to the body.

Capitalism has stood the pre-modern forms of human life on their head. Human societies no longer live respecting the cycles of nature and following nature's rhythms. The modern capitalist era has taken humanity away from its respect for a natural order that defined the best times for planting, irrigating, and harvesting, for performing the rituals of worshiping the gods, for coming together in common rituals, traditions, and customs that promote collective experiences. The worker is transported to a new order where the concepts of speed and the need to save time for the sake of productivity rule all aspects of life. Competition among peers is promoted as a requirement of the social order. The individual's life is transmuted into time dedicated just for work. He or she lives only to work so that his or her family can survive and thus ensure the continuation of working class.

Magaly's life, like that of many other workers, is devoted entirely to work. She does not work to live; she lives to work. Her life has been spent either in domestic work or in sewing. It is a life characterized by a pain and suffering linked to her vulnerability and manifested in the loss of her childhood, her time, her physical existence, and also by the violation of her body. These situations are all related to her class position. When life puts her in situations where she is vulnerable, her suffering resurfaces. This sense of suffering has been a constant throughout her life, leaving her only for short periods. She must face a constant sense of loss which permeates the different spaces and times of her life. The mind-body interrelation became evident when she was diagnosed with cervical cancer. One can speculate as to the importance of lifelong, constant stress in the development of this cancer.

Sergio López²⁹ has argued that:

If we conceptualize emotions as something which are part of the body's organs, then they form a complex pairing in their internal relations with other organs and other emotions (...) a body without organs, emotions, history, culture, and work is inconceivable (...).The displacement of a suppressed emotion depends upon internal levels of anxiety. It is more complex if family or social pressures are added. As a result, the body has no chance to experience peace. Dreams will be disturbed, leading to or-

gans exhibiting disorders and imbalances which over the years become chronic (...).

Stress and damage to health are traditionally thought of as something individual. However, this individuality only exists in appearance, much as we respond to or confront different experiences in an individual way. Focusing on the individual response to stress obscures that—in its essence—stress is a collective experience. Once its collective nature is revealed, the links between stress, health impairment, and social structure become clear. Stress results from the way in which society organizes the creation of the material goods necessary for reproduction.

Contemporary capitalist society is organized to manufacture goods socially. A group of individuals comes together and—thanks to the development of productive forces—produces larger quantities of goods in less time. However the benefits of this increased production are distributed unequally. Such a contradiction fosters distrust and conceals a theft. For theft is the only way that value is transferred to goods created through capitalist production.^{23,31,32} Consequently, as the capitalist seeks to continuously obtain increased profits and productivity from the work day, working conditions deteriorate.

Stress and constant tension lowers our body's natural defenses. Lowered immunity promotes the growth of malignant tumors. For Magaly, harmful working conditions are associated with the many serious health problems she faces, with cervical cancer being the most dramatic. The diagnosis of cancer certainly plays a large role in her subjectivity. We must situate Magaly's sense of self within those places where she has faced the demands of her employers and had to accept them with a resigned attitude. There was simply no other option if she wanted to survive and help her family progress.

Although traditional (hegemonic) social science uses the technique of daily observation, it fails to grasp the larger picture revealed by daily events. The imposition of what is called the "scientific model" privileges statistical methods which often obscure this larger picture. Nonetheless quantitative methods are seen by positivism as the most valid way to do science.

Hampden-Turner has noted⁹ that the obligation imposed on scientists to understand the world only through the methods of the natural scientific methods restricts social sciences to seeing these models as the only valid ones and the only way to understand the world. Natural science is presented as the model of an exact science and scientists are re-

quired to use its "toolbox." The mechanical application of natural science methods to social problems has led to assumptions that we understand something just because we have artificially assigned a value to it. The fact that this assigned value is real has become almost a matter of faith.

The hegemonic perspective uses tools designed for one type of reality (the natural world) to understand society which is ontologically different. Without a doubt this is a political choice. The decision to understand social reality in this illusory manner trains researchers to give a determined existence to things such as emotions, perceptions, and attitudes. This limits analysis to the most superficial level (the isolated phenomena) without connecting it to its ultimate determinants. This prevents any real understanding of the problem and—even worse—any true solutions. Of course, any true clarification would bring into question the established order and bring the researcher closer to the working class.

This critique does not seek to impugn the traditional methods of social science nor is it meant to contrast the quantitative method with qualitative approaches. Instead, it calls for greater awareness that traditional analysis itself is product of capitalist society: it is capitalist social science. This illustrates the need to recover Marxist approaches which see the social as something different from the natural sciences. In the study of society we need to consider what it means to be a human.

Humans live in societies which are historically linked to particular modes of production. They live immersed in a social order which is divided into classes. Under these conditions, they assimilate the world view of their society. But workers are also sentient beings who look at the world around them, think, walk, and have bodies. We cannot study Magaly only from a phenomenological perspective or only from a structural one. Instead we must consider the nature of Magaly's humanity.

Magaly is not an isolated individual—the 18th century Robinson Crusoe of whom Marx spoke[†] - but is part of a larger society which created her and which she also creates, a process marked by her special characteristics as a woman. Any technical, methodological, and even epistemological discus-

[†]"Individuals produce in a society, and hence the socially determined production of individuals, is of course the point of departure. The solitary and isolated hunter or fisherman, who serves Adam Smith and Ricardo as a starting point, is one of the unimaginative fantasies of eighteenth-century romances à la Robinson Crusoe; and despite the assertions of social historians, these by no means signify simply a reaction against over-refinement and reversion to a misconceived natural life."¹⁴

sion is useless if it is not self-consciously philosophical.

The health-disease process itself contains a philosophical position. When we propose that there is no health without disease we assume a philosophical stance. When we note that a sick person does not suffer in a vacuum but rather in a specific society this also implies a philosophical position. The awareness of an unjust order ends the innocence maintained by capitalist society. This loss of innocence may itself be the cause of that “disease” which is a growing awareness of the body and society.

Ultimately, awareness develops from the loss of innocence and the growing realization of exploitation. Resistance appears at this point, but it needs to find a way of expressing itself. Without an alternative, people search for something that can offer them an explanation—or even security—in a life bereft of human meaning.

Stress is not merely a biological problem but also a social one. It is linked to a society that eventually imposes not just a way of being, but also a way of feeling and thinking. This imposition is both material as well as intellectual and mental.

Existing approaches toward stress favor clinical/biological or behavioral explanations. Our approach differs by focusing on the social. Stress is not the primary cause of illness. Stress can be seen as a physiological process that is transformed into something pathological.

Human beings are not passive and static. They are dynamic. They have a history and cultural background. They carry inside a life story. They do not accept circumstances unthinkingly. Rather, they resist oppressive conditions, although sometimes that resistance must be silent and hidden.²⁴ Thus, we associate stress with resistance.

Other authors have examined stress as a manifestation of working class culture. Reygadas³³ has critiqued this cultural or psychological approach to the Mexican worker. He prefers to emphasize:

... those cultural forms of resistance to the powerful that—far from being insubstantial—are sustaining and sustained by daily practices of underground opposition. Faced with the authoritarianism of the factory, mistreatment, poor working conditions, and the lack of a fair contract, workers choose to do as little as possible: “they pretend to pay me, so I’ll pretend to work.” If their interests are not taken into consideration, they show no loyalty to the company. If they think themselves robbed, they may think it appropriate to commit petty theft or deceive the

supervisor or employer. Having been belittled for not mastering modern technology, many Mexicans respond with an anti-intellectual attitude, a proud defense that stems from an acceptance that knowledge comes from experience. This belief results in a greater appreciation of free time and a contempt for the time spent at work.

In agreement with Scott, our position suggests that many of the pathologies associated with stress are linked to this silent form of resistance. Bad behavior in itself might be seen as the best way to fight back. However, it is not the answer to the problem of subjugation. Instead, it is the obligation to remain silent that is the necessary condition for being functional and surviving even under adverse conditions. Yet this silence tends to prolong the negative characteristics of work, does not resolve the problem, and perpetuates the response in the body.

The problem of stress implies subjugation. But researchers must not limit their study to the ways in which the worker is subjugated. We must also understand how people resist domination. The dialectic between how one lives under subjugation and how one resists it defines—to a great extent—whether the worker becomes sick or not.

Ultimately, maintaining silence to survive and living in unjust situations lead individuals to sickness and death. To hide resistance with the goal of remaining functional under the capitalist order and to avoid exclusion results in illness.

In contrast, to speak out, express oneself, organize oneself with one’s peers, to demand rights, to feel supported and not alone, and to share the same sorrows and joys of one’s peers, places sharing in a transformational perspective and relieves tensions. This can be a first step towards changing the material conditions of life in search of the human flowering of which Marx spoke.²³

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