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THE ORGANIZATION OF MODERN SOCIETIES: CORE-PERIPHERY OR VERTICALLY STRATIFIED?[1]

Abstract. *The short article attempts to shed new light on the basic organization of contemporary societies. Initially, two models of societal organization are introduced which are classified as core-periphery model and as a homogeneous vertical stratification model. The second section points to a notorious weakness in currently available stratification schemes which are hardly capable to account for the multi-dimensionality of contemporary living conditions. The third part of this article introduces a complex stratification scheme with a multiplicity of different domains and dimensions. As a next step, the two societal stratification models are combined with the complex stratification scheme so that both societal models can be expressed in terms of different stratification patterns. The fifth section produces the results from two parallel surveys in Slovenia and in Austria which were implemented with two groups of 400 fully employed and 400 unemployed persons. The outcomes of the surveys clearly support the homogeneous vertical model and reject, by and large, the center-periphery model. In a final section one of the empirical findings, namely the strong relations between the lower segment of unemployed persons on the one hand and their health conditions on the other hand are further discussed in theoretical terms and new theoretical links are suggested between social inequality research and medical research.*

Keywords: *Social inequality, comparative research, health research, living conditions*

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It belongs to the conventional wisdom in social and economic research that inequality has increased substantially over the last three decades both at the national and at the global levels. However, significant increases in equality can have quite different effects, depending on the overall organization of contemporary societies. On the one hand, the societal periphery could increase in size and move further away from a diminishing societal core-domain. On the other hand, societies, due to increasing inequalities, could drift further and further apart in their upper and lower segments which leads to a crumbling of the middle stratum in between.

The present article will address the crucial issue of societal organization which despite its centrality is seldom posed or answered. The article will focus on labor processes as the central societal distributive engine for societal stratifications and will introduce a complex stratification scheme which produces two significantly different data patterns for the two different models of societal organization. Additionally, the article will bring empirical evidence from two recent surveys which were conducted in Slovenia and in Austria and which should be capable to support one of the two basic models of societal organization.

Two Models for the Basic Organization of Contemporary Societies

Modern societies can be described, in principle, in a variety of ways with respect to their composition in groups, classes, strata, clusters and the like. In accordance with the broad Marx-Weber tradition it will be assumed that labor processes can be considered as the main societal machinery for the distribution of life chances (Max Weber) as well as of socio-economic risks.

Labor Processes → Vertical Stratifications

But labor processes and their distributive capacities can operate in at least two different forms or models.

The first model emphasizes the emergence of more and more peripheral groups which, aside from unemployed persons, include marginally employed, peripherally self-employed, temporally employed and other groups which fall outside the realm of fulltime employment. Here, the main emphasis lies on a core-periphery segmentation and on a deep vertical split between the core of fulltime employment and other forms of employment, including unemployment. The center-periphery model presumes a core status for fulltime employment, relatively small differentiations within the core of fulltime employment and large vertical distances to peripheral groups like unemployed or marginally employed persons.

The second model of societal organization assumes that labor processes lead to a strong vertical separation into classes or strata. According to the

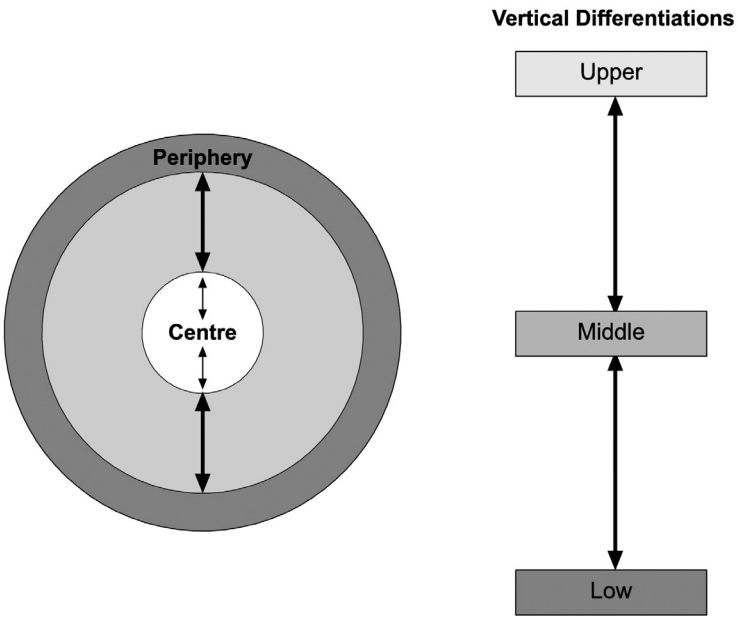
second model the basic vertical divisions occur already within the domain of fulltime employment and other societal groups follow along these strong vertical divisions within the domain of fulltime employment. Thus, the vertical model postulates relatively large vertical differentiations within the sphere of fulltime employment and similar distributions for other societal groups.

It should be noted that both models have different implications for social policy issues. According to the first model, the main emphasis lies in a transfer of persons and groups from the periphery to the core and, thus, to a widening of the core-segment. Within the second model, the main attention is devoted to the lower strata of fulltime employment and to the lower strata of other societal groups as well as to a gradual reduction between upper and lower strata within the domain of fulltime employment.

Figure 1 presents a visual display of these two models of societal organization which stand in the center of the present article.

Figure 1: TWO MODELS OF SOCIETAL ORGANIZATION

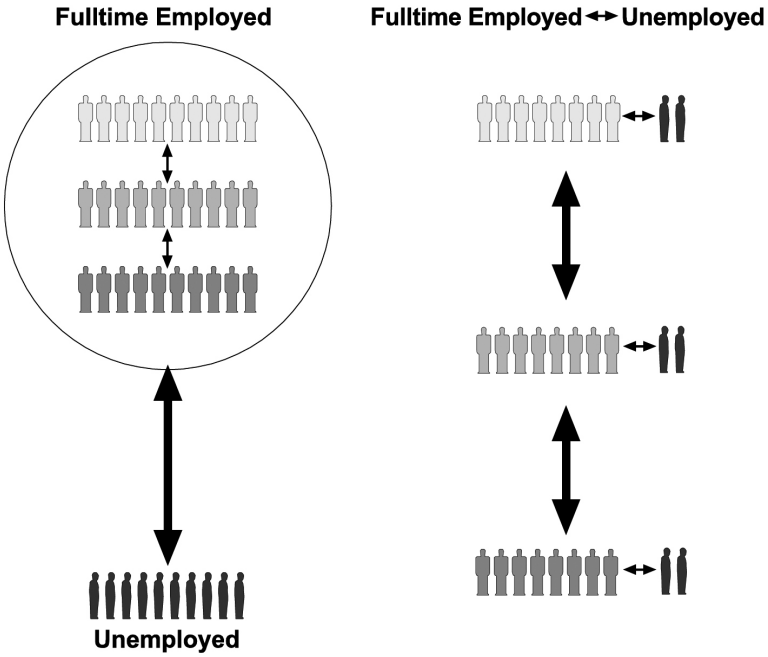
Model I: Core-Periphery Model II: Vertical Segmentations



Taking two extreme groups within labor processes as reference examples, namely fulltime employed and unemployed persons, the two models exhibit the following characteristic features.

The core-periphery model places heavy emphasis on the deep split between the core domain of fulltime employment and unemployed groups. Thus, the first model expects strong divisions along the deep chasm between core and periphery. In sharp contrast, the vertical model sees the deep vertical differentiations within the domain of fulltime employment. Consequently, the group of unemployed persons is assumed to be strongly stratified as well and to follow closely the pattern of the fulltime employed group. Figure 2 presents these two models and their characteristic features.

Figure 2: TWO MODELS OF SOCIETAL ORGANIZATION FOR FULLTIME EMPLOYED AND UNEMPLOYED GROUPS



At first sight, the core-periphery model looks far more plausible than the homogeneous vertical model. After all, unemployed persons have not only lost their job, but they experience financial restrictions and various forms of social exclusion as a consequence of their job losses. It seems highly implausible to assume that the group of unemployed persons has an upper stratum with relatively low differences to the upper stratum of fulltime employed persons.

Nevertheless, both models go along with significantly different empirical data patterns which largely depend on the current stratifications within the core domain of fulltime employment on the one hand and on the gaps

between fulltime employment and marginal forms of employment, including unemployment, on the other hand.

The Missing Links between Labor Processes, Vertical Stratification and the Multi-Dimensionality of Living Conditions

Surprisingly, the currently available stratification schemes suffer from two characteristic deficits which can be summarized in the following way. Classical stratification schemes in the Marx-Weber tradition which are based on labor processes operate with a very small number of variables which, however, are not able to capture the multi-dimensionality of living conditions. Alternative stratification schemes which usually fall outside the sphere of labor processes emphasize horizontal differentiations and operate largely independent from vertical stratification schemes.

Labor Processes	→	Small Set of Key-Dimensions	→	Irrelevant for Multi-Dimensional Living Conditions
Multi-Dimensional Living Conditions	→	Life Styles	→	Irrelevant for Vertical Stratification Schemes

Within the Marx-Weber tradition, the Marxian frameworks on class formations and vertical stratifications try to account for multi-dimensional living conditions within their overall conceptual schemes. However, the traditional or post-traditional approaches in the Marxian tradition (for a comprehensive summary, see Grusky, 1994) share a fundamental shortcoming due to the clearly under-complex conceptual frameworks for reducing the complexities of current living conditions.[2] Referring to contemporary class-analyses as advanced by Pierre Bourdieu (1982, 1985) or by Eric Olin Wright (1997), the main argument rests basically on too little diversity in the underlying class-concepts, including Bourdieu's habitus formations. In essence, two main-dimensions in the case of Wright (relations to means of production (including power relations) and qualifications (expert/skilled/non-skilled)) or the three Bourdieu dimensions with economic, social and cultural capital do not reach the requisite dimensional variety necessary for mastering the highly heterogeneous life-courses of individuals or households.

Due to the under-critical conceptual apparatus, multi-dimensional living conditions would have to be included into a class-analysis framework as additional components. However, such a strategy runs counter to the

[2] *For an interesting summary and discussion see e.g., Giddens, 1989: 209 pp.*

conceptual core of class-analysis, especially in the case of Pierre Bourdieu. But for Eric Olin Wright too, the problem of integrating living conditions into class analysis means for him to study the effects of class formations on living conditions in a peculiar way for which Wright uses a seemingly compelling analogy from medical research.

> *Class analysis is based on the conviction that class is a pervasive social cause and thus it is worth exploring its ramifications for many social phenomena ... Understood in this way, class analysis is what might be called an 'independent variable' specialty. It is a discipline like endocrinology in medicine. If you are an endocrinologist you are allowed to study a vast array of problems – sexuality, personality, growth, disease processes, etc. – in addition to the internal functioning of the endocrine system ... Endocrinology is monogamous in its explanatory variable – the hormone system – but promiscuous in its dependent variables. (*Wright, 1997: 1*)*

Though considerably weaker, this version has the distinctive disadvantage that a large amount of "independent variable specialties" are available, in principle. Take age groups, cohorts, gender, regional differentiations or life-styles, to mention just a few, then one could justify their relevance for socio-economic analysis in Wright's own terms, namely "that age (cohort, gender, life style, region) is a pervasive social cause and thus it is worth exploring its ramifications for many social phenomena." In the end, the socio-economic endocrine system turns out to be itself highly promiscuous.

To conclude, the two most advanced class approaches by Pierre Bourdieu and Erik Olin Wright are by their very structural organization unable to integrate multi-dimensional aspects of current living conditions, including, above all, the aspects of attitudes and self-assessments.

Turning to the shortcomings of the Weberian tradition in their current versions[3], these approaches offer vertical stratification schemes by distinguishing between different classes or status groups. Classes, on the one hand, are defined on the basis of the position and of the interests within a capitalist mode of production which determine, to use a central Weberian term, the life-chances of large groups of individuals. Status-groups, on the other hand, are conceptualized as specific communities, sometimes of an amorphous kind, where the distinctive elements are determined on the basis of a specific social estimation of honor and on particular life-styles which has become another core Weberian notion. Classes and status groups

[3] *For a summary on the Weberian tradition, see e.g., Blau/Duncan, 1967, Giddens 1973, Hodge, 1981, Parkin, 1979, S rensen, 1991/1994 or Treiman, 1977.*

produce, according to Max Weber, different configurations, sometimes very intimately linked, probably more often than not, opposed to each other and at times in aggressive disharmony.

While the conceptual differentiation in Max-Weber's work can be considered as remarkably complex and multi-dimensional, the subsequent empirical research trajectories along Weberian lines suffer from the peculiar fact of being too highly reduced in their conceptual complexities. The wide design spaces for Weberian classes and status groups have been severely under-utilized so far since the index constructions leading to status scales are either based on occupational ratings or on small sub-sets of socio-economic indicators on living conditions or life-styles.

Thus, the Weberian and Post-Weberian traditions have retained their emphasis on vertical stratification, but apparently at the expense of restricting the multi-dimensionality of life styles and the social order to a small number of key variables only. Consequently, the available Weberian or Post-Weberian platforms simply have become too narrow for linking them with additional domains like culture, risks or health-conditions.

Turning to stratification schemes outside the Marx-Weber tradition, one finds a new societal perspective which emphasizes risks and risk formations, and which rests largely on Ulrich Beck's "Risk Society" (Beck, 1986)[4]. Ulrich Beck in his national Post-Chernobyl bestseller uses the pattern of a phase transition between two stages in modernity as a broad platform in which the notion of risks receives its proper attention. The initial stage is characterized, not surprisingly, as industrial or traditional capitalism. Using dialectical metaphors, Beck argues that industrial capitalism has an in-built logic which transcends its own boundaries and identities and which produces, thus, an endogenous drift towards a qualitatively different stage. Thus, driven by inner necessities, industrial capitalism is superseded by a new phase which has been labeled as risk society. Put briefly, risk societies have become the current stage in the capitalist evolution and a generalized logic of risk-production, in contrast to the logic of wealth production of the industrial phase, stands at its center. This new logic of risk production manifests itself most vividly in the effects of high technology production and services which constitute, aside from their undeniable advantages in terms of volume, price, diversity or quality, a permanent threat to individuals or households. Again using dialectical metaphors of inner necessities, production and services under the new risk regime generate, by inner necessity, a large number of pollutants or the potential of very large scale-accidents

[4] *For an interesting historical as well as contemporary summary on the concept of risk, see, aside from the Beck, 1986/1989/1993/1997/1998a/1998b/2000 or Beck/Giddens/Lash, 1994 also Bonß, 1995, for special versions see Baecker, 1988, Banse/Bechmann, 1996 or Japp, 2000.*

within very large scale technologies, highlighted by the two major accidents in atomic power plants in Three Mile Island and Chernobyl. Due to the complexities of production and service processes or of the energy and information substructures involved, frequent occurrences of fatal accidents[5] and high tech-disasters become the order of the risk-day within a risk-society environment.

It would have been fascinating to integrate socio-economic risks into this profile of contemporary risk societies. In fact, Beck devotes the second part of his book on the growing individualization of life courses under the new regime of risk-societies. But despite the phase transition towards risk societies, socio-economic risks have not found their way into the Part II of the book. Rather, for Beck the question of social inequality and vertical stratification seems to undergo a transformation itself, namely a secular change from vertical to horizontal forms. At various points, Beck gives the impression that social inequalities belong basically to the domain in which they originated in the first place, namely to the phase of industrial capitalism. Most notably in the phrase "Poverty is hierarchical, smog is democratic" (Beck, 1986: 51), Beck seems to suggest that vertical societal inequalities become more and more marginalized and de-centered whereas new horizontal ways of inequality like regional, local inequalities or group-specific risks which affect, for example, all employees in a special high-technology plant or even in an entire cluster alike, are gradually occupying the central positions within contemporary risk societies.

Similarly, current multi-dimensional approaches on living conditions (see especially Schulze, 1992) have become, by and large, horizontally stratified, loosing their vertical dimensions in the course if widening the relevant socio-economic dimensions. Thus, current life-style frameworks, while focusing on a broad range of living conditions and socio-cultural practices, have become by and large unable to arrange the resulting life style formations into a vertical ordering on different life styles

The subsequent discussion will have its focus mainly on Gerhard Schulze's book on "Erlebnisgesellschaft", 1992. Here, a representative sample of roughly 1000 persons from the city of Nuremberg has been selected and a large number of questions on cultural practices or on daily routines of information gathering have been asked. In the theoretical core of Schulze`s work lies a universal social grammar (Ibid: 243 pp.) which, at least according to Schulze, is capable to detect and identify hidden homologies between inhomogeneous and seemingly contradictory or incoherent domains. At

[5] *At various points, Beck seems to suggest, too, that the metamorphosis of modernity I into its self-reflexive stage of modernity II brings about a shift in Charles Perrow's, 1984 two dimensional diagram (with coupling and complexity as its vertical and horizontal dimensions) to the quadrant of dense coupling/high complexity.*

various places, Schulze speaks of a latent pattern which connects diverse surface appearances or of a universal pattern in the relation between actors and their environment or worlds (Schulze, 1992: 36).

Essentially, Schulze uses age and education as the basic socio-demographic dimensions in order to differentiate between five different milieus or lifestyles, namely between an entertainment-milieu (age low, education low), a harmonious milieu (age high, education low), a self-realization-milieu (age low, education high), an integrative milieu (age high, education medium) and a distinctive high-level milieu (age high, education high). Each of these five milieus is characterized by specific recombinations between dominant forms of style which are summarized under the headings of high culture, trivial culture or excitement/event culture.

Within the present context, the most important critical finding lies in the fact that the new life-style typologies which have been able to integrate large proportions of everyday routines and cultural practices, widely conceived, have lost the vertical dimension of inequalities almost completely. While these five life-styles can be arranged within a two-dimensional field, consisting of degrees of education on the one hand and age on the other hand, vertical distances and vertical inequalities have been largely reduced and replaced by horizontal disparities of self-contained clusters of socio-cultural practices. Additionally, classical problems of upward and downward mobility are substituted by new rites of passage, with age being a key determinant to change from one lifestyle-cluster to the next. Furthermore, problems of inter-generational inequality and mobility seem to have been reduced to marginal issues since the universal grammar sub specie Schulze reproduces these different clusters in the way it is supposed to reproduce them, namely universally. Finally, the potential space for socio-economic policies has been greatly reduced, too, since these self-sufficient clusters do not lend themselves easily to intervention or compensation.

Apparently, Schulze's analysis and many other life-style studies[6] are subject to a critical trade-off which can be summarized in the following manner. Relying on a small number of objective inequality indicators like income, education or status looses its linkages with overall self-assessments rapidly since many aspects and dimensions of cultural and everyday practices have not been included. Taking the diversified set of habits and routines in areas like information, housing, arts and culture, media or fashion into account, the resulting life styles have lost their connections with vertical dimensions and inequalities almost completely.

[6] *For other life-style studies, see for example Spellerberg, 1996, Schneider/Spellerberg, 1999 or for an interesting summary Matjan, 1998.*

The Stratification Step: Constructing a Complex Configuration of Living Conditions

At this point the article is apparently bound to end with the uneasy conclusion that general problems of societal organization and differentiation cannot be pursued analytically as long as labor processes are assumed as the central engine for vertical societal stratifications. However, the significant weaknesses of available stratification schemes can also lead to an alternative approach which operates in two steps. In a first step a new vertical stratification scheme is introduced which accounts for the multi-dimensionality of living conditions and which produces, contrary to the horizontal life style models, a vertical stratification pattern for different societal groups. The second step focuses then on the research design itself and will be introduced in the subsequent section.

Turning to the new stratification scheme, the following result must be obtained:

Multi-Dimensional Living Conditions	→	Forms of Life	→	Vertical Stratification Scheme

Recently two surveys were conducted in Slovenia and in Austria which tries to integrate a large number of socio-economic dimensions on living conditions. The survey contained three major areas with three distinct subdomains which can be classified as

- Life worlds (work, housing, social capital)
- Resources (income, qualifications, consumption)
- Cognitive-emotional states (perspectives on the future, self attributions, critical life vents)

For each of the domains and sub-domains a varying number of dimensions has been selected which were could be interpreted in terms of life chances or socio-economic risks. In particular, high personal income can be associated with life chances whereas relatively low incomes constitute a specific socio-economic risk. Approximately fifty different dimensions were used in order to arrive at a complex vertical stratification scheme.

Figure 3 shows the complex overall configurations with the three main domains, the three subdomains in each of the main areas as well as the number of dimensions in each sub-domain.

For each respondent in the survey an overall index was calculated which differed from 0 to 1. This overall index was sequentially computed by starting with the individual dimensions in each of the sub-domain and by finding an aggregate value for each of the three major areas. Finally, the three domain-specific indices were aggregated to an overall index for each of the

survey respondents. Dependent on the overall distribution of these indices a group-specific separation has been undertaken between

- an upper stratum (upper 33 % of the population distribution, group with multiple life chances)
- an intermediate segment (middle group with 33 % of the population)
- a lower segment (lower 33 % of the population distribution, group with multiple socio-economic risks)[7]

Figure 3: A COMPLEX STRATIFICATION SCHEME FOR THE MULTI-DIMENSIONALITY OF LIVING CONDITIONS

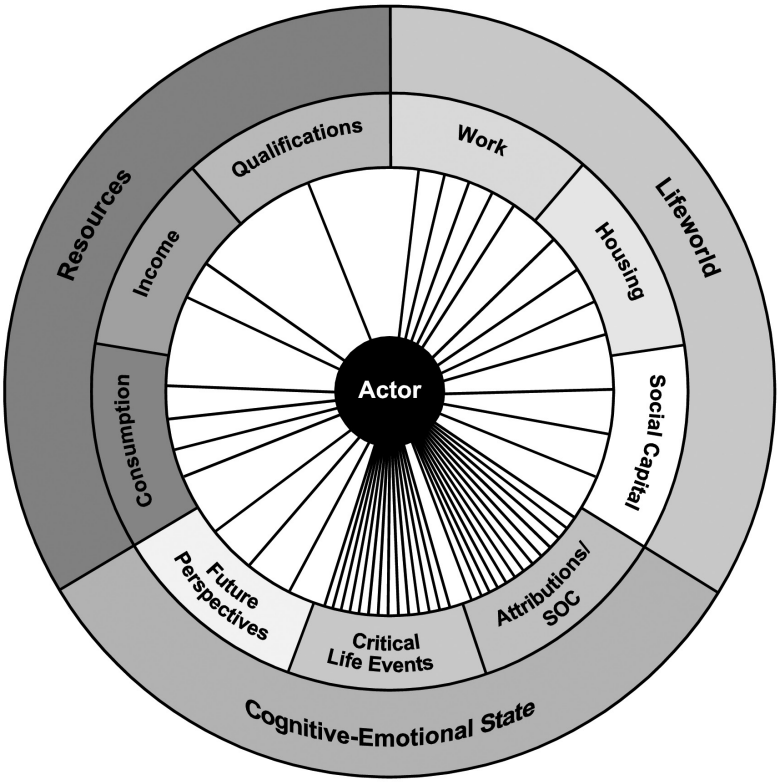
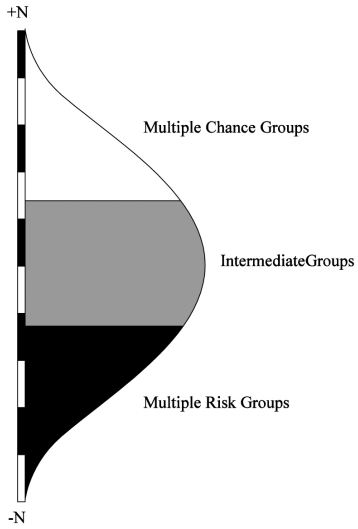


Figure 4 shows the new vertical stratification scheme which is based on roughly fifty dimensions across the three main survey domains of resources, cognitive-emotional states and life worlds.

[7] *For more details, see Toš/Müller, 2005, Toš/Müller, 2009 or Müller/Nemeth/Toš, 2002.*

Figure 4: A MULTI-DIMENSIONAL STRATIFICATION SCHEME



The Design-Step: Focusing on Groups of Fulltime Employed and Unemployed Persons, Their Multi-Dimensional Living Conditions and Their Stratification Patterns

While the first step led to a new stratification scheme which was sufficiently diversified for a broad range of domains and dimensions of living conditions the second step operates with the research design itself which has its focus on two extreme groups with respect to their position in the labor process, namely on fulltime employed persons and on unemployed persons only.

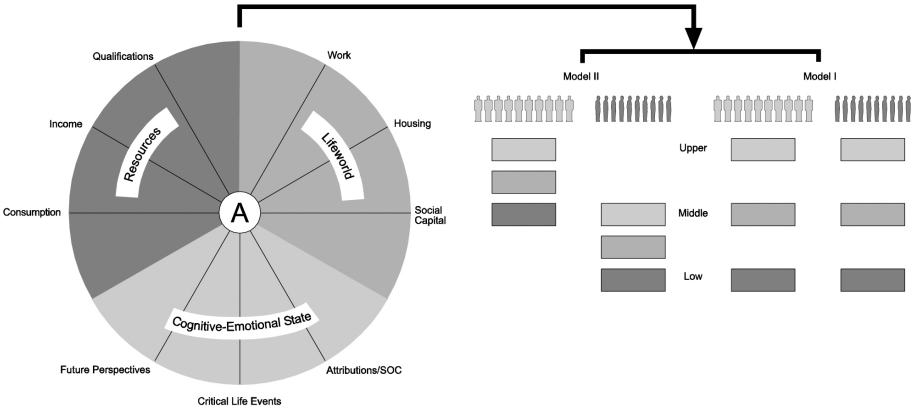
Two Extreme Groups in the Labor Process	→	Multi-Dimensional Vertical Stratification for Each Group	→	Different Data Patterns

In fact, the two surveys in Slovenia and in Austria were focused on samples of 400 fulltime employed and 400 unemployed persons. The survey questions and items were formulated in an identical manner for both extreme groups and the multi-dimensional vertical stratification scheme was applied to both groups respectively.

With the help of the multi-dimensional vertical stratification scheme for both extreme groups it should be possible to produce a data pattern which either follows the core-periphery model or the homogeneous vertical stratification model.

Figure 5 presents an overview on different data configurations for these two models. The core-periphery model should exhibits deep vertical distances between the groups of fulltime employed and unemployed persons and weaker differences within the three segments of each group. The vertical stratification model should produce strong vertical differences within each group and relatively small horizontal differences between the different segments in each group. Phrased differently, the core-periphery model should show significant differences between the two groups whereas the homogeneous vertical model should emphasize the differences within each of the two extreme groups in the labor process.

Figure 5: TWO DIFFERENT STRATIFICATION PATTERNS FOR CONTEMPORARY SOCIETIES



In this manner the two models of societal stratification can be expressed in terms of different data patterns.

The Main Results from a Parallel Survey in Slovenia and Austria

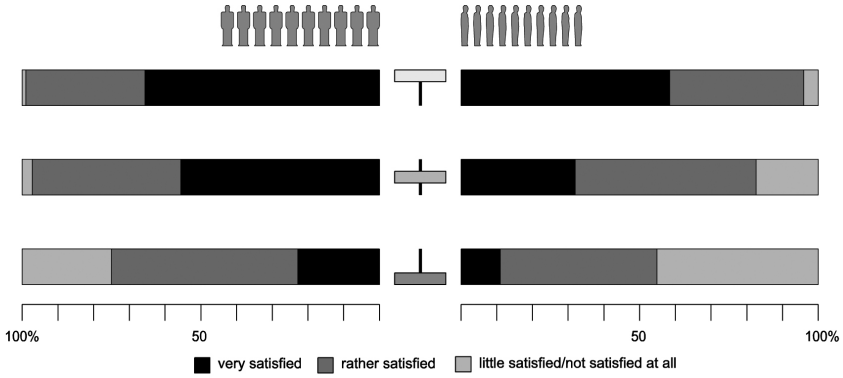
Turning to the results of the surveys in Slovenia and in Austria more specifically the first general finding was that the general data patterns were highly similar for both countries. In both countries the vertical differences within each of the two extreme groups were by far stronger than the horizontal differences between the two groups.

Subsequently, several typical empirical results can be presented, starting with one of the central dimensions in survey research, namely with overall life satisfaction. As can be seen from Figures 6 and 7, the horizontal differences between the three groups with multiple life chances, the middle group and the group with multiple socio-economic risks are considerably smaller than the differentiation within the fulltime employed and the unemployed

persons. Interestingly, these differences turn out to be smaller in the Slovenian case, but even here the vertical differences within the unemployed and fulltime employed persons exceed the horizontal differences.

Apparently, even the central domain of life satisfaction differs significantly within the group of unemployed persons. Likewise, contrary to the assumptions of the modern economic theory of happiness, the multiple risk group, despite its fulltime employment status, expresses significantly lower levels of life satisfaction than the upper or the medium stratum of unemployed persons.

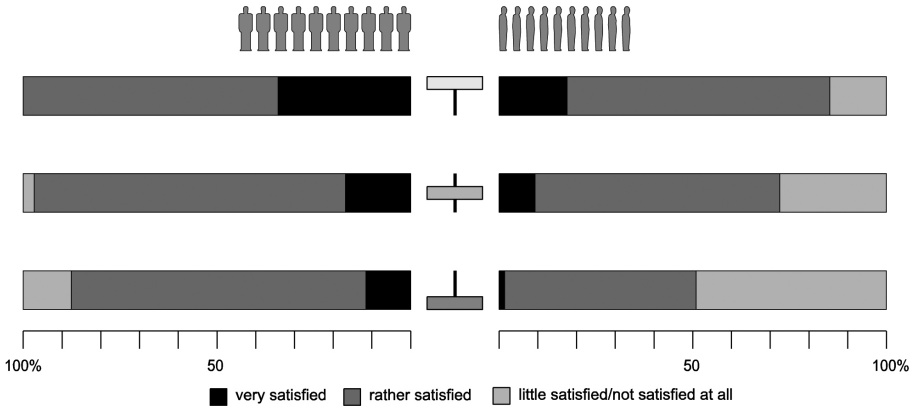
Figure 6: OVERALL LIFE SATISFACTION (AUSTRIA)



Left side: Fulltime employed persons
Right side: Unemployed persons

Upper row: Group with Multiple life chances
Middle row: Middle Stratum
Lower row: Group with Socio-Economic Risks

Figure 7: OVERALL LIFE SATISFACTION (SLOVENIA)



Left side: Fulltime employed persons
Right side: Unemployed persons

Upper row: Group with Multiple life chances
Middle row: Middle Stratum
Lower row: Group with Socio-Economic Risks

Figure 8 presents a particularly revealing example, namely the feeling of stress across all six groups in Slovenia. The first remarkable result lies in the overall distribution with relatively low stress values for the upper strata and high values for the lower strata. Equally astonishing is the finding that the horizontal differences between fulltime and unemployed persons are almost negligible.

Figure 8: STRESS IN EVERYDAY LIFE (SLOVENIA)

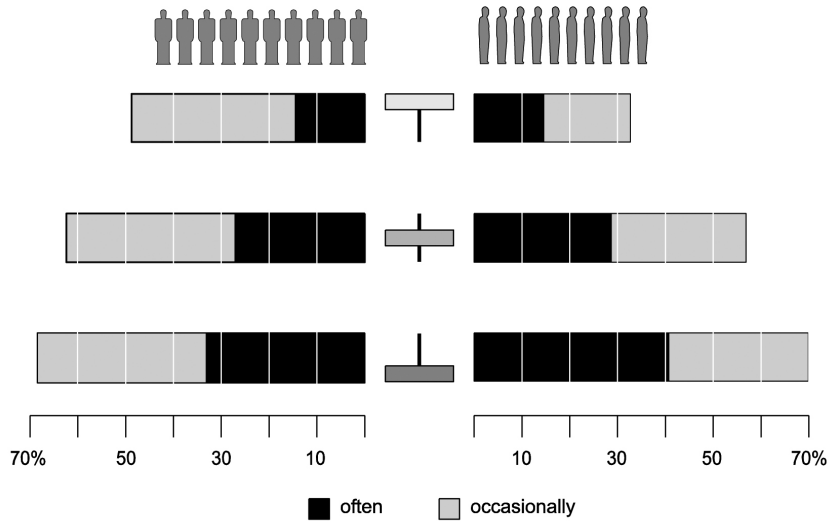


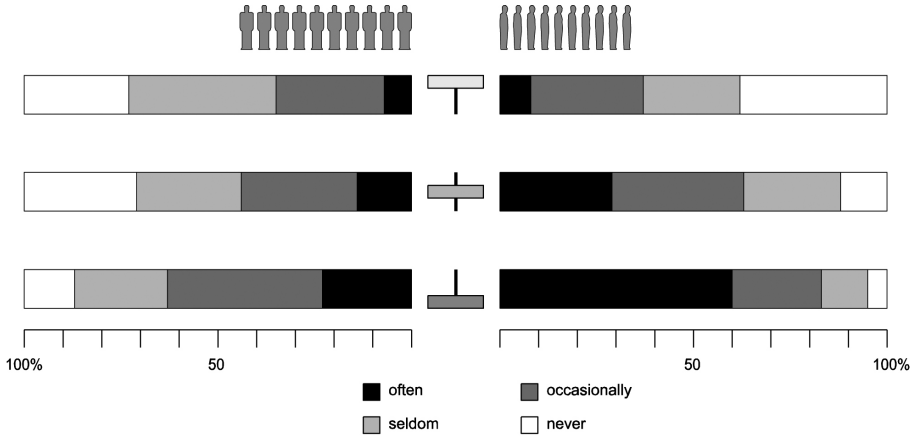
Figure 9 exhibits a typical result from a set of items on internal and external-attributions. Again, the vertical differences between the three groups are striking, compared to the relatively small horizontal differences.

Patterns like these were found practically across all major domains, sub-domains and dimensions. For example, a high satisfaction with one's former or current work produced in the Slovenian case the following values for the three groups of fulltime employed persons: 51% for the upper group with multiple life chances, 24% for the middle group and 20% for the group with multiple socio-economic risk. The corresponding values for the group of unemployed persons was 41% in the upper stratum, 36% in the middle group and 19% in the group with multiple socio-economic risks.

In fact, most of the sub-domains with their different dimensions gave support to the homogeneous vertical stratification model and rejected the core-periphery model. However, the big exception could be found in all the dimensions which were directly linked with the income of persons. In the

income-domain, but only in the income area, one could find support for the core-periphery model with deep horizontal differences between the corresponding strata of fulltime employed and unemployed persons.

Figure 9: "TIMES ARE BAD" (AUSTRIA)



Left side: Fulltime employed persons
Right side: Unemployed persons

Upper row: Group with Multiple life chances
Middle row: Middle Stratum
Lower row: Group with Socio-Economic Risks

Closing the Gap from Social to Medical Research: Inequality, Stress and Health-Conditions

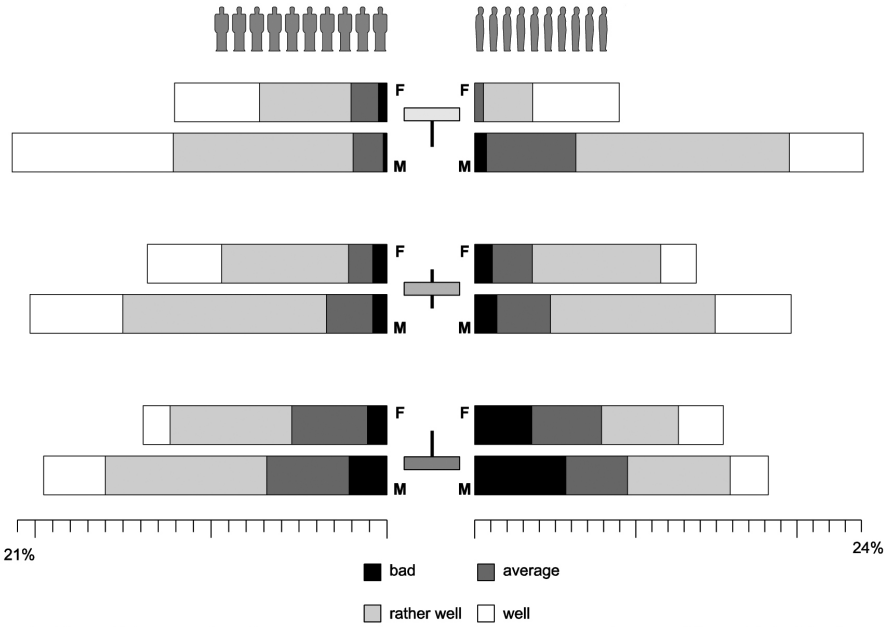
Another interesting general result could be found both in Slovenia and in Austria alike. In the health domain one can see significant differences between the lower strata of fulltime-employed and unemployed persons. The values for the multiple risk group of the unemployed persons were clearly worse than their counterparts from the multiple risk group of fulltime employed persons.

Figure 10 shows the self-reported state of health in Austria where one can see a strong difference between the two lower multiple risk groups especially with respect to bad health conditions.

This result can also be supported by Figure 11 which shows the distribution for different numbers of ailments. Again, the lower strata of multiple risk groups differ significantly since more than 30% of the unemployed group reports ten and mire ailments, compared to 13% in the multiple risk group of fulltime employed persons.

The same result prevails in two rather psychological ailments, namely for feeling nervous and feeling tired as expressed in Figures 12 and 13.

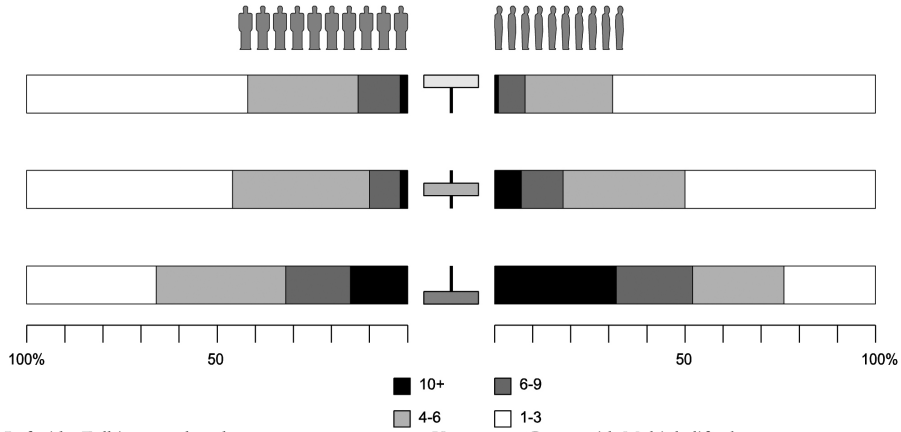
Figure 10: GENERAL STATE OF HEALTH (AUSTRIA)



Left side: Fulltime employed persons
Right side: Unemployed persons
F: Female M: Male

Upper row: Group with Multiple life chances
Middle row: Middle Stratum
Lower row: Group with Socio-Economic Risks

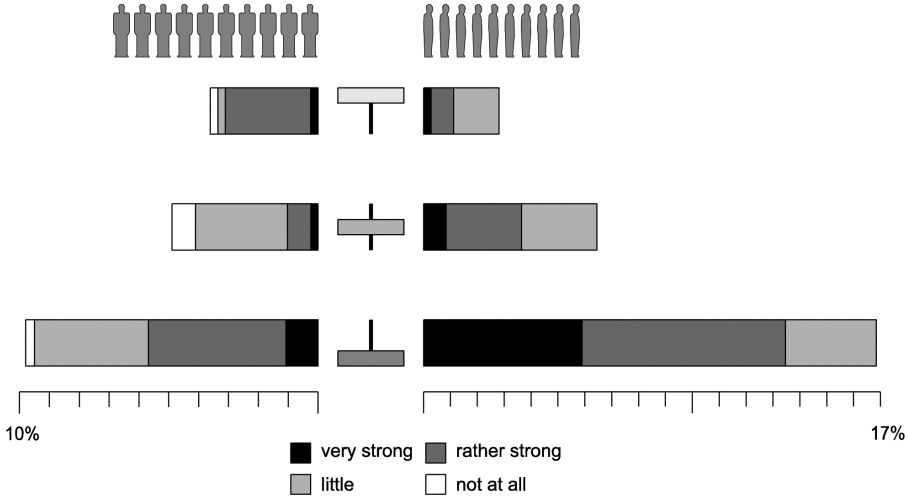
Figure 11: NUMBER OF AILMENTS (AUSTRIA)



Left side: Fulltime employed persons
Right side: Unemployed persons

Upper row: Group with Multiple life chances
Middle row: Middle Stratum
Lower row: Group with Socio-Economic Risks

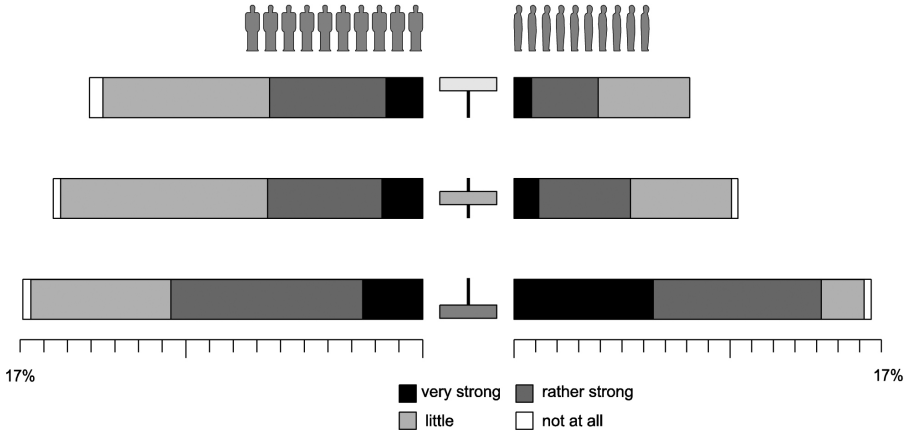
Figure 12: FEELING NERVOUS (AUSTRIA)



Left side: Fulltime employed persons
Right side: Unemployed persons

Upper row: Group with Multiple life chances
Middle row: Middle Stratum
Lower row: Group with Socio-Economic Risks

Figure 13: FEELING TIRED (AUSTRIA)



Left side: Fulltime employed persons
Right side: Unemployed persons

Upper row: Group with Multiple life chances
Middle row: Middle Stratum
Lower row: Group with Socio-Economic Risks

These findings in the health domain suggest a new bridge which leads from social survey analysis to the areas of bio-medical health research. Through this bridge one can move from various domains of vertical socio-economic dimensions, from socio-economic inequalities, from vertical stratification as well as the self-reported health status to a deeper language level and to a homogeneous vocabulary of stressors and of neuro-immunological processes.

Initially, it is useful to start with a taxonomy of different types of stressors which can be found within the relevant body of literature (see, for example, Cooper, 1996, Horwitz/Scheid, 1999, or Sarafino, 2002). Here, one is confronted with a heterogeneous set, comprised of sensory stressors (strong light, noise, sensory deprivation, etc.), block-stressors (preventing essential routines like eating, sleeping, social contacts, etc.), achievement stressors (tests, examinations, work-tasks, but also monotony at work, etc.), social stressors (large crowd of people, loneliness, isolation, etc.), environmental stressors (noise, pollution, toxic materials, etc.), decision-based stressors (goal conflicts, quick decisions, but also lack of decision-making, etc.) or future-based stressors (fear, anxiety of the future, etc.)

Seemingly, the heterogeneity of stressors is accompanied by a heterogeneity of stress reactions which vary in time (minutes, hours, days, weeks ...), in intensity or in emotions, associated with each stress reaction. Nevertheless, common to all these stress reactions is an attempt to reduce the discrepancy between the effects of stressors and internal target values. Moreover, all stress reactions involve the activation of the hypothalamus-pituitary-adrenal axis and produce comparatively high quantities of endocrine hormones, particularly corticosteroids, with cortisol as the most important one, and catecholamines. Likewise, all physiological reactions to stress manifest themselves in a broad range of measurable changes like a higher production of stress hormones, higher degrees of blood pressure, heart rate, respiration rate, galvanic skin responses or in larger amounts of free fat acids.

The general pattern of stress responses possesses at least two main connections to the domain of sickness and ailments, namely through their direct effects on the cardiovascular system on the one hand and through their immediate impact on the immune system on the other hand.

With the short background on stress-research, it appears plausible to create a bridge from the current findings on the status of health to special classes of stressors like social, environmental, future-based or decision-based stressors. In order to move along this bridge, one needs a special subset of survey dimensions which are linked to societal inequality. In particular, the lower segments of dimensions like degree of education, income, but also working conditions, work autonomy or environmental constraints like pollution or traffic noise can be seen as external determinants of societal inequalities. From this perspective, the following subset-relation can be put forward:

Lower Segments S^L of Dimensions of Societal Inequalities $\subset$ Stressors

It is quite obvious that this subset-relationship needs a very detailed justification which cannot be provided within the framework of the present article. However, five main arguments can be given, however, which should

offer some plausibility for a sub-set relation between S^L, the lowest decile, lowest quarter up to the lower third in the different dimensions of societal inequalities and stressors.

- First, S^L-positions, which can be specified in a wide array of living and working conditions, are characterized, *inter alia*, by their relative permanence. Thus, many of the S^L–parts of socio-economic inequality dimensions like low, insufficient or deteriorating incomes or low degrees of qualifications are to be classified as long-lasting or, like in the case of low qualifications, as (nearly) permanent. Thus, being positioned in the S^L–parts normally acts as a continuous stressor and not as a single, rare or isolated occurrence.
- Second, there exists a remarkable symmetry between the language of societal inequality, in particular the focus on the lower parts of a distribution on the one hand and the physiological stress language on the other hand. In both cases, no equivalences can be found for the upper side of the inequality dimensions. Feeling unsafe in the public sphere does have a corollary in terms of stressors. But feeling very safe in the public domain does not constitute an alternative source for stressors. Likewise, a noisy environment at the workplace or at home implies at the same time an environmental stressor whereas a quiet atmosphere at work or at home cannot be associated with a different group of stressors. Thus, the lower segments of the distribution of inequality dimensions can be linked to stressors, whereas upper segments in the distribution imply, by and large, the absence of stressors.
- Third, the distribution-dependent specification for thresholds for the S^L–parts provides additional support for the subset relationship between the S^L–areas of dimensions of societal inequality and stressors. Since the majority of the population is, by definitional necessity, above the S^L-threshold, individual actors, falling in a specific S^L–part, perceive themselves usually relatively deprived. Thus, the available literature on the importance of relative deprivation (Olson/Hafer, 1996 or Walker/Pettigrew, 1984) can be added as further evidence for the proposed S^L–part-stress linkages.
- Fourth, while stress reactions vary in length, intensity and emotional involvement, the basic physiological reaction patterns are unspecific with respect to the sources of stress. In other words, one does not find a "bad boss-stress reaction", confined to a specific region in the neuro-immune system in contrast to a "loud noise-stress reaction", affecting other parts of the neuro-immune system. Thus, a multi-dimensional array of essential living conditions across the contexts or settings of actors and across their cognitive-emotional organization can be interpreted as a summary of all relevant potential stressors whose scope and degree

of completeness is limited by the restrictions inherent in conventional survey research only.

- Fifth, stressors and stress reaction are clearly not invariant to the actual number of stressors since stress reactions are functionally related, probably in a complex and non-linear manner, to the overall number of stressors. This, in turn, provides additional support why a survey analysis should focus on the aggregation of dimensions because these aggregate values should be interpretable in terms of a net value for the overall number of socio-economic stressors.

In this way, a bridge can be built to biomedical stress research which could offer a plausible hint on the specific data patterns found in the two surveys in Slovenia and in Austria. Unemployment as an additional permanent stressor operates especially within the multiple socio-economic risk groups which could account for the significant horizontal differences in the health domain. It is hoped that this suggestion could lead to a much deeper understanding of the complex interactions between daily routines at the workplace or at home and patterns of health conditions.

Outlooks

It should be emphasized that the empirical results from our study should have strong implications for social policies, broadly conceived. Due to the deep vertical differences already in the domain of fulltime employment much more emphasis should be devoted to the lower stratum with multiple-socio-economic risks which differs so strongly from the upper or the medium strata of the unemployed group. After all, bringing people back to work can also become a failed strategy if such a return to work implies an integration into the ranks and files of multiple socio-economic risk groups.

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