

**CONTENTS**  
**Vol. 15, No. 3 (2002)**

ARTICLES

*William T. Whitney Jr.*, *Becoming a Physician: Class Counts* 261

*Eftichios I. Bitsakis*, *Complementarity: Dialectics or Formal Logic?* 275

CONFERENCE PAPERS, "THE GLOBAL ECONOMY AND THE NATIONAL STATE," HANOI, 9–10 JANUARY 2003 307

*Alexandros Dagkas*, *The Balkanization of the Balkans* 309

*Do The Tung*, *Contradictions of Economic Globalization* 317

*Anthony Coughlan*, *Nation, State Sovereignty, and the European Union: Some Democratic Principles* 321

*Tran Van Binh*, *Social and Cultural Changes in Vietnam with the New Market Economy* 335

*Jeffrey R. Kerr-Ritchie*, *Gender, Unfree Labor, and Globalization* 347

BOOKS AND REVIEWS

*The Nazi Attack on the USSR: Interviews with Stalin's Associates* (Excerpts from *By Stalin's Side*, by Georgii A. Kumanev) 359

*Harald Neubert*, *Stalin and the Cominform. Review of The Cominform and Stalin's New Order in Europe*, by Grant M. Adibekov 370

ABSTRACTS OF ARTICLES (in English and French) 382



## Becoming a Physician: Class Counts

William T. Whitney Jr.

*Nowadays it is fashionable to talk about race or gender; the uncool subject is class. It's a subject that makes us all tense, nervous, uncertain about where we stand.*

—bell hooks, *Where We Stand: Class Matters*

Thirty-seven students from minority and low-income U.S. backgrounds were studying medicine in Cuba in 2002. That nation provides a free six-year course of medical study for Latin American young people, and recently Cuba invited poor and minority students from the United States to take advantage of the same opportunity. The students have committed themselves to caring for the underserved when they return home. One of these medical students, a young woman from the Bronx, writes:

Imagine, growing up in a poor neighborhood where your future seemed as if it would be dictated by the few resources you had available to you. Imagine, growing up and being told, implicitly and explicitly, by society that your career choices were limited. . . . For as long as I can remember, I have known that I wanted to be a doctor. . . . However, for a long time I didn't know that someone like myself, an African-American woman, could be or had the opportunity to become a doctor. (Walker 2001)

The fact of U.S. students studying in Cuba suggests that affirmative action may have fallen well short of goals set three decades ago by proponents who then and since have relied upon it to bring about equal access in education. I argue here that the shortcomings of affirmative action are due to persisting discrimination based on social class. Such shortcomings exist even though medical educators committed to racial justice have devoted years of dedicated service to affirmative action. Newly available data are presented regarding the class affiliations of U.S. medical students. Examination of the realities of a class-fractured society demonstrates the need to include both race and class in affirmative action to reach the goals of equality of opportunity.

In the early 1960s, African Americans made up 2% of all medical students, and 75% of them attended all-Black Howard and Meharry medical colleges. Affirmative action was introduced so that minority-group students might enter medical schools in numbers high enough to give them a share of the total medical-school enrollment equal to the proportion of minorities in the general population. Over the ten years ending in 1974, African Americans, Mexican Americans, mainland Puerto Ricans, and Native Americans—the underrepresented minorities—comprised 10% of all medical students, and they stayed at that level from 1974 to 1994, except for a peak of 12% in 1995. Thereafter their numbers declined, from 2137 entering students in 1995 (1365 African American) to 1768 in 2001 (1170 African American). Meanwhile, the minority share of the general population rose from 16% in 1974, to 20% in 1994, to 22% in 2000. Projections place ethnic minorities at 32% of the population in 2010 and 47.2% in 2050. Far fewer Black, mainland Puerto Rican, Chicano, and Native American students are now studying in U.S. medical schools than the proponents of affirmative action had hoped for three decades ago (Cohen 1997, 106–7).

Affirmative action has faced political hostility and legal challenges. In a 1997 public-opinion poll, only one of six white respondents favored preferences for minority college applicants (Deville 1999a, 1256). Washington and California in 1998 passed referenda rejecting race-based affirmative-action policies.

Decisions in the 1978 Allen Bakke case and the Hopwood case of 1995 held that a history of racial discrimination against a class of people was no longer allowable in court as evidence of discrimination against individuals. Sympathetic lawyers, however, devised new arguments to provide affirmative action with a continuing legal cover, among them the suggestion that the state has an interest in fostering diversity within the medical profession for the sake of humane, high-quality health care (Deville 1999b, 247–55). Even the Davis, California, medical school targeted by Bakke's legal action was able to maintain a stable annual rate of 12% minority students entering each freshman class for almost twenty years (Davidson 1997, 1153).

The participation of foreign-educated physicians in U.S. health care has interfered with affirmative action. Residency training programs of city hospitals, especially those serving poor people, have long depended upon foreign medical graduates to maintain clinical services and generate income. Foreign graduates make up more than 25% of all physicians working as residents, and many remain in the United States after completing their training (DeAngelis 2000). They now account for almost one-fifth of all practicing physicians (Polsky et al. 2002). During their training and later on in practice, they care for people who could have been served by newly trained U.S. Black and Hispanic physicians. The participation of foreign graduates in U.S. medical-training programs is used by medical-school officials as a pretext for refusing to graduate more than 16,500 new graduates each year, a rate that has been stable for many years (Mullan 2000). To graduate more than that number would entail either opening up new training positions for extra graduates or reducing the number of foreign-educated resident physicians. And with U.S. hospitals and medical schools under financial stress, especially inner-city hospitals, neither is likely to occur. Minority applicants will probably continue for some time to compete with white students for a fixed number of medical-school openings.

Affirmative action has failed despite hard work and commitment on the part of medical educators and administrators. For example, medical-school officials have recruited minority

faculty members to provide role models and have assigned them to admissions committees (Johnson et al. 1998, 237). They have set up culturally sensitive counseling services, and in tandem with high schools and colleges, medical schools have provided potential medical students with immersion experiences, vacation study courses, mentoring, and tutoring. "Linkages" were established with local high schools to improve teaching in the biological sciences (Davidson and Ernest 1997, 1153). Faculty members publicized research findings that validate some of the objectives of affirmative action. They showed that minority-group patients prefer to be cared for by minority physicians with whom they can identify. Studies were published showing that Black and Latino students have been completing medical schools at rates comparable to white students, despite lower college grades and admission-test scores (Poussaint 1999).

In fact, admissions committees have been accepting minority applicants into medical schools at almost the same rates that they admit white applicants. The overall similarities are striking. For whites, from 1990 to 2000, the ratio of applicants to those accepted into medical schools averaged 2.28 (range 1.84 to 2.60). For Blacks, that ratio averaged 2.50 (range 2.24 to 2.78). The average ratio of Mexican American and mainland Puerto Rican applicants to those accepted was a surprisingly low 1.88 (range 1.73–2.02) (AAMC Web site 2000). It would appear that minorities are underrepresented in medical schools, not because their applications are rejected disproportionately, but because many potential candidates are failing even to apply for admission.

In a landmark article published in the *American Journal of Public Health*, Magnus and Mick contend that the focus of affirmative action should have been on both social class and race, rather than on race alone. "Because race and class are imperfectly correlated and index distinct (although overlapping) attributes, we believe that both deserve attention in medical-school admissions decisions... we argue for an expansion of affirmative action to include social class as a supplement to race. Considerations of individual justice favor a review of medical-school applicants' socio-economic status." They suggest that racial preferences may actually benefit applicants from prosperous backgrounds who

belong to ethnic minorities, noting “the continued enrollment of medical students principally from the middle and upper classes.” They call for an updating of studies from the 1970s that first looked at the class background of medical students. They lament “the American discomfort with the subject of social class. . . . American researchers do not even gather relevant statistics . . . [or determine] the percentage of American university students who are of working class origins” (2000, 1197–201).

The purpose of the present study is to validate the notion that the shortcomings of affirmative action are due to a refusal on the part of U.S. society to deal with discrimination based on social class. An attempt will be made to study barriers to equal access by looking at the class background of medical students. Data provided by the Association of American Medical Colleges (AAMC) relating to the income levels, education, and occupations of parents of medical students will be presented in order to identify the social class of their children. The AAMC administers the application process for all prospective medical students and is well situated to collect such data. Information on family income and educational levels in the general population was taken from U.S. Census data, available on the web site of that agency. The data presented here have to do primarily with Black and white families, because affirmative action arose, for the most part, out of the historic struggle over many years of African Americans for their rights.

Attention will be focused first on the income levels of the parents of all medical students admitted to U.S. medical schools during the period from 1990 through 2000. The information is based on responses from 96,480 entering white students (15,086 responses are missing) and from 10,181 African American students (1771 missing).

This eleven-year survey (Table 1) indicates that the parents of medical students command significant financial resources, more by far than are available to U.S. families in general. Not unexpectedly, Black parents earn less than white families. But most Black students admitted to medical schools have parents who enjoy at least moderate economic prosperity.

The data for the year 2000 indicate that all but a few families

of entering medical students are prosperous, many of them being quite well-to-do. Some 36% earned more than \$100,000 and less than \$249,000 annually, 6.5% earned between \$250,000 and \$500,000, and 2.4% exceeded the latter amount. Only 6% of the students were children of parents earning under \$50,000 annually.

Table 1.  
Annual Income (in current dollars) of Parents of Entering Medical Students, 1990–2000.

	25th percentile*	Median	75th percentile
All parents of students	\$40,000	\$70,000	\$110,000
All U.S. families		\$41,606	
Parents of Black students	\$26,000	\$49,000	\$80,000
All U.S. Black families		\$29,114	
Parents of white students	\$48,010	\$75,000	\$120,000
All U.S. white families		48,991	

\*An amount of \$40,000 in the 25th percentile indicates that 25% of the parents have incomes below \$40,000, and 75% have incomes equal to or above \$40,000.

Information about the education levels of the parents of accepted applicants to medical schools is presented in Table 2. Again, it is derived from responses to questionnaires completed by the applicants during the period 1990 through 2000. The totals of the responses are as follows: for mothers of African American students, 11,515 (238 responses are missing); fathers of African Americans, 11,203 (750 missing), mothers of white students, 110,587 (979 missing); and for fathers of whites, 110,315 (1251 missing).

The differences between the education level of the parents of first-year medical students and adults in the general population are striking. Data from this eleven-year period indicate that only 13% of African American adult males and 13.6% of adult females have completed college. By contrast, 25% of the African American fathers and mothers have earned at least a master's degree, and another 50% of the fathers have finished college. African American parents are more than twice as likely as the general

Table 2.  
Education Levels of Parents of Entering Medical Students (in percentiles)

	High-school grad	High-school specialty	Some college	College grad	Some grad school	Masters	Ph.D. or equiv.
Fathers of Black students	25th			50th		75th	
Mothers of Black students		25th	50th			75th	
Fathers of white students			25th		50th		75th
Mothers of white students			25th	50th			75th

population of white adults to have finished college. Well over half of the white fathers have completed graduate-school programs, in contrast to white adults in general, of whom only 26.6% of the males and 21% of the women are college graduates. Education may serve as a more accurate marker of class identity for Blacks than income, because Black people generally earn less than whites despite working in similar middle- and upper-class occupations.

Data relating to parental occupation are derived from information provided by applicants for the two years 1990 and 2000 (Table 3). The totals for the numbers of respondents for both years are as follows: for African American mothers, 1637 (95 responses are missing); African American fathers, 1578 (204 missing); white mothers, 18,612 (779 missing), and for white fathers, 18,634 (757 missing).

The “working class” is presumed to include skilled workers, unskilled workers, nurses, nonprofessional health workers, secretaries, clerks, and service workers. The presence of one high-earning parent doing white-collar work is assumed to have the capacity of removing his or her child from the working class, even though the occupation of the other parent may be working class

Table 3.  
Occupation of Parents of Medical Students

	Students admitted in 1990		Students admitted in 2000	
	Working class	Other	Working class	Other
Black fathers	36%	84%	30%	70%
Black mothers	48%	52%	47%	53
White fathers	16%	84%	15%	85%
White mothers	46%	54%	38%	62%
All fathers	15%	85%	17%	83%
All mothers	45%	55%	43%	57%

in nature. The actual totals for middle- and upper-class parents of medical students may, therefore, add up to more than is suggested by the data on occupations. The data indicate that for both Black and white fathers, those from the working class represent a minority.

Most beginning medical students, therefore—African American and white alike—would seem to have parents who are both high earners and well educated and whose work is professional, executive, or intellectual in nature. Commenting on the Bakke case, Geiger and Sidel reached similar conclusions in 1978, as they condemn selection criteria that relate primarily to the “structure and content of the education that is available in middle- and upper-class secondary schools and colleges...as a result, the poor...and racial minorities rarely get into the pool of applicants” (19). The authors show that the median annual income for medical-student families of \$28,000 was twice that of the national median income at that time; 37% of the medical students came from the wealthiest 12% of the population. Only 12% came from the poorest 36% of the population.

Table 4 gives results of a 1983 study of family income levels of medical students during the academic year 1981/82 that, for the first time, compares Black and white families (Boerner and Thomas-Forgues 1983).

Within each racial group—56% of the Black students and 75% of the white students—there is a predominance of students from families from the middle- and upper-range income groups.

Table 4.  
 Medical-Student Family Income in 1981

Parents' income	Whites	Blacks
Less than \$15,000	10%	33%
\$15,000 to \$30,000	29%	31%
Over \$30,000	46%	25%

Such overrepresentation by middle- and upper-class students in medical schools has never been well documented, perhaps due to a general U.S. tendency to relegate considerations relating to class to the category of race. Studies of health outcome in particular often attribute adverse effects of class difference to the fact of racial variation. African Americans, for example, have been shown to be much more likely than whites to die from accidents, murders, cancer, strokes, cardiovascular disease, and newborn illnesses. In 2000, the infant-mortality rate for Blacks was 14.0 (number of first-year deaths per 1000 births), that for white babies, 5.7. The life expectancy of Black men was 68.3 years, that of white men, 74.8 years (Hoyert et al. 2001). Navarro, more than other authors, has suggested that class differentials account for a significant portion of the health disadvantage of Black people. Working-class people in general, he states, experience increased rates of cardiovascular disease, chronic illness, and sickness days. "A growing disparity of wealth and income by class mainly, but not exclusively, explains the race differentials in morbidity and mortality" (1990, 1239).

Similarly, a *Lancet* editorial writer declares:

If race is not the main reason why the mortality rates are higher for Blacks than for whites, racism probably is... Blacks and other minorities have low income jobs, live in poor housing.... The overwhelming majority of Black women and men and other ethnic minorities are members of the burgeoning low paid working class—the class that for most causes of death has higher mortality rates than do the middle and upper classes, who earn more. (1991, 1116)

The use of race to account for the effects of class difference opens the door to speculation as to psychological, cultural, and

genetic explanations for human suffering and serves as a “proxy for unmeasured socioeconomic and/or sociocultural factors” (Williams 1997, 322).

An upper-class advantage in health outcome parallels privileges enjoyed by most upper-class young people, including, of course, those inclined toward medicine. They gain self-assurance from good schools, financial security, and the example of achieving parents. Imbued with family traditions of long-term planning, especially for study and borrowing money, they progress along a familiar road. Money waiting in the wings is a crucial prerequisite for attending medical school, either for covering expenses or as security for loans. Tuition payments account for only 4% of the costs of a medical education. The costs for individual students, however, are burdensome in the extreme, ranging from \$40,000 to \$60,000 each year. U.S. medical students leave medical school heavily indebted (Beran and Lawson 1998, 819). Loans made up over 80% of the financial aid received by students in 1998. That year, graduates of public medical schools owed an average of \$69,000, and graduates of private schools, \$98,000 (Ariyan 2000, 1460).

By contrast, young people growing up in poverty—20% of U.S. children—may know little about predictability and much about distractions that interfere with aspirations and planning. Their parents cope with unpaid bills, inferior health care, inadequate housing, and the threat or reality of joblessness. The educational potential of many working-class children is not high. The president of the Association of American Medical Colleges has called for a “fundamental reform of our educational system... a long-term solution for a very complex, multi-factorial, recalcitrant social catastrophe” (Cohen 1997, 106–7). According to Snow and colleagues, the influence of class is ubiquitous: “low social-economic status often encompasses a broad range of conditions that may be detrimental to the health, safety, and development of young children which on their own may serve as risk factors for reading difficulties” (1998, 125). Within the same schools, working-class children are far more likely than high-income children to experience difficulty reading. Adams points out that the

differences in “literacy experience”—oral readings and other language-based experiences—are vast, from 30,000 hours for some children, to 3,000 for others (1990, 3–13). Class-based differences in educational experiences exist within the same school district. Children from working-class families are exposed to school curricula that emphasize rote and specific skills, while middle- and upper-class children are engaged in critical thinking and problem-solving activities (Anjou 1981).

Economic and educational handicaps in place during childhood may serve, therefore, as powerful dream inhibitors. Working-class young people drop out of the running for careers as doctors at an early stage. In fact, students from working-class backgrounds are as unlikely to be part of first-year medical-school classes today as were women fifty years ago. The vast majority of medical students of both races come from families who possess ample financial resources. Affirmative action would seem to have favored primarily those African American students who can pay for a medical education.

The subject at hand, however, concerns people’s lives, and the stakes are high. Physician-patient interaction and physician attitudes affect health-care quality. Troubled interpersonal communication predisposes to misunderstandings, inaccessibility, mutual hostility, and noncompliance with medical recommendations. And when antagonisms exist due to class and ethnic differences, even the most rational medical treatment regimens, health-education programs, and efforts toward prevention may fail (Magnus and Mick 2000). This is the point, then, at which ideas of action in behalf of equal access might be considered.

Medicine itself would benefit mightily from action taken to open up its ranks to rich and poor alike, because class privilege now operates to deny the profession its full complement of intellectual power and social commitment. And in the interest of fairness, no young person should be denied the privilege of being able to study and perform work that is as useful to humankind and stimulating to its practitioners as medicine. Very little, however, has been done by the U.S. government to make equal access a reality.

Industrialized nations elsewhere freely award government

subsidies to medical students in return for practicing temporarily in underserved areas. But the National Health Service Corps (NHSC) of the United States made scholarships available to only 350 medical graduates in 2000. Burdened by heavy debt loads, many students are forced to choose those medical specialties that yield high income instead of the careers that they might have preferred because of social usefulness, but had to reject because of lowered remuneration (Woodworth et al. 2000).

A European experience of four decades points the way to useful action. There, social-democratic parties allied with labor unions have long stood up for working-class issues relating to security and dignity. In Denmark, Norway, Sweden, Finland, and Austria, policies have been instituted that promote social and economic justice. High public expenditures in health care are the rule in those nations, as are low rates of infant mortality, high expenditures for social security, universality in health-care access, high rates of female employment, and high public employment in health, education, and welfare. Countries ruled by Christian Democratic parties have registered less favorable gains, followed by the formerly fascist European nations (Greece, Spain, and Portugal) and by the "liberal nations" (U.S.A, Canada, Ireland, Britain) (Navarro and Shi 2001). The lesson is that when policies of income redistribution are put in place and when people's basic needs for housing, education, health care, and old-age security are attended to, then prospects brighten for young people from the working classes. In that context, equal access to medical education would be readily achieved as an incidental consequence of far-reaching change.

Defenders of the status quo in a society advertised as being classless are prone to regard attention paid to class as asking for trouble. Perhaps they fear that an increased awareness of the role of class differentials might lead to overt antagonism between classes. And that possibility raises the specter of class-based political action. A fantasy like that should, of course, become a reality sooner rather than later. And to get the work done, a labor-based political party is needed to pioneer processes of remedy and repair.

If medical work were opened up to those potential aspirants

who have been falling by the wayside, then new energies, empathy, and talent might be released to further the struggle for an equitable health-care system. A new class of doctors is needed to resist the onslaughts of corporate health care. Doing away with barriers to equal access to medical education caused by class-based discrimination ought to be part of the fight for overall health-care reform, because one is unlikely to occur without the other.

*Pediatric Department, Stephens Memorial Hospital  
Norway, Maine*

#### NOTE

The author is grateful to Jeremy Peck of the AAMC Research Division, who generously provided the data on which this study is based. I have used U.S. Census data for income level of U.S. families in general and the percentage of adults in the general population who have completed a four-year college course.

#### REFERENCE LIST

- Adams, Marilyn J. 1990. *Beginning to Read: Thinking and Learning about Print*, Cambridge, Mass.: MIT Press.
- Anjou, Jeanne. 1981. Social Class and School Knowledge. *Curriculum Inquiry* 11:2–42.
- Ariyan, Stephen. 2000. The Rising Level of Medical School Debt: Potential Risk for a National Default. *Plastic and Reconstructive Surgery* 105:1457–64.
- Association of American Medical Colleges Data Warehouse. 2000. Applicant Matriculant File, 22 November. <[www.aamc.org/stuapps/facts/famg4.htm](http://www.aamc.org/stuapps/facts/famg4.htm)> (Revised 22 December 2000).
- Beran, Robert L., and Gregory E. Lawson. 1998. Medical School Financial Assistance, 1996–1997. *Journal of the American Medical Association* 280: 819–20.
- Boerner, Robert J., and Maria Thomas-Forgues. 1983. Parental Income of 1981 First-Year Medical School Applicants and Accepted Students. *Journal of Medical Education* 58:829–31.
- Cohen, Jordan J. 1997. Finishing the Bridge to Diversity. *Academic Medicine* 72, no. 2:103–9.
- Davidson, Robert C., and Lewis Ernest. 1997. Affirmative Action and Other Special Consideration Admissions at the University of California, Davis, School of Medicine. *Journal of the American Medical Association* 278: 1153–58.
- DeAngelis, Catherine D., ed. 2000. Appendix II: Graduate Medical Education. *Journal of the American Medical Association* 284:1166.

- Deville, Kenneth. 1999a. Defending Diversity: Affirmative Action and Medical Education. *American Journal of Public Health* 89 (August): 1256–61.
- . 1999b. Trust, Patient Well-Being and Affirmative Action in Medical School Admissions. *Mount Sinai Journal of Medicine* 66 (September): 247–56.
- Geiger, H. Jack, and Victor W. Sidel. 1978. Medical School Admissions: The Case for a Quota. *Hastings Center Report*, October, 18–20.
- hooks, bell. 2000. *Where We Stand: Class Matters*. New York: Routledge.
- Hoyert, Donna L., et al. 2001. Annual Summary of Vital Statistics. *Pediatrics* 108:1241–55.
- Johnson, Jerry, et al. 1998. Extending the Pipeline for Minority Physicians: A Comprehensive Program for Minority Faculty Development. *Academic Medicine* 73, no. 3:237.
- Lancet* Editorial. 1991. Not a Classless Society. *Lancet* 338: 1116.
- Magnus, Stephen A., and Stephen S. Mick. 2000. Medical Schools, Affirmative Action, and the Neglected Role of Social Class. *American Journal of Public Health* 90:1197–201.
- Mullan, Fitzhugh. 2000. The Case for More U.S. Medical Students. *New England Journal of Medicine* 343:213–17.
- Navarro, Vicente. 1990. Race or Class versus Race and Class: Mortality Differentials in the United States. *Lancet* 336:1238–40.
- Navarro, Vicente, and Leiyu Shi. 2001. The Political Context of Social Inequalities and Health. *Social Science and Medicine* 52:481–91.
- Polsky, Daniel, et al., 2002. Initial Practice Location of International Medical Graduates. *Health Services Research* 37, no. 4: 907–28.
- Poussaint, Alvin F. 1999. Clinical Experience and Minority Group Students. *Clinical Orthopedics and Related Research* 362:78–84.
- Snow, Catherine E., M. Susan Burns, and Peg Griffin, eds. 1998. *Preventing Reading Difficulties in Young Children*. Committee on the Prevention of Reading Difficulties in Young Children. Washington, D.C.: National Academy Press.
- Walker, Lucius Jr. 2001. Fund Raising Letter, IFCO/Pastors for Peace, New York, October.
- Williams, David. 1997. Race and Health: Basic Questions, Emerging Directions. *Annals of Epidemiology*, 7 July, 322–23.
- Woodworth, Philip; Frederic Chang, and Stephen Helmer. 2000. Debt and Other Influences on Career Choices among Surgical and Primary Care Residents in a Community-Based Hospital System. *American Journal of Surgery* 180: 570–75.

# Complementarity: Dialectics or Formal Logic?

**Eftichios I. Bitsakis**

*To make it more accessible to readers unfamiliar with the language of quantum mechanics, the editors have appended to this article a glossary of selected terms.*

In 1927, at a conference in honor of the pioneering studies in electricity by Alessandro Nicola Volta in his birthplace in Como, Italy, Niels Bohr formulated the principle of complementarity in what has become known as the Como lecture. This lecture was published in the proceedings of the Fifth “Conseil de Physique” Brussels, 24–29 October 1927 (Bohr 1928). Complementarity constituted one of the pillars of the Copenhagen interpretation of quantum mechanics. I shall attempt to analyze here its status and epistemological function, taking into account that, as Scheibe says, it is impossible to consider the Copenhagen interpretation as a unified and consistent logical structure (1973).

The complementarity principle considers as mutually exclusive attributes represented by noncommuting operators, as, for example, the position and the momentum of a particle. In spite of this, some physicists like Fock and Rosenfeld (see, for example, Freire 1998—Ed.), as well as philosophers, considered this principle to be a dialectical one. It is well known, however, that according to Heraclitus, Hegel, and the founders of modern materialism,

dialectics means unity and struggle of opposites. Consequently, before passing to the analysis of the principle of complementarity, it would be useful to recall the conception of dialectics concerning opposite or contradictory attributes of matter.

According to Heraclitus (576–480 B.C.), there is a hidden harmony in nature and a unity of opposites, like that of the lyre and the bow. According to Hegel (1770–1831), creator of modern dialectics, modern science eliminated metaphysics. At the same time, the progress of empirical science favored the formation of more elevated categories. A central category of dialectics, according to Hegel also, is that of contradiction. Dialectics considers the opposites and the contradictory in their unity, and not as being mutually exclusive.

*Things are contradictory:* Formal logic, writes Hegel, considers the category of contradiction as less important than that of identity. Hegel, on the contrary, regards contradiction as the more profound and essential determination. It is the root of movement and the vital manifestation of things. Contradiction, in consequence, is not simply a logical or an epistemic category. It is an ontological category. It concerns *the things themselves* and not only our ideas about things. Consequently, it is not an anomaly; it is the principle of every spontaneous movement.

Contrary to formal logic, dialectical logic is not a science of the general-abstract, but of the general, which contains the wealth of the particular. For Hegel, the essential category is not that of being, but of becoming. Because of their internal contradictions, things are not in a state of being, but in a state of becoming. However, what is abolished is at the same time conserved. It has lost its immediate existence, but it is not annihilated.

*Unity and struggle of opposites:* The suppression of the contradiction is, according to Hegel, the more profound, intimate, and objective moment of the “spirit,” that is to say, of the existing. Ordinary logic grasps only difference and opposition, not the passage from one to another (1969, 409–43).

For the founders of modern materialism also, the category of contradiction is not simply a logical-epistemic one. It is at the same time an ontological category. The opposites exist in things

themselves. Their unity and their struggle are the internal cause of dialectical movement. According to Marx, what constitutes the dialectical movement is the coexistence of two contradictory aspects. It is their struggle and their fusion in a new category. If we try to eliminate the “bad side,” we destroy the dialectical movement (1984, 168).

I have referred to the two categories, *opposition* and *contradiction*, as if they were synonymous. However, their difference is essential. Opposition means that two poles coexist. What is essential in that case is their unity. The unity coexists with difference and opposition. In the case of contradiction, every pole is the negation of its opposite. And the suppression of the contradiction entails the destruction of the one or even the two opposites. Yet the difference between opposition and contradiction is not absolute. An opposition can be transformed into an antagonistic contradiction, the resolution of which results in the destruction of the opposites as, for example, the destruction of a nucleus in decay, the destruction of a star because of gravitational collapse, or the extinction of an animal species as a result of the transformation of its unity-opposition with the natural environment (Bitsakis 2001, 352; Sève 1998, 168–87).

Let us now pass to the case of complementarity, after this very brief philosophical prelude.

### ***The principle of complementarity***

Classical physics postulated that energy is exchanged in a continuous way. Consequently, in the frame of the classical idealizations, one accepts that the measuring apparatus does not disturb the state of the particle, and so it is, in principle, possible to fix the place of the particle in phase space (for example, momentum and position) and to describe its trajectory in a deterministic way. The Galilean particle, on the other hand, possesses mass as its only attribute—the measure of its inertia. It follows that the identity of the particle is conserved during the measurement. Thus, it is normal that the structure of the lattice of propositions concerning a classical system is Boolean, that is to say, it conforms to formal logic. To sum up: realism, determinism, and nonlocality

constituted the solid foundations of the classical Newtonian paradigm.

The indivisibility of the quantum of action, however, created a new situation. Niels Bohr, in his famous Como lecture, states: "The quantum postulate implies that any observation of atomic phenomena will involve an interaction with the agency of observation not to be neglected" (1961, 54). Bohr emphasized the uncontrollable perturbation of the quantum systems due to their interaction with the measuring apparatus. And because of this supposed uncontrollable interaction, Bohr concluded:

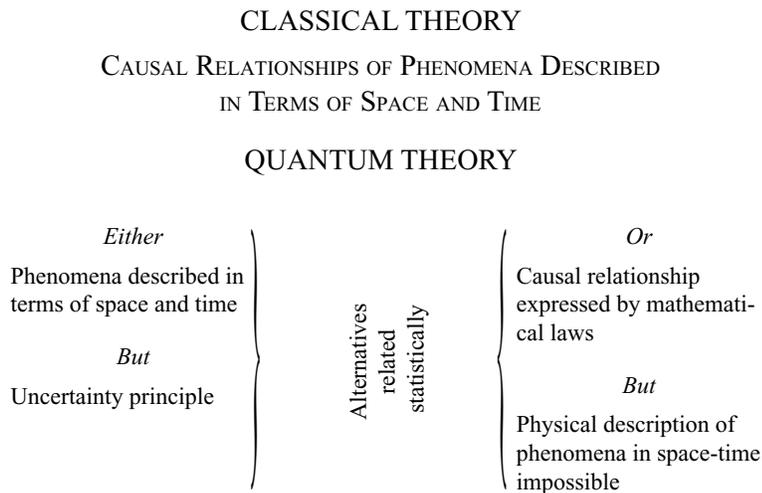
The impossibility of neglecting the interaction with the agency of measurement means that every observation introduces a new, uncontrollable element. Indeed, it follows from the above considerations that the measurement of the positional co-ordinates of a particle is accompanied not only by a finite change in the dynamical variables, but also the fixation of its position means complete rupture in the causal description of its dynamical behavior, while the determination of its momentum always implies a gap in the knowledge of its spatial propagation. (68)

This means that the two opposites, position and momentum, are mutually exclusive. However, it is evident that this alleged incompatibility is a factual, not a logical one: a particle can have a position and a momentum at the same time, even if it is impossible to measure both of them. In spite of that, the uncertainty relations constituted the starting point for the formulation of the complementarity principle and the elaboration of an antirealist and indeterministic interpretation of quantum mechanics.

The indivisibility of the quantum of action, Bohr writes, is, from the classical point of view, an irrational element. This situation prevents an unlimited combination of the space-time coordination and the causal pictorial description. For Bohr, an indirect measurement of the conjugate observable, by successive observations, is equally impossible. Thus, Bohr maintains: "The position of an individual at two given moments can be measured with any desired degree of accuracy; but if, from such measurements, we would calculate the velocity of the individual in the ordinary way,

it must be clearly realized that we are dealing with an abstraction, from which no unambiguous information concerning the previous or future behaviour of the individual can be obtained” (1961, 66). In this way, indeterminacy was established as a fundamental principle of the agnostic interpretation of quantum mechanics. Yet, as Gaston Bachelard wrote at that time, the cause of this indeterminacy was “well determined”—it is the quantum of action (1951, 211–23).

Thus, according to Bohr, we have to do with mutually exclusive conditions for the unambiguous use of the concepts of space and time on the one hand and the dynamical conservation laws on the other. Two years later, Werner Heisenberg summarized the situation in the chart below (1949, 65).



Complementarity was the response of the alleged impossibility of measuring simultaneously, or by successive measurements, two noncommuting variables. Bohr writes: “The coupling between phenomena and their observation, forces us to adopt a new mode of description designated as *complementary* in the sense that any given application of classical concepts precludes the simultaneous use of other classical concepts which in a different connection are

equally necessary for elucidation of the phenomena” (1961, 10).

The inequalities of Heisenberg were the starting point for the formulation of complementarity. This principle considers as mutually exclusive elements of reality that are factually or logically incompatible (position and momentum, wave and particle, etc). It follows that complementarity is incompatible with the dialectical mode of thinking. More than that; complementarity puts directly or implicitly not only the question of causality, but also that of the simultaneous existence of opposites. We shall discuss these questions.

For the moment, we must note that the physical foundation of the inequalities of Heisenberg is not clear. In fact, Heisenberg derived his inequalities from two mutually contradictory presuppositions. One involved the use of a gamma-ray microscope to determine the position of an electron. In doing so, however, he implicitly admitted that the position and the momentum of the particle exist before the measurement and they are disturbed by it. The second way to the inequalities, on the contrary, presupposes that the system is a wave packet having no precise position and momentum and that one of these mutually exclusive attributes is realized during the measurement (Heisenberg 1949, 21). The Copenhagen School has never paid attention to this contradiction between the operationalist and the ontological premises used by Heisenberg (Bitsakis 1976). Knowledge of the ontic counterpart of a relation or of a principle, however, is essential in order to ascertain its validity and, at the same time, the validity of its implications. The problem of realism is a fundamental question related to the inequalities of Heisenberg and it will be discussed in the next two sections.

But we must note, for the moment, another conclusion of Niels Bohr: It is impossible to measure with an arbitrary precision the values of two noncommuting variables, because the measuring apparatus disturbs the system in an uncontrollable way. Bohr, as we have seen, and also Heisenberg, supported this thesis. Yet Bohr also formulated a different point of view: The reason for this limitation is not a restriction of the accuracy of measurements, but the mutually exclusive “conditions for the unambiguous use of space

and time concepts on the one hand, and the dynamical conservation laws, on the other hand” (1958, 40–41). Thus, Bohr displaced the problem from the experimental to the semantic level. Yet he never attempted to give a physical explanation of the assertion that the system and the apparatus constitute an unanalyzable wholeness and of the more general principle of nonseparability. On the contrary, Bohr insisted that in quantum mechanics we are dealing only with phenomena. Thus he implicitly supported an antirealist thesis that, in addition, contradicted his assertion concerning “the impossibility of neglecting the interaction with the agency of measurement” (1961, 68). The inequalities of Heisenberg constituted the starting point of the antirealism of Bohr:

A sentence like “we cannot know both the momentum and the position of an atomic object” raises at once questions as to the physical reality of two such attributes of the object, which can be answered only by referring to the conditions for the unambiguous use of space-time concepts, on the one hand, and dynamical conservation laws, on the other hand. While the combination of these concepts into a single picture of a causal chain of events is the essence of classical mechanics, room for regularities beyond the grasp of such a description is just afforded by the circumstance that the study of the complementary phenomena demands mutually exclusive experimental arrangements. (1958, 40–41)

Complementarity’s negating the possibility of knowing “mutually exclusive” elements of reality posed de facto the question of their existence.

***The principle of nonexistence of nonobservable  
(or nonobserved) quantities***

Let us accept that, because of the indivisibility of the quantum of action, it is impossible to “observe” two noncommuting “complementary” observables. The question then arises: Do the complementary attributes have a simultaneous existence? The answer of Bohr was not clear and unique on this crucial question. (According to Louis de Broglie, Bohr was the Rembrandt of

modern physics, with the “*clair-obscur*” of his ideas). The dominant answer of the Copenhagen School, on the contrary, was clear. According to the “principle of nonexistence of nonobservable (or nonobserved) quantities,” if a particle has a precise position, then it has no momentum, and if it has a precise momentum, then it is nowhere! As Melhberg comments ironically, if a particle is “accelerated in Brookhaven, it could not possibly be in Brookhaven (1967, 50). The “principle of nonexistence” is the transcription, in the domain of physics, of the well-known operationalist “principle.” Heisenberg and other physicists and philosophers have elevated this assertion to the status of an ontological principle.

The principle of nonexistence is usually attributed to Heisenberg. In fact, it was Pauli who stated it in 1919. According to Pauli, quantities in principle nonobservable would be fictitious and without physical meaning. Heisenberg, Dirac, and others adopted this principle, which was not respected in practice, even by them. According to Dirac, for example, it was possible to discover quantum mechanics because Heisenberg did not keep so strictly to his idea of working entirely in terms of observable quantities (Kragh 1990).

We must, however, make a distinction between nonobserved and nonobservable quantities. The above “principle” of Pauli-Heisenberg is, evidently, a methodological one, conforming to the operationalist philosophy. Nevertheless, a nonobserved quantity may exist in itself, prior to being “observed.” This, for example, would be the case of the simultaneous existence of position and momentum. These elements of reality are factually incompatible only in the frame of the Copenhagen interpretation. But does a quantity that is nonobservable in principle have an objective existence? It is evident that such a quantity has a weaker ontic status than the one that is merely nonobserved. Bohr did not believe in the existence of  $\mu$ -mesons and Dirac in the existence of neutrinos, yet both particles were “observed.” But how could the nonobservable in principle be observed? And how is it possible to attribute a certain reality to the “nonobservable”? In this way the methodological principle was transformed into an ontological one. Yet it is a matter of fact that the distinction between the two cases was not clear and that the dominant tendency was to identify the real with the observed.

For the extremists of the orthodox school, there is no reality other than the observed one. “A phenomenon is not a phenomenon until it is observed.” Consequently, an electron does not exist until it is observed. In this context the role of the observer becomes essential in the creation of phenomena. Schrödinger’s cat, for example, will be half-dead and half-alive, until an observer reduces its “wave packet.” It is well known, however, that the observer does not participate directly in the great experiments of microphysics.

Nevertheless, it is legitimate to accept, in conformity with microphysics, that particles, although not corpuscles in the Democritean sense, exist independently of being observed and that they are physical objects with definite attributes—mass, charge, spin, etc. As Einstein stressed, a free particle possesses a position and a momentum, even if it is impossible to measure them in the same individual case (1948). At the same time, it is true that there are attributes created by the measurement through the transformation of other, preexisting elements of reality—through a process of passage *from potentiality to actuality*. But the question necessitates a more concrete analysis (Bitsakis 1988a).

As I have noted, quantum mechanics deals with two kinds of incompatibilities: a factual one and a logical one (Antonopoulos 1994). Position and momentum, for example, are not logically incompatible. Because of that, many authors—Einstein, Popper, Margenau, and others—have challenged their factual incompatibility. Thus, when the position of a particle is ascertained with a margin  $\Delta x$ —for example, after passing through a slit—its simultaneous momentum  $p_x$  can be ascertained on the basis of its trajectory to a point of impact, with an accuracy far surpassing Heisenberg’s inequalities (Margenau 1978). In Popper’s words: “We measure the momentum  $p_x$  of the incoming particle by its position on the film of the spectrograph. And this is typical. It should hardly be necessary to stress that we almost always measure momenta by positions” (1967, 28). And it is well known that physicists use the geometrical data of the trajectory of the particle in a bubble chamber in order to compute its dynamical characteristics. Consequently, the Heisenberg inequalities are violated in practice. In spite of that, the eventual factual incompatibility has been transformed, on the basis of the complementary principle, into an ontological

postulate. Yet this postulate not only contradicts common sense, but the foundation of physics as well.

The inequalities of Heisenberg have posed an epistemological problem concerning the possibility of knowing the simultaneous values of noncommuting observables. The dominant interpretation transformed this problem into an ontological one: A particle with “sharply” measured position has no momentum; it is neither at rest nor in a definite state of motion. This paradox conforms with Bohr’s thesis that an independent reality, in the ordinary sense, can neither be ascribed to the phenomena, nor to the agency of observation.

There is no logical incompatibility between position and momentum. In the frame of formal logic, on the contrary, wave and particle properties are logically incompatible. Bohr, instead of facing this contradiction, eluded it with his “principle of complementarity.” Yet, as is well known, the problem of the wave-particle duality constitutes, since 1924, a field of theoretical and experimental investigations. The problems are not as simple as the Copenhagen interpretation understands them to be on the basis of the principle of nonexistence and the principle of complementarity (Bitsakis 1997).

The principle of nonexistence and the principle of complementarity constitute a positivist answer to the new, real, and fundamental problems posed in the 1920s by quantum mechanics. Pauli and Heisenberg asserted, ever since 1927, the claim that only measurable (observable) quantities should enter into the formulation of quantum mechanics. This claim conforms to the thesis of Berkeley and Hume that the real is identified with the observable. The same irreducible incompatibility was postulated for the wave and the corpuscular aspects of microparticles.

The postulate of nonexistence implies that a proposition attributing a certain property to a microparticle has meaning only if it is verified empirically. Consequently, in order to avoid contradiction, no concept can enter a theory if it is not experimentally verified, at least to the same degree of accuracy as the experiments to be explained by the theory (Heisenberg 1949, 1). Fortunately, theorists do not respect this rule.

The principle of complementarity constituted an epistemological obstacle: negating the simultaneous existence of noncommuting variables, it became a hindrance to the effort for a deeper understanding of the microphysical reality.

### ***Complementarity and realism***

Let us again pose the question: If it is impossible to measure “exactly” two factually incompatible observables, say  $x$  and  $p_x$ , then is it legitimate to postulate that they have a simultaneous existence? More generally, is it legitimate to attribute a property  $p$  to a system  $S$ , prior to its interaction with the measuring apparatus? Finally, is it legitimate to postulate the existence of an *objective* reality to which corresponds our *empirical reality*, a reality that exists independently of any “observer”? Bohr, in most of the cases, has not given an unambiguous answer. His position, as we have noted, wavers between a timid realism and an equally timid, but sometimes open, antirealism. (It is evident that the realism I speak about has nothing to do with naive, intuitive realism. It concerns the immediately given, as well as the hidden reality accessible by the mediation of scientific instruments, but inaccessible to direct intuition [Bitsakis 1993, 160]).

Bohr writes about matter, about particles, about nature, objective knowledge, etc. Nevertheless Bohr confined knowledge to phenomena. Thus, he emphasized the essential irreversibility of the process of “observation” and the perfectly objective character of the description of atomic phenomena (1983). At the same time, he made important concessions to the positivist philosophy by accepting the nonexistence of what is not observed.

In fact, Bohr very often used the terms “observation,” “phenomena,” and “uncontrollable perturbation.” The indivisibility of the quantum of action created, according to him, a “situation hitherto unknown in natural science.” Thus, he maintained, it is difficult to distinguish between subject and object and, “in consequence of this state of affairs, even words like ‘to be’ and ‘to know’ lose their unambiguous meaning” (1961, 115, 15, 19). Phenomena are created by observation, and we cannot ascribe an independent reality to them. Consequently, quantum mechanics necessitates a

radical revision of our attitude as regards physical reality.

However, there are measurements which do not create new elements of reality. It is the case of “ideal measurements.” In the case of the so-called “reduction of the wave packet,” on the contrary, preexisting elements of reality are transformed into different ones, creating new quantum states. In that case the Hilbert space is not a space of preexisting states in superposition, but a space of potential states. The dialectics between the potential and the actual is alien to the spirit of the Copenhagen interpretation. And the passage from the potential to the actual is a determinate one. Contrary to the so-called indeterminism of the orthodox school, a new form of determinism—*quantum statistical determinism*—is valid in the realm of quantum mechanics (Bitsakis 1988b).

Complementarity concerns mutually exclusive attributes of matter. It concerns phenomena having no internal relations. It has no meaning, says Bohr, to hunt for underlying causes. Finally, this universe of phenomena is dissolved into the pure world of mathematics: “There is no quantum world. There is only an abstract quantum description” (cited in Jammer 1974, 204).

The position of Bohr concerning the objective existence of “complementary” attributes is not clear, although its dominant element is a *subjective phenomenalism*. The second protagonist of the Copenhagen interpretation, Werner Heisenberg, on the contrary, professed an open antimaterialism of neoplatonic flavor. Elementary particles, Heisenberg writes, are not real; they form a world of potentialities, in which causality is not applied and where the law of conservation of energy is not valid (1959, 61, 66, 81, 160). On another occasion, Heisenberg formulated his neo-Pythagorean conception of the quantum world as follows: “If we attempt to penetrate behind this reality into the details of atomic events, the contours of this ‘objectively real’ world dissolve—not in the mist of a new and yet unclear idea of reality, but in the transparent clarity of a mathematics, whose laws govern the possible and not the actual” (1955, 28).

The indivisibility of the quantum of action, and the resulting modification of the state of the system during the measurement, led Bohr to the elaboration of the notion of *complementarity*. The

alleged impossibility of a classical description meant, according to him and to Heisenberg, that the external world is potential, not actual, in character (Heisenberg 1955, 28). Electromagnetic waves, for example, are probability waves—not real waves, but a *tendency to something*. The same is true for elementary particles. As opposed to the dialectical philosophy of Aristotle, the philosophy of complementarity dissociated and formally opposed potentiality to actuality. Nevertheless, the potential presupposes an ensemble of actual elements of reality of the previous state, and the actual is realized by the transformation of these elements to those characterizing the new state (Bitsakis 1982, 1988a).

### ***Duality and complementarity***

Until now, I have focused on the case of two factually, not logically, incompatible variables. This is the case of position and momentum. Yet complementarity concerns also the case of concepts incompatible in the frame of formal logic. Wave and particle are two such concepts. In their case, it seems that we have to do with a genuine ontic incompatibility.

According to Bohr, and more generally to positivist epistemology, in quantum mechanics, an independent reality can neither be ascribed to phenomena, nor to the agency of observation. Stationary states, individual transitions and so on, possess “just as much or as little ‘reality’ as the very idea of individual particles” (Bohr 1961, 87). For Bohr, only complementary phenomena are “real” and yet devoid of any ontic counterpart. In the frame of this devastating philosophy, the question concerning the eventual objective unity of opposing attributes of matter was considered as having no meaning. Thus, instead of trying to face the problem of the status of opposing attributes and processes, Bohr avoided it; *he eluded the contradiction instead of resolving it*. Instead of the quest of the eventual hidden unity of the opposites, Bohr professed their agnostic dissociation.

These considerations are valid, in particular, for the fundamental question of the status of the wave-particle duality. For Bohr, quantum mechanics deals with mutually exclusive situations or phenomena. Thus Bohr maintained that complementarity

removes the apparent contradiction between mutually exclusive experimental conditions, such as the wave and particle manifestations. This is a reasoning conforming to formal logic.

Bohr avoided the problem. Since the question *whether the wave-particle duality has a physical counterpart* is a legitimate one, it is legitimate to ask whether the two opposing empirical pictures correspond to a concealed unity in the realm of the objective reality. For Bohr, on the contrary, the whole question was reduced to an empirical statement, namely, that we have to do “with a novel kind of complementary relationship between the applications of different fundamental concepts of classical physics” (1983, 80). This agnostic position hindered the experimental and theoretical work of solving the problem of duality.

A similar position was held by Carl von Weizsäcker: “Hence I may not say: ‘The atom is a particle’ or ‘It is a wave’, but ‘It is either particle or wave, and I decide by the disposition of my experiments, in which of the two ways it manifests itself’” (1952, 33). Heisenberg, on the contrary, was clearer: “The two pictures are of course mutually exclusive, because a certain thing cannot at the same time be a particle . . . and a wave” (1959, 44, 50). Formal logic excludes the unity of the opposites. Complementarity in its turn considers them as mutually exclusive. Consequently the logic of the principle of complementarity is formal, not dialectical, logic.

It is true that the objective unity of the two contradictory aspects of matter was rejected also by other physicists and philosophers, who, contrary to the phenomenism of the orthodox school, belonged to the realist tradition. For Popper, for example, the particle-wave duality and the subjective interpretation of probability are responsible for the antirealist interpretation of quantum mechanics. Landé also rejected the notion of duality. He accepted only the objective existence of particles and considered the wave picture as an epiphenomenon, resulting from the statistical distribution of the particles. Landé maintained that if Max Born’s “statistical particle interpretation is accepted seriously, there is no room for ‘duality’ any more; wave phenomena are mere appearances of *real* particles” (1960, 95). Quantum theory for Born is a unitary particle theory (98).

Other protagonists of the realist school, on the contrary, formulated arguments in favor of the objective unity of the wave and the particle. The duality of light, notes Damian Canals-Frau, was a concept familiar to Einstein in 1909 and also to de Broglie in 1924. For Einstein the “light quantum” is the “particle-like” aspect of the light, and the wave is the “Maxwellian” or “electromagnetic” aspect. According to Canals-Frau, the two aspects are not separable, and jointly define the counterintuitive thing that, following electrodynamics, we call *photon*. Each photon occupies a volume that can be determined by a single-photon Young interference experiment (1993). The question of duality is a physical, not a metaphysical, one. Before the Como conference, de Broglie had already tried in his doctoral dissertation to describe a real, physical wave, transporting a particle localized in space-time (1953). Einstein also tried to arrive at a synthesis of the two opposing attributes. Finally, it is well known that recent new experimental evidence pleads in favor of the objective unity of the corpuscular and the wave properties of microparticles. Neutron interferometry favors, in particular, the old idea of Einstein concerning the existence of “ghost waves,” that is to say, of empty waves carrying no particle.

Finally, what has been (and is) the epistemological function of the principle of complementarity? I quote Louis de Broglie on this subject: “It is possible to compare complementarity with the ‘soporific virtue’ of opium about which Molière spoke ironically. It is perfectly legitimate to translate the soporific properties of opium by attributing to this substance a ‘soporific virtue.’ Nevertheless, you must be careful not to see in these words, an explanation of these properties” (1988).

Paul Langevin was also one of the eminent physicists who argued in favor of objectivity of the wave-particle duality. In his words, the association of the corpuscles and the waves, necessary in optics, has also been “imposed on matter, since in every variety of material corpuscles, atoms or molecules, wave mechanics demonstrated the necessity of associating waves of a new type, transporting electric charge, subject to the action of an electric or a magnetic field” (1933, 21). Six years later, Langevin maintained that we are facing a double aspect of the light and of the matter as

well: ondulatory in certain cases, corpuscular in others. The connection of the two aspects is to be found in a statistical conception (1939).

In spite of the “solution” of Bohr, the problem of the duality is still open and on the order of the day. Experimental evidence pleads in favor of the wave-particle duality. In fact, let us take the case of the famous two-slit experiment. If we consider light as an electromagnetic wave, there is no problem. Or, in the case of photons and of massive particles, the classical explanation is not valid, because the trajectory of the particle passing from the slit *A* would be independent of the opening or the closure of slit *B*. However, the pattern of interference is different in the two cases. Consequently, it is impossible to avoid the question: How does the particle “know” whether slit *B* is open or closed?

Particle theory cannot give an answer. On the other hand, it is impossible to represent the photon or the particle by a classical wave. If we use individual photons, then, we must accept that every photon interferes with itself, as was anticipated by Dirac, and its impact is localized. Consequently we must take into consideration the corpuscular and the wave nature of the photon or of the massive particle (electron, neutron, etc). How can we explain this fact?

If the distance between slits *A* and *B* is smaller than the “diameter” of the region affected by the wave accompanying the particle, then it is possible, in principle, to understand the influence of slit *B* on the particle passing through *A* as well as the interference of the particle with itself. However, is it legitimate to attribute a trajectory to our particle? If we put two detectors,  $C_1$  and  $C_2$ , at an appropriate distance behind the slits, then we destroy the interference particle, but we ascertain whether the particle has passed through *A* or *B*. Consequently, our particle behaves like a particle and at the same time like a wave. The theory must express the objective, intrinsic unity of the opposite attributes of quantum particles. The theory of the double solution was a first response to the dilemma of whether we are dealing with waves or particles (Bitsakis 1997a).

Neutron interferometry, also, offers new evidence in favor of the wave-particle duality. The interference pattern taken in these

experiments indicates that each neutron carries information about the physical situation in two widely separated beam paths. Yet the particle follows one of the possible paths. Consequently, “something” passes along the second path. In that case also we have to do with a phenomenon of self-interference of the single particle. The results of neutron interferometry are incompatible with the conception of quantum particles as either waves or corpuscles. but not both. It seems that we must go beyond the intuitive ideas and attribute an ontic status to the wave-particle duality. As Bozic and Maric note, de Broglie waves satisfying the Schrödinger equation guide the particle inside the interferometer, determining the set of possible trajectories, as well as their probabilities (1991).

***Nonseparability, complementarity, and causality***

Bohr took note of the “causal description” of phenomena in the frame of the relativistic theories. But “in quantum theory the uncontrollable interaction between the objects and the measuring instruments forces us to a renunciation even in such respect.” However, Bohr affirms that the “viewpoint of complementarity may be regarded as a rational generalization of the very ideal of causality” (1958, 41). In 1937, in another case also, Bohr maintained that complementarity is “the expression of a rational synthesis of the wealth of experience in this field, which exceeds the limits to which the application of the concept of causality is naturally confined” (1958, 19). For Bohr, however, the quantum postulate implies a renunciation of the causal space-time coordination of atomic processes. “Determination of the energy and the momentum of particles demands that we renounce their exact co-ordination in time and space.” A “fundamental indeterminacy” is the new feature of the quantum world (1961, 114). In the Como conference, Bohr maintained that the space-time representation and the principle of causality “are mutually excluded from the description of the experience” (1928, 217).

Bohr insisted on the impossibility of a simultaneous measurement of the position and the momentum of a particle. However, the movement of a free particle obeys the deterministic equation of Schrödinger. More than that, as I have noted, physicists in practice use the geometrical data in order to compute the dynamical

ones. In the case of a free particle, there is no “indeterminacy.”

The real problem concerning the validity of determinism concerns the case of the interaction of the particle with an apparatus, which results in the creation of new quantum states, that is to say, the famous “reduction of the wave packet.” In that case, determinism seems to fail. Bohr considered this case also, in the frame of nonseparability.

Because of the indivisibility of the quantum of action, the interaction between the system and the apparatus cannot be neglected. Bohr writes that in the domain of quantum physics, instruments form an inseparable part of the phenomena. Consequently, in the application of the formalism, the whole experimental arrangement must be taken into account. The system and the apparatus constitute an indivisible and unanalyzable wholeness, and atomic objects obtained by different experimental arrangements exhibit a novel kind of complementary relations (1948; 1983, 3–5).

Yet the “principle” of nonseparability necessitates an action at a distance, responsible for the so-called “collapse” of the “great system” and the realization of one of the eigenstates of the quantum particle. *Bohr never recognized this implicit presupposition.* In his positivist conception, our information concerns only phenomena. Thus, it has no meaning to pose “metaphysical questions.” Nevertheless, the question of *by what kind of physical interaction the alleged nonseparability is realized* is a legitimate one to which no answer was provided. Although action at a distance violates the principle of relativity, Bohr and his school insisted that the physical reality of a system is disturbed by what is taking place in another region. This nonseparability constituted the weak point of the interpretation of the EPR Paradox by Bohr. At the same time, it had far-reaching implications for our conception of nature. A way out was, evidently, to say that physics is concerned only with phenomena, only with an empirical reality, without intrinsic relations to an objective reality independent of our experimental devices. What, however, can be said in this case about causality and determinism?

On this question also, the conceptions of Bohr, and more generally, of the Copenhagen interpretation, are not clear. Some-

times they are contradictory. The classical thesis was formulated by Bohr in 1927: “The very nature of the quantum theory thus forces us to regard the space-time co-ordination and the claim of causality . . . as complementary but exclusive features of the description” (1961, 54–55). Consequently, we can have a spatio-temporal or a causal description. “Any attempt at an ordering in space-time leads to a break in the causal chain” (Bohr 1961, 98). This means that causal connections exist, but they are incompatible (complementary) with the spatiotemporal description. Yet Bohr maintained at the same time that “we have been forced step by step to forego a causal description of the behaviour of individual atoms in space and time, and to reckon with a free choice on the part of nature between various possibilities to which only probability considerations can be applied” (1961, 4). Finally, twenty years later, Bohr recognized that “it is hardly unreasonable to endow nature with volition in the ordinary sense.” But even then he reduced the whole question to a rather trivial conclusion, namely, that “our possibilities of handling the measurement instruments allow us only to make a choice between the different complementary types of phenomena” (1958, 51).

The problem of causality and determinism was obscured in the frame of the complementarity interpretation. In fact, as is well known, the evolution of the state vector of a free, undisturbed particle, is perfectly deterministic. Here it is legitimate to accept that such a particle has a defined position and momentum during its free “flight” in space. It is true that an eventual measurement will disturb its state. Yet, in practice, as we noted, its conjugate variables are calculable to a precision surpassing the limit posed by the inequalities of Heisenberg.

The more difficult case concerns the transformation into a mixture of states. In that case, the principle of determinism seems to fail. Nevertheless, on the basis of the initial data, it is possible to calculate the set of the possible states and their respective probabilities. The probabilistic character of quantum mechanics is not an argument in favor of indeterminism. The indeterministic argument is based on the alleged impossibility of measuring both the position and the momentum of the particle. Yet suppose that we

begin to measure exactly the two noncommuting variables. We cannot with certainty predict the outcome of the interaction with the apparatus—the “reduction of the wave packet”—that is to say, the transformation of the particle is a nonlinear phenomenon, not described by the linear equation of Schrödinger. However, it is possible to predict the possible states on the basis of the relevant causes. And if we modify the initial conditions, the probabilistic distribution will be modified also. This indicates the deterministic character of the so-called “noncausal reduction of the wave packet” (Bitsakis 1991). For Bohr, on the contrary, the creation of physical properties during the measurement immediately raises the question of the physical reality of such attributes (Bohr 1948). Consequently, even in the case of the so-called “reduction of the wave packet,” causality and determinism are valid. But it is evident that we now have to do with a *new form of determinism—quantum statistical determinism*—an expression of the multiple potentialities of the quantum ensembles (Bitsakis 1988b).

Complementarity is prisoner of the mechanistic paradigm—in its frame, the only conceivable form of determination is the Laplacean one. The inadequacy of this form was considered as absence of causality and determinism in the realm of microphysics (Bitsakis 1976, 1983).

Nonseparability, nonlocality, and indeterminism are fundamental principles of the Copenhagen interpretation. Nevertheless, if conventional quantum mechanics is nonlocal, physical theories are in general *local*. In fact, Maxwell introduced locality for electromagnetic waves. Einstein, later, replaced the nonlocal Newtonian theory of gravitation by a new local one. More than that: The electromagnetic theory of Maxwell and the theory of gravitation of Einstein are *hidden-variable theories* in contrast to the nonlocal theories they replaced. In a similar way, relativistic quantum mechanics is a local theory. Consequently, causality and locality are well-defined and verified concepts. Nonseparability and nonlocality, on the contrary, are *ad hoc* postulates without physical foundation. The orthodox school never proposed a mechanism by which two particles separated by a space-time interval can influence each other.

We can now approach the problem of causality and, more generally, the question of the completeness of quantum mechanics, from another point of view—that formulated by Hans Reichenbach.

Observables, according to Reichenbach, correspond to macroscopic things. Statements about physical quantities of a smaller scale, on the contrary, are derived by way of inferences based on macroscopic observables—for example, the interactions between electrons, or between electrons and photons. Elementary occurrences of this kind are called *phenomena*. Such phenomena may be considered as observable in a wider sense. On the contrary, Reichenbach writes, we shall consider as nonobservable all those occurrences that take place between interaction events—for example, during the motion of an electron. Reichenbach named this class of occurrences *interphenomena*. Inferences leading to them can be made only within the framework of quantum mechanics.

If we try now to assign, by any kind of rule, simultaneous values to noncommuting quantities, the distributions of which are governed by the state function *psi*, then the resulting interphenomena are subject to *causal anomalies*. Causal anomalies result whenever we use an exhaustive interpretation. The term *particle* and the term *wave*, for example, both belong to interphenomena. Exhaustive interpretation, according to Reichenbach, states too much, insofar as it speaks of causal anomalies, which have no bearing upon the world of phenomena.

The principle of anomaly is related to the principle of complementarity, but it goes beyond that, inasmuch as it makes precise statements about nonobservables in quantum mechanics. In order to avoid causal anomalies, Reichenbach confined his interpretation to the frame of the Copenhagen interpretation, renouncing “any description of interphenomena,” adding that “we should restrict quantum mechanics to statements about phenomena” (1944, 33).

The solution, Reichenbach maintains, is three-valued logic, “because the causal anomalies, as formulated in exhaustive interpretations, appear to be superfluous complications” (43). In this way, Reichenbach reduces our cognitive possibilities to the

quantum level, transforming any eventual deeper realities into an unknowable *thing-in-itself*. His theory, in particular, constituted an obstacle to any effort to find deeper causal relations determining the probabilistic distribution (1944, 40–43).

### ***Complementarity and dialectics***

So far, I have tried to show that the logic underlying the principle of complementarity is formal, not dialectical logic. Some eminent physicists, however, like Vladimir Fock and Léon Rosenfeld, have maintained that complementarity is a dialectical principle. Let us examine the validity of this viewpoint.

Let us take the case of a genuine logical contradiction: the case of the wave-particle duality. We have the following positions concerning this problem:

(1) The wave-particle duality expresses the objective, ontic unity of the two opposite attributes of microparticles (de Broglie and contemporary authors).

(2) The opposite thesis: There is no wave-particle duality. There are only particles. The wave-like pictures are epiphenomena, produced by individual impacts, symmetrically distributed. The wave picture can be explained on the grounds of simple and general postulates of invariance and symmetry (Newton, Duane, Landé, and others).

(3) The formal conception of Heisenberg: either particles or waves.

(4) The agnostic position of Bohr and his followers.

(5) The rejection of dualism from a realist point of view: There is no dualism. An electron is neither a particle nor a wave (Margenau and Cohen 1967).

(6) The claim that complementarity expresses the dialectical synthesis of opposites in quantum mechanics (Fock, Rosenfeld, and others).

Let us examine this last point of view.

Dialectics, since Heraclitus and Hegel, as I have noted, postulated the unity and, at the same time, the conflict of opposite realities and processes. Contradiction and opposition, consequently, do not have a merely epistemological status. They are, at the

same time, *ontological categories*. They concern matter, and not only our conceptions of matter. Dialectics claims to have its ontic counterpart in the objective, primary reality.

Nothing like this exists in the texts of Niels Bohr. Complementarity means for him that opposites are exterior to each other, that they are mutually irreducible. Complementary relations exclusively concern phenomena—the empirical reality—not an objective, primary reality, whose existence is relegated by the orthodox school to the realm of metaphysics. Complementarity destroys the internal unity and the mutual determination of the opposing attributes of matter. More than that: In this way, it poses a limit to our knowledge of the microphysical world.

Yet Fock maintained that the notion of complementarity “was a profound one,” and that it was possible “to join it up with the philosophical notion of dialectics.” In the name of dialectics, Fock also proclaimed the thesis that “those contradictory data exhaust our knowledge of the object” and that it is meaningless to consider the complementary properties as simultaneous (Fock 1965, 1966). In the same spirit, Rosenfeld argued that complementarity means “synthesis” of contradictions that disappear to give place to a New Harmony (1952). Nothing like that is pertinent to the spirit of Niels Bohr.

As Mario Bunge notes, Rosenfeld defended the orthodox interpretation of quantum mechanics in the name of dialectical materialism. For Rosenfeld, complementarity appears as the only possible rational interpretation of the existing situation. For the first time, we were obliged to abandon the distinction between the observer and the object of observation. Now, the only complete interpretation is possible in the frame of the relation of complementarity. Heisenberg is an idealist, affirms Rosenfeld. This is not a reason for rejecting complementarity. Bohr is too subtle a dialectician to fall into the inconsistency of Heisenberg (1952). On another occasion, Rosenfeld considered as futile the attempts of Einstein and others: “While great masters (Planck, Einstein, Bohr, Schrödinger) were vainly trying to eliminate the contradiction in Aristotelian fashion by reducing one aspect to another, Bohr realized the futility of such attempts. He knew that we have to

live with this dilemma and that the real problem was to refine the language of physics as to provide room for the coexistence of the two conceptions” (1963). However, the problem is not the formal coexistence, but the dialectic unity of the opposites.

As Max Born notes, Rosenfeld was an enthusiastic follower of Bohr and also proclaimed his adherence to dialectical materialism. Born says that Rosenfeld tried in several papers to represent Bohr’s complementarity as giving support to Marxist philosophy. Born notes that Fock also clearly and unambiguously rejected the attempts to salvage determinism, attempts that had been undertaken by de Broglie and his school. Yet Fock was a follower of dialectical materialism (Born 1962, 36).

In reality, complementarity is incompatible with dialectics because it rejects a priori the eventual unity of dual, opposite attributes of matter. As for their existence before measurement, the Copenhagen school maintained two different, unilateral theses: (1) the question of complementary pairs has no meaning because quantum mechanics is concerned only with phenomena, and (2) the mutually exclusive elements of reality are *created* by the measurement.

Nevertheless, the situation is *not* so simple. In fact, we have “complementary pairs” that evidently exist before the measurement, as, for example, the position and the momentum of a particle. There are also elements of reality created, as I have noted, by the interaction of the particle with the apparatus (passage from potentiality to actuality) as, for example, the components of the spin of a particle. From this point of view, complementarity is the positivist version of the fact that the apparatus plays an active role in microphysics (Bitsakis 1988c).

### ***Kant, Kierkegaard, and Bohr***

The agnostic philosophy of Bohr was considered by some authors as similar to that of Immanuel Kant. In fact, for Kant also, only phenomena are accessible to reason: *not things-in-themselves*. However, the similarity between Kant and Bohr is illusory. Contrary to Bohr, Kant was a *realist*. For him, *phenomena and things-in-themselves exist independently of the knowing subject*.

Moreover, Kant was a rationalist: Causality and other categories, although a priori categories of reason, impose necessary relations to phenomena. Bohr, on the contrary, was an empiricist. And, as already noted, his epistemology is in many ways incoherent and, in the end, idealist. It must be noted also that Kant, as is well known, elaborated a rigorous classification of propositions (empirical, tautological, a posteriori synthetic, and a priori synthetic) in order to define their objective status.

The antinomies of *The Critic of Pure Reason* concern the impossibility of Logos to know things-in-themselves. The contradictions for Bohr, on the contrary, concern the empirical reality—the only legitimate reality for him. They concern phenomena. Objects, for Kant, exist independently of the subject. Bohr, on the contrary, asserts that no sharp separation between object and subject can be maintained, since the perceiving subject also belongs to our mental content. (What is the meaning of the contention that the perceiving subject belongs to our mental content? If the aphorism has a meaning, it is pure subjective idealism.) Categories, for Kant, have a precise meaning and impose rigorous laws for reasoning. For Bohr, concepts have a relative meaning, depending upon our arbitrary choice of viewpoint. Bohr tried to generalize the notion of complementarity in order to include phenomena of biology, psychology, and sociology. This “dialectics,” however, is not the quest for the concealed causes of contradictions. Its objective is a “search for a harmonious attitude towards life.” Thus Bohr considered a number of complementary pairs, such as thought and sentiments, mechanistic and vitalistic viewpoints, free will and causal chains of physiological processes, and so on. These pairs are constituted by independent, mutually exclusive elements (1958, 1961).

The above complementarities are the products of a poor philosophy. Nevertheless, empiricism is not the unique source of the philosophical explorations of Bohr. Thus, in his aphorism: “Just as the freedom of the will is an experiential category of our psychic life, causality may be considered as a mode of perception by which we reduce our sense impressions to order” (1961, 116–17). Bohr combines, in a “complementary” way, David Hume and his

compatriot Søren Kierkegaard, the founder of Christian existentialism. Max Born, in turn, discovered a correlation between the complementarity of Bohr and Cartesian dualism: “I believe with Niels Bohr that the concepts body and soul are complementary, and not reducible to each other” (1962, 61). All these are part of philosophical idealism known since the times of Descartes, Plato, and Pythagoras.

***Complementarity: Its status and function***

Finally, what is the *status* of complementarity? *Is it a concept?* No, in my opinion. This notion is not scientifically operative; it cannot describe or explain phenomena; it has not the form of a mathematical relation; it is impossible to use it for making predictions; it is neither verifiable nor falsifiable.

Complementarity is rather an epistemological and, by extension, an ontological postulate. It is fundamentally positivist in character, although its incoherent use has colored it with idealistic and existentialist shades. Consequently I cannot agree with Yakov Terletsky when he characterizes complementarity as *a concept or a philosophical concept*, and when he writes that we must distinguish between the concept of complementarity as a physical law or phenomenon and the interpretation of this phenomenon (1988). (Complementarity is neither a law nor a phenomenon.) I also cannot agree with V. Pankovic when he defines complementarity as a *metatheoretical, meta-epistemological* principle (1991). Complementarity is an epistemological postulate not deserving the status of a concept or a principle.

What was (and is) then the epistemological function of complementarity? Pankovic sees an equivalence between Gödel’s theorem of incompleteness and Bohr’s complementarity principle (Pankovic 1991). Yet the epistemological function of Gödel’s theorem was that of a *catalyst* for scientific investigations. Complementarity, on the contrary, lived a parasitic life in the field of quantum mechanics and nourished ideas and conceptions varying from intuitive realism to superficial positivism and idealism. Postulating the mutually exclusive character of complementarity pairs, and the completeness of the quantum-mechanical description, complementarity played the role of an epistemological

obstacle to the discovery of the objective dialectics between the different and contradictory manifestations of microphysical reality.

*Professor Emeritus  
Department of Philosophy  
University of Ioannina, Greece*

#### NOTE

Translations from non-English sources have been done by the author.

#### GLOSSARY

*Conjugate.* See *psi function*.

*Copenhagen interpretation.* The interpretation of quantum mechanics associated with the Danish physicist Niels Bohr and his followers.

*Eigenstate.* One of the possible quantum states of a physical system.

*EPR Paradox.* In 1935, Albert Einstein and two colleagues, Boris Podolsky and Nathan Rosen, published a paper in the *Physical Review* that they maintained was conclusive proof that quantum mechanics could not be considered to be a complete theory. As part of their arguments, they used the device of hypothetical experiments (called *thought experiments*) that they maintained would produce results inconsistent with the predictions of quantum mechanics as interpreted by Bohr.

*Hilbert space.* In a further development of quantum mechanics, the mathematical characteristics of the state functions fall into a category of functions investigated earlier in the twentieth century by the mathematician David Hilbert

*Locality.* If a physical theory explains the behavior of a particle by forces or other factors present at the position of the particle, the theory is said to be *local*. If the theory explains the behavior of the particle by forces or factors acting from a distance, the theory is *nonlocal*. Maxwell, for example, by introducing the concept of the mathematized electric field, attributed the behavior of a charged particle to the force due to the field at the particle's position, thus replacing Coulomb's law, which attributed the force on a charged particle to the presence of electric charges at a distance from it (nonlocal theory).

*Noncommuting operators.* In quantum mechanics, the state of a particle is represented by a mathematical function often denoted by the Greek letter *psi*. Various physical properties of particles such as their momentum and position are represented by mathematical operations called *operators* applied to the state function, so that a momentum operator is used to obtain the momentum, and a position

operator is used to obtain the position. When two different operators are applied to the same state function in succession, the order in which they are applied may or may not yield different results. If they yield different results, they are called noncommuting operators. The momentum and position operators—the operators most discussed in this article—are such operators.

*Nonlocality.* See *locality*.

*Nonseparability.* Two particles are said to be nonseparable if, after having interacted in the past, they continue to constitute an inseparable whole, even when they are a large distance apart.

*Phase space.* As part of the mathematical treatment of physical systems, it is sometimes useful to describe the state of a physical system by the values of certain physical properties. The range of possible combinations of these properties for the system constitutes its phase space.

*Principle of relativity.* The reference to the principle of relativity here is to the basic law that information cannot be transmitted at speeds greater than the speed of light.

*Psi function.* The mathematical function of space and time from which one obtains information about the particles, for example, momentum or position. In general it is a complex quantity containing terms with and without the “imaginary” square root of minus one. When multiplied by its complex conjugate (that is, multiplied by itself with the sign of imaginary term reversed), it is considered to be proportional to the probability density for the system, upon interaction, being in the state associated with the value of the function.

*Quantum of action.* A mathematical relationship among physical quantities that was introduced by Max Planck in 1900 to provide the mathematical basis for his discovery that energy is not exchanged between particles in a continuous way, but in multiples of minute, discrete quantities (quanta).

*Schrödinger's cat.* Erwin Schrödinger, the physicist who formulated the equations of quantum physics that yield the wave-like state functions and their associated quantized physical properties, put forth a hypothetical situation to display the paradoxical consequences of quantum theory. A cat is enclosed in a closed chamber that also contains a Geiger counter and a radioactive substance in such small quantity that within an hour there is an equal likelihood for one atom or no atoms to decay. If a decay does take place, it will be detected by the Geiger counter, which, in turn, will trigger the release of a hammer that will shatter a small flask containing enough hydrocyanic acid to kill the cat. At the end of an hour, there are equal likelihoods that the cat is alive or dead. The *psi* function for the cat would therefore have two terms of equal magnitude, one term representing the cat as alive and the second term representing the cat as dead, even though the cat at that moment is either alive or dead. According to Schrödinger, “the *psi* function for the entire system would express this by having in it the living and the dead cat (pardon the expression) mixed or smeared out in equal parts.” If at

the end of the hour the chamber is opened and the state of the cat determined, the  $\psi$  function is reduced to one of the two terms." Noncommuting operators are subject to Heisenberg's uncertainty principle.

*Two-slit experiment.* When a beam of light impinges on a screen after passing through a barrier having one or two narrow slits, a pattern of light and dark bands spreads over a wide area of the screen, the pattern from a barrier with one slit being quite distinct from the pattern from a barrier with two slits. If, instead of a beam of light, a beam of particles of appropriate momentum impinges on a screen that phosphoresces when struck by particles, patterns of a similar nature arise, and the pattern in the case of a single slit is again distinct from the pattern from two slits. A subject of much discussion is how to reconcile the view that a single particle can pass through only one slit with the result that a stream of particles behaves as if each particle "knew" that there was another slit present.

*Uncertainty relations.* According to the uncertainty relations as formulated by Heisenberg, two noncommuting physical properties (such as position and momentum) do not have uniquely defined precise values, but each is spread over a range of values, where the widths of the two spreads are related mathematically; the narrower the width of one spread, the greater the width of the other. If the range of the spread of one property is narrowed by the physical arrangement, such as by narrowing the width of a slit a particle is to pass through, then the associated range of momenta increases.

*Wave packet.* A free particle is considered as constituted by the superposition of a great number of plane waves. If the particle interacts with a measuring instrument designed to detect one of its properties—for example, its position or momentum—the result of the interaction is to "reduce" the superposition of the great number of plane waves to only one such wave, namely the wave that is identified by the measurement. The so-called "reduction of the wave packet" is the product of the interaction of the particle with the measuring apparatus.

## REFERENCE LIST

- Antonopoulos, C. 1994. Indivisibility and Duality: A Contrast—An Essay on the Logical Relation between the Classical Variables in Quantum Mechanics. *Physics Essays* 7, no. 2:187–202.
- Bachelard, Gaston. 1951. *L'activité rationaliste de la physique contemporaine*. Paris: Presse Universitaires de France.
- Bitsakis, Eftichios I. 1976. *Le Problème du déterminisme en Physique*. Ph.D. dissertation. Université de Paris.
- . 1982. Potentiality and Actuality in Microphysics. *Scientia* 117:561–76.
- . 1983. *Physique et matérialisme*. Paris: Editions sociales.
- . 1988a. Potential and Real States in Quantum Mechanics. In *Microphysical Reality and Quantum Formalism: Conference Papers*, edited by Alwyn van der Merwe, 47–63. Dordrecht: Kluwer.

- 
- . 1988b. Quantum Statistical Determinism. *Foundations of Physics* 18, no. 3:331–55.
- . 1988c. A Generalization of the EPR Criterion of Reality. In *Problems in Quantum Physics*, edited by Ludwig Kostro et al., 3–23. Singapore: World Scientific.
- . 1991. The Physical Meaning of the Superposition Principle. *Physics Essays* 4, no. 1:124–33.
- . 1993. Scientific Realism. *Science & Society* 57:160–93.
- . 1997. The Wave-Particle Duality. In *The Present Status of the Quantum Theory of Light: Proceedings of a Symposium in Honour of Jean-Pierre Vigié*, edited by Stanley Jeffers et al., 333–48. Boston: Kluwer.
- . 2001. *La Nature dans la pensée dialectique*. Paris: L'Harmattan.
- Bohr, Niels. 1927. The Quantum Postulate and the Recent Development of Quantum Theory. In *Atti del Congresso Internazionale dei Fisici, Como, 11–20 September 1927*. Bologna, Italy: Zanichelli.
- . 1928. Le Postulat des quanta et le nouveau développement de l'atomistique. In *Electrons et photons: Rapports et discussions du cinquième Conseil de physique tenu à Bruxelles du 24 au 29 Octobre 1927 sous les auspices de L'Institut International de Physique Solvay*, 215–47. Paris: Gauthier-Villars.
- . 1948. On the Notions of Causality and Complementarity. *Dialectica* 2: 312–19.
- . 1958. *Atomic Physics and Human Knowledge*. London: Wiley.
- . 1961. *Atomic Theory and the Description of Nature*. Cambridge: Cambridge Univ. Press.
- . 1983. *Essays, 1958–1962: On Atomic Physics and Human Knowledge*. Suffolk: Richard Clay.
- Born, Max. 1962. *Physics and Politics*. London: Oliver and Boy.
- Bozic, M., and Z. Maric. 1991. Probabilities of de Broglie's Trajectories in Mach-Zehnder and in Neutron Interferometers. *Physics Letters A* 158:33–42.
- Canals-Frau, Damian. 1993. Bohr's Complementarity Principle, Quantum Mechanical Completeness, and the Photon. *Physics Essays* 6, no. 4:609–13.
- de Broglie, Louis. 1953. *La Physique quantique restera-t-elle indéterministe?* Paris: Gauthier-Villars.
- . 1988. *Les Incertitudes d'Heisenberg*. Paris: Gauthier-Villars.
- Einstein, Albert. 1948. Quanten-Mechanik und Wirklichkeit. *Dialectica* 2: 320–24.
- Fock, Vladimir. 1965. La Physique quantique et les idéalizations classiques. *Dialectica* 19:223–45.
- . 1966. Une discussion entre V. Fock et Niels Bohr. In *Sciences et matérialisme dialectique*, 92–104. Recherches internationales à la lumière du marxisme, no. 54. Paris: Editions de la Nouvelle critique.
- Freire, Olival Jr. 1998. Dialectical Materialism and the Quantum Controversy: The Viewpoints of Fock, Langevin, and Taketani. *Nature, Society, and Thought* 8, no. 3:309–25.

- Hegel, Georg Wilhelm Friedrich. 1969. *Hegel's Science of Logic*. Translated by A. V. Miller. London: Allen and Unwin.
- Heisenberg, Werner. 1949. *The Physical Principles of Quantum Theory*. New York: Dover.
- . 1955. The Development of the Interpretation of the Quantum Theory. In *Niels Bohr and the Development of Physics: Essays Dedicated to Niels Bohr on the Occasion of His Seventieth Birthday*, edited by Wolfgang Pauli, 12–29. London: Pergamon Press.
- . 1959. *Physics and Philosophy: The Revolution in Modern Science*. London: Allen and Unwin.
- Jammer, Max. 1974. *The Philosophy of Quantum Mechanics*. New York: Wiley.
- Kragh, Helge. 1990. *Dirac: A Scientific Biography*. Cambridge: Cambridge Univ. Press.
- Landé, Alfred. 1960. *From Dualism to Unity in Quantum Physics*. Cambridge: Cambridge Univ. Press.
- Langevin, Paul. 1933. *L'Evolution de la science électrique*. Paris: Gauthier-Villars.
- . 1939. La Physique moderne et le déterminisme. *La Pensée*, 1:1-4.
- Margenau, Henry. 1978. *Physics and Philosophy: Selected Essays*. Dordrecht: Reidel.
- Margenau, Henry, and Leon Cohen. 1967. Probabilities in Quantum Mechanics. In *Quantum Theory and Reality*, edited by Mario Bunge, 71–89. New York: Springer.
- Marx, Karl. 1984. *The Poverty of Philosophy*. In vol. 6 of *Karl Marx, Frederick Engels: Collected Works*, 105–212. New York: International Publishers.
- Mehlberg, Henry. 1967. The Problem of Physical Reality in Contemporary Science. In *Quantum Theory and Reality*, edited by Mario Bunge, 45–65. New York: Springer.
- . 1980. *Time, Causality, and the Quantum Theory: Studies in the Philosophy of Science*. Boston: Reidel.
- Pankovic, V. 1991. On the Impossibility of the Existence of an Absolute.... *Annales de la Fondation Louis de Broglie*, 16:217–29.
- Popper, Karl. 1967. Quantum Mechanics without “The Observer.” In *Quantum Theory and Reality*, edited by Mario Bunge, 7–44. New York: Springer.
- Reichenbach, Hans. 1944. *The Philosophic Foundations of Quantum Mechanics*. Berkeley: Univ. of California Press.
- Rosenfeld, Léon. 1952. L'évidence de la complémentarité. In *Louis de Broglie: Physicien et penseur*, 43–66. Paris: Albin Michel.
- . 1963. Niels Bohr's Contribution to Epistemology. *Physics Today*, October, 47–54.
- Scheibe, Erhard. 1973. *The Logical Analysis of Quantum Mechanics*. New York: Pergamon Press.
- Schrödinger, Erwin. 1935. Die gegenwärtige Situation in der Quantenmechanik. *Naturwissenschaften* 23:807–12; 823–28; 844–49.
- Sève, Lucien. 1998. Nature, science, dialectique : un chantier à rouvrir. In

*Sciences et dialectiques de la nature*, edited by Lucien Sève, 23–247. Paris: Dispute.

Summhammer, J. 1995. The Physical Quantities in the Random Data of Neutron Interferometry. In *The Concept of Probability*, edited by Eftichios Bitsakis and Cleanthes A. Nicolaidis, 207–19. Dordrecht: Kluwer.

Terletsky, Yakov P. 1988. Complementarity and Irreversibility. In vol. 2 of *Microphysical Reality and Quantum Formalism: Conference Papers*, edited by Alwyn van der Merwe et al., 41–52. Dordrecht: Kluwer.

Umakantha, N. 1998. Representational Approach to Quantum Mechanics. *Physics Essays* 11, no. 1:96–122.

Weizsäcker, Carl F. von. 1952. *The World View of Physics*. London: Routledge and Kegan Paul.

## ***NST* Conference and Study Tour in Vietnam: “The Global Economy and the National State”**

*Nature, Society, and Thought*, in cooperation with the Ho Chi Minh National Political Academy, sponsored a conference and study tour in Vietnam, 5–17 January 2003. In volume 15, no. 2, we presented a report on the study tour, including principal features of the socialist market economy in Vietnam, and a selection of papers presented at the two-day conference in Hanoi. In this issue we present the second selection of papers. Additional papers will be presented in volume 15, no. 4.



# **The Balkanization of the Balkans**

**Alexandros Dagkas**

This essay has two purposes. The first is to explore, in the case of the Balkan region, the historical evolution of the nation-state and its position in the context of globalization today. The second is to clarify certain aspects of the nation-state at the end of the twentieth century in relation to how it is considered by the radical social movement as an agent of progressive formations.

In contrast to views that hold globalization to be a new phenomenon, a long-held concept of the interdependence of countries sees globalization as a continuation of the efforts of developed countries to promote their economic and other interests on the global scale. In the ages of colonialism and of imperialism, the face of the world was, in certain respects, no different from what it is today. The difference today lies in the additional benefits reaped through the application of scientific and technological developments and the rapidity with which information is disseminated.

The concept of the nation-state needs clarification. Hegel's view of the state as an extrahistorical force is directly opposed to the view that sees it as a historically determined institution that appeared in the early evolution of human society along with other institutions such as private property. During the age when nations were taking shape, the mechanism of the state played a protective role, ensuring the economic survival of each national entity. The nation-state gave objective reality to national consciousness, and,

at the same time, to the need for the formation of a domestic market in which capital could be accumulated and function as an engine of economic development in the framework of the capitalist mode of production. With this content, the nation-state functioned as a mechanism that received the messages of reality through the filter of *raison d'état*, the interests of the state. Economic and social determinism led state officials to act in accordance with the interests of the dominant forces in the economy, society, and politics.

Globalization in the late twentieth century was marked by an unbridled aggressiveness on the part of the United States and its allies. With no opposing counterweight of the caliber of the Soviet Union, the determined pursuit of global supremacy by the United States takes the form of open intervention against selected targets in disregard of the standards for international relations that took shape in the aftermath of two catastrophic world wars. In the Balkans, the arrogance of superior firepower found an outlet in the unprovoked NATO attack on Yugoslavia in 1999.

The Balkan Peninsula, the southeastern-most corner of Europe, is the continent's connecting link with Asia Minor. Its coasts are bathed by the Black, Aegean, and Adriatic seas. The mountainous terrain, insufficient rain, and few navigable waterways have made the development of agricultural activities difficult and kept its population low. When Western Europe began to industrialize early in the nineteenth century, the Balkans remained a region of farming and livestock. With the discovery of new routes and acquisition of colonies by the Western nations, the region fell into decline and lost its importance in global affairs. After World War II, the region became part of the European Communist bloc, with the exception of Greece at its southern tip and Turkey, which retained territory in Thrace. The new system of production resulted in significant development in infrastructure and heavy industry, although not approaching the level of the developed capitalist countries.

Politics and society in the Balkans—the so-called “powder keg of Europe”—were characterized during that period of capitalism by the existence of many national and ethnic groups. This particularity had its counterpart in geopolitical developments,

with the creation of small national states and the emergence of autonomist movements. The term “balkanization,” which is used metaphorically to describe a process of geopolitical fragmentation or any kind of disintegration, derives from this reality.

During the 1990s, after the collapse of the Communist bloc in Eastern Europe, the process of “balkanization of the Balkans” was repeated. The achievement represented by the creation of the federal state of Yugoslavia, which, in embracing different ethnic populations within its borders, had transcended the process of parcelizing into national states, was destroyed by external intervention. The goal was the political and social elimination of the last pole of survival of the socialist mode of production and of resistance to the new state of affairs in the Balkans.

The issue of Yugoslavia was more a vestige of the previous age than a problem of the present. This region’s bourgeois-democratic problems remained unresolved during the interwar period, and were frozen after 1944 with the establishment of a Communist-led government. Other countries, in the Balkans and elsewhere sought the solution to the national question in bourgeois fashion: with the capitalistic incorporation of the different national populations, or with the use of force—oppression, population transfers, or both. In any case, with the creation of a nation-state for each of the national groups in the former Yugoslavia, the nationalisms that had remained unrealized in the past reached fulfillment at the end of the twentieth century. The issue was not predetermined; the region could well have retained its old federal form. But matters unfurled violently because under the table the United States and Germany had major stakes in the region that required the breakup of Yugoslavia.

The revolutionary Marxist movement early identified the national question as requiring appropriate tactical handling to serve the strategic goal of social revolution. In the nineteenth century, not all national movements were uncritically supported. Frederick Engels opposed the formation of small national states, arguing that a civilized capitalist state objectively helped a country develop and approach social revolution. Karl Marx wrote that England’s conquest of India played an objectively progressive

role, because it helped the country escape its medieval structures and set it on the road to capitalist development, with the creation of a bourgeoisie and a proletariat. From the historical point of view, these were solid observations, for in a given conjuncture the theoreticians of social revolution could not launch slogans out of season; their objective was to help accelerate the pace of the social evolution.

During World War I, the opposing approaches of Lenin and Rosa Luxemburg to the national question developed from different conceptual starting-points. Lenin thought that once the revolution had prevailed, the working class would give national communities full national rights with the right to self-determination, even including secession. Luxemburg insisted that this was wrong, because it essentially handed these countries to their bourgeoisies; she argued that in the age of imperialism the right to self-determination could not be realized, while in socialism it was unnecessary, so that the only remaining prospect was to seek the creation of a unitary state under a socialist regime. Lenin did not waste time seeking a solution to national and other problems, but spearheaded the October 1917 Russian Revolution, which succeeded in creating a proletarian state: Soviet Russia. The new regime proclaimed four basic slogans: land for the landless, peace, all power to the soviets, and national autonomy. It is obvious that in a multinational state the resolution of the national question had priority, together with the direct measures that won popular support for the government (land distribution, lifting of the state of war) and that made clear the political class character of the new working-class government. The tactical handling of the resolution of national differences later produced the strange phenomenon that saw the Russian Communists advocating national autonomy with the right to secession and the Communists in each national region arguing that the interest of the nation was to remain with Russia in a unified federal state.

The revival of nationalism and chauvinism in the twenty-first century, however, once again makes timely the examination of the theoretical difference between Lenin and Luxemburg on the proper tactic toward the national question. In hindsight, Luxemburg's

version seems justified to some extent. Lenin's position was sound in that period, however, given the need to rally the forces of nationalism in the struggle against the bourgeoisie and capitalism, preventing them from becoming obstacles to the proletarian revolution.

During the interwar period in the Balkans, assessment of the national issue acquired capital importance for the socialist revolution. In contrast to the Bolsheviks, who put off resolving the ethnic problem until *after* the acquisition of power, with the general position that the chronic bourgeois-democratic problems would be solved through the socialist revolution, the Bulgarian Communists integrated the national question into their political planning and allied themselves with the nationalist movement (Macedonian autonomists) *before* the revolution, arguing that the resolution of the national issue was a bourgeois-democratic duty—in the framework of the bourgeois regime—for the realization of the socialist revolution.

In the second half of the twentieth century, the Communist bloc unconditionally and without exception supported all national-liberation movements, on the grounds the world revolutionary movement could find support in strong national sentiment, and thus attract people to the cause. The problem lay in the fact that the bourgeoisie led all these national movements; nowhere was the working class supreme. In practice, the revolutionary movement in most cases gained no benefit.

These allusions to the revolutionary Marxist movement's attitude to the national question have a connection with the nation-state if they are seen in reference to the elaboration of the movement's slogans.

The vision of the working-class movement, and the focal point of its propaganda, was the abolition of frontiers. In the Balkans, however, the elimination of frontiers and the creation of a Balkan federation was the demand of the bourgeoisie, and had its roots in the beginning of the nineteenth century. On the European level, the corresponding initiative of the bourgeoisie after World War II aspired to the economic integration of the western portion of the continent, including one Balkan state, Greece. In the twenty-first

century, the process of eliminating internal borders is accompanied by the reinforcement of a broader entrenchment, at the frontiers of the European Union. The goal is freedom of movement for capital and has nothing to do with proletarian internationalism.

In this framework, there has been a reversion of the role of the nation-state in international developments in relation to the struggle of the working-class movement against imperialism. While the nation-state, according to the theory espoused by the movement, will be eclipsed after socialism, its timeliness is preserved in the present state of capitalist supremacy. It is evolving into a pole around which its members rally against foreign invasion or other forms of intrusion that are either obvious (as in the case of foreign influences on national cultural identity—language, religion, customs) or camouflaged (as in the case of the exercise of political pressure, imposition of economic models, dictation of social terms).

It should be stressed that the tactic by which the working-class movement seeks allies in combating imperialism has inherent dangers. The question, in a nonuniform class environment, is which social class will prevail. It is a question of correlation of forces, and of the awareness of the proletariat. Russia provides an example after the February 1917 revolution. The Mensheviks and the Socialist Revolutionaries thought that the goal had been achieved and that the country, under bourgeois rule, ought to set its course toward capitalist development. The Bolsheviks countered that the revolution ought to proceed directly to the next stage, socialist revolution. During the course of the ensuing clash within the Russian proletariat, the working class gave proof of its maturity when it turned to Lenin.

If this debate about the correlation of forces is extended to alliances within the framework of the nation, account has to be taken of the fact that slogans advocating national autonomy find an echo chiefly among the petty-bourgeois strata and the unenlightened proletariat. This lays a duty upon the working-class movement to seek out the debate among its members over whether this is matter of tactics or strategy. It remains unclear whether in the Bulgarian Communist Party's alliance with the Macedonian autonomist

movement in the interwar period, the national question was one of tactics or whether it revealed a latent chauvinism among the members of the Party.

The class view, which sees the working class as the most important social force, prevents the movement from becoming nationalist. Class analysis reveals that the identification of the interest of the working class with that of the nation is a temporary tactic, appropriate to the first stage of the process of social revolution, that, once the first stage has been achieved, will proceed to the second stage.

Originally presented at the conference, "The Global Economy and the National State," Hanoi, Vietnam, 9–10 January 2003.

*Faculty of Education*  
*Aristotle University of Thessaloniki*  
*Greece*

**HEALTH CARE NOT WARFARE**

*Phil Benjamin*

# political **A**ffairs

Journal of Marxist Thought JUNE 2003

A Marxist monthly for the latest articles on socialism, international affairs, labor, peace, fighting racism and sexism, culture and politics.

**YOUR  
MONEY  
OR YOUR  
LIFE**

**THE COST  
OF WAR**

*David Lawrence*



**YOUR HEALTH  
AT A COST**

*Don Sloan*

**HEALING  
THE  
SYSTEM**

*Joel Wendland*

**PULITZER PRIZE WINNER  
DAVID LEVERING LEWIS**

• \$22/1 year • \$36/2 years  
• \$46/3 years

Pay by credit card online through  
PayPal at [www.politicalaffairs.net](http://www.politicalaffairs.net)

*Send to Political Affairs  
235 W. 23rd Street,  
New York, NY 10011*

## **Contradictions of Economic Globalization**

### **Do The Tung**

Economic globalization is the inevitable objective tendency when the production forces develop under the impact of the forward march of technology and a high level of production. It is also the highest level of economic internationalization.

The ongoing economic globalization process is influenced by capitalist production relations. The corporations in the developed capitalist countries, including the transnational corporations, lead in economic development and in the sciences and technology. The governments of these countries control multimarginal decisions and activities of international economic organizations like the IMF, WB, and WTO. Transnational corporations, especially the five hundred leading ones, play a decisive part in the contemporary world economy. Economic globalization delivers unfair profits primarily to developed countries and the powerful corporations. Economic globalization today is capitalist globalization. But economic globalization is not necessarily associated only with capitalism. It is changeable if production relations change. This is our struggle against the dark side of globalization.

Economic globalization is a dual track. It brings both negative and positive implications for the socioeconomic life of each nation. The positive side is to stimulate worldwide economic growth and improvements in the production forces. The flow of goods, services, and labor is facilitated by the removal of tariff barriers; the flow of investment and technology transfer helps

countries acquire capital and modern technology, internationalizes the labor process, and enhances profit. The developing countries obtain access to external resources, shortening the process for industrialization and modernization of the national economy. Rapid communications and global transportation help reduce production prices and increase social productivity and economic benefits. The economic interactions are useful for the struggle for peace, cooperation, and development, as well as for the solidarity spirit of the international working class in the struggle to change the nature of globalization.

The dark side of economic globalization can be seen in the increasing gap between the poor and the rich.

Because of their different history, many countries do not stand a fair chance. They do not enter the marathon on the same starting line. With suitable planning and balanced integration in the regional and international economy, however, they can face the challenges. Those that fail to do so will lose. The less-developed economies can be easily hurt, especially in the financial and monetary field, where globalization involves transnational crime, generates global social evils, and undermines human culture. The flipside of globalization can be shown by the fact that developing countries have to face protectionism by the developed ones, which call for free trade but do nothing to remove the high barriers in important export industries such as agriculture, textiles, and shoe production.

At the time of the Uruguay round, the developing countries were said to reap the most benefits from free trade in textiles; they would receive benefits of more than 300 billion dollars. The developed economies of the United States and the European Union were not to maintain protectionist tariffs in these areas. In the first two years, they were to reduce tariffs by up to 16% and by 17% in the second stage. In reality, the EU reduced tariffs by 3.6% and the United States by only 1.3%. They are violating their commitment to remove barriers to free trade in the years 1995–2005.

Along with agricultural production subsidies, the developed economics resort to other policies to keep the less-developed economics from access to the world market. Because of

unemployment, the developing economies have to increase agricultural production to create more jobs and improve income, but their products are limited to the lower levels of the processing chain. For example, the market share of the cacao-producing countries is decreasing. In 1997–1998, cacao beans, cocoa water, cocoa butter, cocoa powder, and chocolate accounted for 90%, 44%, 38%, 29%, and 4%, respectively. The developed countries often increase their export of processed cocoa—the most profitable part of the trade—at a greater rate than their imports.

The rich countries of the world demand the upgrading of institutions that are concerned with intellectual rights, health standards, labor, and the environment insofar as they view them as prerequisites for their market access. In reality, the goal is to limit exports from the poor countries. This is a new form of protectionism.

The workforce of the member countries of the Organization for Economic Cooperation and Development (OECD) is becoming older and older. In Japan and EU, the employed/retired ratios will drop from 5/1 at present to 3/1 in the year 2005. The developing countries suffer from unemployment, but lack a skilled workforce. This causes emigration pressure and labor export. However, the OECD applied immigration limits on unskilled labor while encouraging the immigration of skilled labor from the poor countries.

Preferential treatment for the developing countries, although mentioned in the GATT and WTO regulations, is nominal. The poor countries do not often receive such preference. Low-income countries are allowed to open communications markets six years after the developed countries. The low-income countries, however, are at least twenty-five years behind the United States. The period of six years does nothing to bridge the gap. So only the rich and powerful benefit from this free trade.

Under the framework of the WTO, most of the poor countries could not take part in the discussion of the regulations. Most of the developing countries could not afford to take part in the Geneva negotiations. While the United States has thousands of experts on WTO, the member developing countries cannot assign permanent

envoys to Geneva to take part in WTO meetings because there are forty-seven official meetings each week.

The dual nature of economic globalization causes both favorable support and fierce protests. In every country, some groups benefit from it and others lose through unemployment or bankruptcy. But reality shows that those who have good policies and suitable integration in the regional and international economy would reap more benefit.

Economic globalization, however, is an inevitable process, the objective result of the development of production forces. Although developing countries face more challenges than opportunities, they risk many more fierce challenges if they remain outside economic integration. Many experts conclude that the two billion people living in poverty are mostly the population of countries standing outside the economic globalization process.

In general, economic globalization brings both the good and the bad. Our solution is directed against its dark side, not the whole process. Every country should seek to integrate actively, take advantage of the positive, and struggle to replace the unfair international economic order with a new and better one.

Originally presented at the conference, "The Global Economy and the National State," Hanoi, Vietnam, 9–10 January 2003.

*Department of Political Economics*  
*Ho Chi Minh National Political Academy*

# Nation, State Sovereignty, and the European Union: Some Democratic Principles

Anthony Coughlan

Nations and *nation-states* make up the international community. The trends constituting “globalization” and the supranationalism of the European Union affect the environment of Europe’s nation-states, but do not make them out-of-date. Nationhood, shared membership of a national community, is the normal basis of democratic states in the modern world. This is shown by the advent of many new nation-states to the international community since 1989, and the likely advent of many more in this century. The following democratic principles are proposed as fruitful ways of approaching questions of nationhood, state sovereignty, and the European Union. No claim is made for their novelty, but it may be useful to have them together as a summation of what is contended to be the classical approach of democrats to these issues.

## ***1. Internationalism, not nationalism, is the primary category.***

We are internationalists on the basis of our solidarity as members of the human race. As internationalists, we seek the emancipation of humanity. The human race is divided into nations. We stand, therefore, for the self-determination of nations. The right of nations to self-determination was the basis of the eighteenth-century American Revolution. It was formally proclaimed

as a democratic principle in 1789 in the French Revolution's Declaration of the Rights of Man. It is now a basic principle of international law, enshrined in the United Nations Charter. As democrats and internationalists, we assert the right of those nations that wish it to have their independence, sovereignty, and a nation-state of their own, so that they may relate to one another internationally on the basis of equal rights with other nations. The democratic principle of internationalism does not mean that we are called upon to urge people of other nations to assert their right to self-determination, but that we respect their wishes and show solidarity with them if they decide to do so. It is as true of the life of nations as of individuals that separation, mutual recognition of boundaries, and mutual respect—political equality, neither dominance nor submission—are the prerequisite of free and friendly cooperation, of internationalism. Political integration, subsuming existing independent states into a larger supranational whole, is the opposite of this.

***2. Nations and nationality come before nationalisms and nation-states.***

Nations exist as communities before nationalisms and nation-states. To analyze nations and the national question in terms of "nationalisms" is philosophical idealism, looking at the mental reflection rather than the thing it reflects. Nations evolve historically as stable, long-lasting communities of people sharing a common territory and language and the common culture and history that arise from that. On this basis develop the solidarities, mutual identification, and mutual interests that distinguish a people from its neighbors. Some nations are ancient, some young, some in process of being formed. Like all human groups—for example, the family, clan, or tribe—they are fuzzy at the edges. No neat definition will encompass all cases. The empirical test is to ask people themselves. If they have passed beyond the stage of kinship society, where the political unit is the clan or tribe, people will invariably know what nation they belong to. This is also the political and democratic test. If enough people in a nation wish to establish their own independent state, they should have it, for democracy can normally exist only at the level of the

national community and the nation-state. It is principally within the national community that sufficient solidarity and mutuality of identification and interest exist to overcome other social divisions and induce minorities to consent freely to majority rule and obey a common government based on it.

Such mutual identification and solidarity characterize the *demos*, the collective *we* that constitutes a people possessing the right of national self-determination. They underlie a people's sense of shared citizenship and allegiance to a government as "their" government, possessing democratic legitimacy, and their willingness to finance that government's tax and income-transfer system, thereby tying the richer and poorer regions and social classes of particular nation-states together. When people speak of the "common good" that it is the duty of the state to uphold and advance, they refer to the welfare of the community, the nation, the *demos*, the people. The solidarities that exist within nations do not exist among nations, although other solidarities may exist. International solidarity becomes more important with time, as modern communications, trade, capital movements, and common environmental problems link all nations together in international interdependence as part of today's "global village."

### ***3. Humanity is still at the relatively early stage of the formation of nation-states.***

Only a dozen or so contemporary nation-states are more than a few centuries old. The number of member states of the United Nations has grown from some sixty in 1946 to nearly two hundred today. The number of European States has grown from thirty to fifty since 1989. This process is not ended even in Western Europe, where people have been at the business of nation-state formation for centuries. It is ongoing in Eastern Europe. It has scarcely begun in Africa and Asia, where the bulk of the world population lives, still in clan or tribal societies, and where state boundaries were drawn by the colonial powers after World War II with little consideration for the wishes of indigenous peoples. More than six thousand separate languages exist in the world; at their present rate of disappearance, six hundred or so will remain in a century's time. These will survive because in each case they

are spoken by a million or more people.

Many embryonic and long-established nations exist without nation-states and have a national identity but no independence—Kurds, Palestinians, and Chechyns, for example. A nation can keep its identity in servitude as well as freedom. Many new nation-states, probably a couple of hundred or more, are likely to come into being during the twenty-first century. They will thereby acquire those two classical pillars of independent statehood, the sword and the currency—the monopoly of legal force over a territory and the monopoly of the issue of legal tender for that territory. A world of several hundred nation-states will be a world of several hundred national currencies.

***4. Multinational states, whether federal or unitary, must respect the right to self-determination of the nations composing them if they are to be stable and endure.***

The right to self-determination of nations does not require that a nation must seek to establish a separate state. Nations can coexist amicably with other nations inside a multinational state, like the English, Welsh, and Scots within the British state. But they can so coexist only if their national rights are respected and the smaller nations do not feel oppressed by the larger ones, especially culturally and linguistically. If that condition breaks down, political pressures are likely to develop to break up such a multinational state. The historical tendency seems to be for multinational states to give way to national ones, mainly because of the breakdown in solidarity among their component nations and the development of a feeling among the smaller ones that they are being put upon by the larger. Shared civic nationality is the political basis of multinational states, shared ethnic nationality the political basis of nation-states. In both cases, if the state is a democratic one, all citizens will be equal before the law, and the rights of minority nationalities in multinational states and of national minorities in nation-states will be equally respected. Historically, multinational federal states are all twentieth-century creations—the USSR, the Russian Federation, Czechoslovakia, Yugoslavia, India, Pakistan, Nigeria, Malaysia, etc. Several have lacked the stability and popular legitimacy that comes from centuries of tradition. Some have

already dissolved, others are likely to in time, as various peoples within them assert their right to national independence.

***5. The European Union is fundamentally undemocratic and cannot be democratized, for there is no EU solidarity and supranational common good that is superior to that of its member states.***

It is the absence in the European Union of anything like the underlying national solidarity binding Europe's nation-states together that makes the EU project, and especially the euro-currency scheme, so problematic and therefore unlikely to endure. The EU is a creation of powerful political, economic, and bureaucratic elites, without popular legitimacy and authority. It is directed from the top down rather than the bottom up and is therefore fundamentally undemocratic. There is no European "demos," no European people bound together by solidarities like those that bind nations and nation-states. Rather the EU is made up of a plurality of Europe's nations and peoples. Therefore, no EU "common good" exists, comparable to that underlying each one of its component member states, the achievement of which could be regarded as justifying the establishment at supranational level of state-like governmental institutions.

Every nation-state is both a monetary union and fiscal union. As a monetary union, it has its own currency, and with that the capacity to control either the domestic price of that currency (the rate of interest), or its external price (the rate of exchange). As a fiscal union, it has its own taxation, public-spending, and social-service systems. By virtue of citizens paying common taxes to a common government in order to finance common public-spending programs throughout the territory of a state, there are automatic transfers from the richer regions and social classes of each country to the poorer regions and classes. This sustains and is sustained by a shared national solidarity, a mutual commitment to the common good. By contrast, the euro-currency project (Economic and Monetary Union) means a monetary union but not a fiscal union. Never in history has there been a lasting monetary union that was not also a fiscal union and political union—in other words a fully fledged state, deriving its legitimacy from a shared national

solidarity and a common good that its government existed to serve, which in turn underpinned a common fiscal-transfer system. The euro-currency scheme deprives the poorer EU states and the weaker EU economies of the right to maintain their competitiveness or to compensate for their lower productivity, poorer resource endowment, or differential economic shocks, by adopting an exchange rate or interest rate that suits their special circumstances. It fails to compensate them for this loss by the automatic transfer of resources from the center that membership in a fiscal union would entail. Compensatory fiscal transfers at EU level to the extent required to give the monetary union long-run viability are impossible, in view of the sheer volume of resources required and the unwillingness of the richer EU countries to provide them to the poorer because of the absence of shared national solidarity. Currently expenditure by Brussels in any one year amounts to less than 1.3% of EU annual gross domestic product, a relatively tiny figure, whereas expenditure on public transfers by the EU's member states is normally from 35% to 50% of annual national products.

Consequently, the solidarity that would sustain an EU fiscal union and an EU multinational state does not and cannot exist. Democratizing the EU without a European *demos* is impossible. The EU's adoption of such traditional symbols of national statehood as an EU flag, EU anthem, EU passport, EU car number plates, EU Olympic games, EU youth orchestra, EU history books, EU citizenship, and an EU constitution are so many doomed attempts to manufacture a European *demos* artificially, and with it a bogus supranational EU "nation" and "national" consciousness. They leave indifferent the ordinary European people, whose allegiance remains to their own countries and nation-states. The more European integration is pushed ahead and the more the national democracy of the EU member states is undermined, the more the EU loses legitimacy and authority in the eyes of the citizens of its member states. Consequently the greater and more certain is the eventual popular reaction against it. To align oneself with such a misguided and inevitably doomed project is to be out of tune with history. It is to side with a supranational elite against the democracy of one's own people, to spurn genuine internationalism for the intoxication of building a superpower.

**6. *The EU turns national executive ministers into supranational legislators, greatly increasing their personal power while reducing the democracy of their own peoples.***

Ministers in European Union states tend to welcome the transfer of state functions from the national to the supranational EU level because it means a considerable increase in their own personal power. At the national level, ministers are part of the executive arm of government. To get something done they need the approval of their prime minister and, if it involves the expenditure of money, their national finance minister. Above all, they must have the support of a majority in their national parliament and, implicitly, of the voters in their country as a whole. Remove that power to Brussels, shift the relevant competence to the supranational level, and the national minister in question becomes a European legislator, one of a dozen or two others, making laws for three hundred million people behind closed doors, often on the basis of package deals, on first-name terms with the high and mighty of the European world. The accretion of power can be intoxicating to the politicians concerned, even if they wield only a handful of votes on the EU Council of Ministers, as they are transformed from mere government executives at the national level into European legislators, collectively responsible to no one.

Simultaneously there is a reduction in the power and competence of their own parliaments and peoples, who can no longer decide or make laws on the issue in question. A member state on its own cannot decide a single European law. Its people, parliament, and government may be opposed to an EU law, its government representative on the Council of Ministers may vote against it, but they are bound to obey it nonetheless once it is adopted by qualified majority Council vote. This devalues the vote of every individual citizen. Each policy area transferred from the national level to the supranational EU level devalues it further and reduces the political ability of citizens to decide the common good. It deprives them of the most fundamental right of membership in a democracy, the right to make their own laws, to elect the representatives to legislate, and to change those representatives if they dislike the laws they make.

**7. *Respect for state sovereignty is a fundamental democratic principle and the cornerstone of international law.***

Insistence on the sovereignty of one's own state is a natural right as well as a social duty. It is in no way an expression of misguided national egotism. Sovereignty has nothing to do with autarchy or economic self-sufficiency. The national sovereignty of a democratic state is analogous to the freedom and autonomy of the individual. It means that one's domestic laws and foreign relations are exclusively decided by one's own parliament and government, which are elected by and responsible to one's own people. State sovereignty is a result of advancing political culture and is an achievement of modern democracy. It is not an end in itself but an instrument of juridical independence, enabling a people who inhabit a particular territory to decide its own destiny and way of life in accordance with its own needs, interests, genius, and traditions. It is the opposite of every kind of subordination to foreign rule. Without sovereignty, a nation's politics becomes provincial, concerned with marginal and unimportant issues. State sovereignty alone guarantees the political independence of a nation and creates conditions for its members to maintain their right to self-determination. The sovereignty of a democratic state means at the same time the sovereignty of its people. The end of the sovereignty of a state is at the same time the end of the sovereignty of its people. The sovereignty of a state and of its people is democratically inalienable. No government, no parliamentary or referendum majority, has the right to alienate it, for they have no right to deprive future generations of the possibility of choosing their own way of life and deciding the common good of that society. The only mode of international cooperation acceptable to democrats is therefore one that will not demand of a state the sacrifice of its sovereignty. That makes possible the free cooperation of free peoples united in sovereign states on the basis of juridical equality, which is fundamental to a stable international order.

**8. *The EU's concept of "pooling sovereignty" is a propaganda cover for domination by others and the effective rule of the bigger EU states.***

Concepts of "shared sovereignty," "pooled sovereignty," and "joint national sovereignties" are covers for having one's laws

and policies decided by European Union bodies one does not elect, which are not responsible to one's own people and which can have significantly different interests. EU countries can no longer decide their own laws over a wide range of governmental issues. In practice, countries and peoples that surrender their sovereignty to the EU become ever more subject to laws and policies that serve the interests of others, and in particular the bigger EU states. The claim that if a nation or state surrenders its sovereignty to the EU, it merely exchanges the sovereignty of a small state for participation in decision-making in a larger supranational EU is simply untrue. The reality is different. The EU continually reduces the influence of smaller states in decision-making by abolishing or limiting national veto powers. Even if bigger states divest themselves similarly of formal veto power, their political and economic weight ensures that they can always get their way in matters decisive to them. Equally false is the statement that membership of new states in the European Union and their surrender of sovereignty to the EU would increase their sovereignty in practice. The nation that gives up its sovereignty, or is deprived of it, ceases to be an independent subject of international politics. It becomes more like a province than a nation. It is no longer able to decide even its own domestic affairs. It literally puts its existence at the mercy of those who are not its citizens, who have taken its sovereignty into their hands and who decide the policies of the larger body. In the European Union the big states, in particular the Franco-German axis, decide fundamental policy. Juridically, EU integration is an attempt to undo the democratic heritage of the French Revolution, the right of nations and peoples to self-determination. Its profoundly undemocratic character makes the EU a project that is historically doomed and that must inevitably disintegrate.

***9. The dominance or attempted dominance of one people by the government and powerful elites of another is imperialism and a denial of democracy.***

Imperialism can take the classical form of direct rule, in which the dominated people is openly treated as a colony, or the more modern form in which a people may have formal political

independence, but its resources and external political and economic relations are mainly under foreign control and directed at continuing its subordination or dependence. Neocolonial relations of this kind are common in the contemporary world between metropolitan powers and former colonies, and are against the interests of the peoples of both.

***10. Democracy means equality of rights, which people agree to accord one another and which the state recognizes.***

Democrats acknowledge the possession of equal rights by all citizens of a state, as well as equality of rights for people of different sex, race, religion, age, and nationality. Ethnic minorities are also entitled to have their rights protected within a democratic state. Majority rights and minority rights are different from one another, but are not in principle incompatible. The struggle against racism, sexism, ageism, and national oppression are all democratic questions. By contrast, the traditional issues that divide political Right and Left, the proponents of capitalism and socialism, in modern industrial societies, are concerned with inequality—in ownership and control of society's productive forces, in power, possessions, income, and social function. The mass democracy that historically was first achieved under capitalism serves to legitimate and make more tolerable the inequalities of power, wealth, and income that exist in that form of society. Traditional left-wing thought contends that capitalism creates the material conditions for the application of the principle of democracy to the economic sphere, as socialism, social-democracy, or a social market.

***11. Globalization changes the environment of nation-states, but does not make them out-of-date. Internationalism, not globalization, is the way to a humane future.***

The notion that “globalization” makes the nation-state out-of-date is an ideological one. Globalization is at once a description of fact and an ideology, a mixture of “is” and “ought.” It refers to significant trends in the contemporary world: the internet, ease of travel, free trade, free movement of capital. The effect of these on the sovereignty of states is often exaggerated. States have always been interdependent to some extent. Relatively more

globalization, in the sense of freer movement of labor, capital, and trade existed in the late nineteenth century, although the volumes involved were much smaller than today. At that time, moreover, most states were on the gold standard, a form of international money. Modern states impinge more intimately on the lives of their citizens than at any time in history. They do more and are expected to do more for their citizens, most obviously in providing public services and redistributing national income. Globalization imposes new constraints on states, although constraints have always existed. States adapt to such changes, which do not cause nation-states to disappear or become less important. The ideology of globalization serves the interests of transnational capital, which wishes to be free of state control on capital movements and seeks minimal social constraints on the private owners of capital. The relation of transnational capital to sovereign states is ambiguous. On the one hand, it may seek to erode the sovereignty of states in order to lessen their ability to impose constraints on private profitability. On the other, it looks to its own state, where the bulk of its ownership is usually concentrated, to defend its economic and political interests internationally.

***12. People on the political Left and Right have an objective common interest in the establishment and maintenance of state sovereignty and in upholding national democracy.***

People on the political Right wish the state to legislate right-wing measures, those on the political Left seek left-wing ones. But neither can obtain their wishes unless they are citizens of an independent state in the first place, with the relevant legislative power and competence to decide. This is why people on both ends of the political spectrum have an objective common interest in establishing and maintaining an independent nation-state and a government that represents and is responsible to the nation. Likewise, within each state different social interests align themselves for and against the maintenance of state sovereignty, seeking either to uphold or to undermine national democracy. This is the central theme of the politics of our time. It is why democrats in every country today, left, right or center, are potentially part of an

international movement in defense of the nation-state and national democracy against the political and economic forces that seek to undermine these.

***13. States have the right to protect their civic or ethnic cohesiveness by controlling immigration, but not at the cost of discriminating against ethnic or national minorities within their borders.***

No international, positive, or natural-law right entitles people to migrate to live and work in other people's countries apart from political asylum seekers, who are recognized as possessing such rights under international and natural law. All independent states have the right to decide who shall settle in their territories and how newcomers may acquire rights of citizenship. At the same time, once people of different national or ethnic origins are resident in a country, they have the right to be treated the same as everyone else.

Such classical components of citizenship as rights to residence, work, and social maintenance must now be extended by the government of each EU country to the citizens of all its member states as a requirement of European law. This fact provides evidence of how the European Union affects the sovereignty of its members. The states themselves no longer decide such matters. Two distinct democratic principles are involved in assessing international migration policy: the right of national communities to protect their social and cultural cohesiveness and integrity in face of uncontrolled or excessive immigration, and the right to equal treatment of all people within a country. It is the confusion of these two principles that often makes rational consideration of migration issues difficult.

***14. Protecting human rights is a prime duty of sovereign states. No one state or group of states has the right to police the domestic affairs of other states.***

International action to protect human rights should be grounded in respect for state sovereignty. This principle can be overridden only in accordance with the generally recognized prin-

principles of international law and on the basis of a broad consensus of the world community—for example, if states attack others, commit genocide, or sponsor terrorism beyond their borders.

This paper was presented in slightly different form at the conference, “The Global Economy and the National State,” Hanoi, Vietnam, 9–10 January 2003.

*Senior Lecturer Emeritus in Social Policy*  
*Trinity College, Dublin*

# SCIENCE & SOCIETY

*A Journal of Marxist Thought and Analysis*

Edited by David Laibman

SCIENCE & SOCIETY is a peer-reviewed interdisciplinary journal of Marxist scholarship, now in its 67th year of publication. It publishes original studies in theoretical and applied political economy, social and political theory, philosophy and methodology, history, labor, ethnic and women's studies, literature, and the arts. We draw upon all schools and interpretations, encouraging dialog among Marxists, post-Marxists, and Marxism-influenced scholar activities, to place knowledge and ideas at the service of social transformation and human development.

#### REPRESENTATIVE ARTICLES INCLUDE:

- Globalization in the Perspective of Imperialism, *Robert Went* 66(4), 2002
- "No Varsity Teams": New York's Jefferson School of Social Science, 1943-1956, *Marvin E. Gettleman* 66(3), 2002
- Biology as Ideology, *Derek Lovejoy* 66(2), 2002
- Socialist Calculation and Environmental Valuation: Money, Markets and Ecology, *John O'Neill* 66(1), 2002
- The Transnational Ruling Class Formation Thesis: A Symposium, *Michael Mann, Giovanni Arrighi, Jason W. Moore, Robert Went, Kees van der Pijl, and William I. Robinson* 65(4), 2001
- Globalization in Historical Perspective, *Jason W. Moore* 65(3), 2001
- The 1953 Coup in Iran, *Ervand Abrahamian* 65(2), 2001
- Havana Up in Harlem: LeRoi Jones, Harold Cruse and the Making of a Cultural Revolution, *Cynthia Young* 65(1), 2001

#### SPECIAL ISSUES:

- Spring 2002: *Building Socialism Theoretically: Alternatives to Capitalism and the Invisible Hand*
- Spring 2001: *Color, Culture, and Gender in the 1960s*
- Spring 2000: *The Capitalist Ruling Class: Concept, Theory, Evolution*
- Fall 1998: *Dialectics: The New Frontier*, Bertell Ollman and Tony Smith, Guest Editors

#### SUBSCRIPTION INFORMATION:

ISSN 0036-8237, Volume 67, 2003 (4 issues)

Subscriptions include full online access in addition to the regular print copies

Individuals: \$33.00, Outside the U.S.: 40.50 (surface mail); \$61.00 (airmail)

Institutions: \$170.00, Outside the U.S.: \$198.00 (includes airmail)

Also available in better bookstores.

**Guilford Publications, Inc.**, Attn: Journals Dept.

72 Spring Street, New York, NY 10012.

**Call Toll Free: 1.800.365.7006**, 9AM to 5 PM EST

(In Area Codes 212, 718, 516, & 914, call 212-431-9800)

**Fax: 212.966.6708 & Visit Our Website: [www.guilford.com](http://www.guilford.com)**

**View a  
Sample  
Issue  
Online!**

## **Social and Cultural Changes in Vietnam with the New Market Economy**

**Tran Van Binh**

In the past two decades, Vietnamese culture and society have undergone major changes. Among these changes, some are positive and some are negative. Through those changes, Vietnam has been gradually searching for its own way of development. It is the way toward a prosperous people; a strong country; and an equitable, democratic, civilized society.

It should be acknowledged that until the mid-1970s Vietnam had to face foreign aggressive forces—there being nothing more precious than independence and freedom—this aspiration of all Vietnamese generations had become a goal for rallying national strength. This goal also represents the quintessence and traditional values of the nation. During that time, the Vietnamese nation could still build a healthy and civilized culture and society. In the fierce war against foreign aggressors, the relationships in the society were fervid. Not only local writers and journalists but also international writers and journalists who visited Vietnam then witnessed this reality. Among the international visitors was Susan Sontag, a U.S. writer and journalist who visited Hanoi and some northern provinces in 1972, when the war was at its fiercest period. After the visit, she went back to the United States and wrote a book called *The Trip to Hanoi*, in which she concludes, “Back from Hanoi, I feel more peaceful and pure. Vietnam has become a key for me to criticize the United States.”

*Nature, Society, and Thought*, vol. 15, no. 3 (2002)

After 1975, Vietnamese history turned to a new page: the period of national construction and development in peace. Numerous new issues were raised and needed solving when the state of peace replaced that of war. A number of legitimate material and spiritual needs, which were temporally ignored or shelved in the state of war, now had to be addressed with adequate attention and solutions. To meet those needs, economic development was a necessity. The subsidy economy, once appropriate and necessary in wartime, was now obsolete and hindered socio-economic development, producing stagnancy and backwardness in all aspects of social life. Thus the Sixth National Congress of the Communist Party of Vietnam in 1986 decided to abandon the subsidy economy for a market economy. This represented a major shift in the economic thinking of the Party and society.

Since the Sixth Party Congress, the Vietnamese economy has developed rapidly in many fields, such as agriculture, industry, trade, and services. Many new economic sectors and business organizations have been created. The Gross Domestic Product and income per capita have increased considerably. The living conditions of the Vietnamese people have continued to improve in the areas of nutrition, accommodation, means of transportation, conveniences, etc. Take Hanoi, for example. According to a survey in 2001, households that did not have television sets only accounted for 1.6% of all households. Additionally, about 23% owned personal computers and only 17.5% did not possess motorbikes. In the Mekong River Delta provinces, the people's living standards, although remaining lower than in Hanoi; have also improved. Hunger has been almost eradicated. Dwellings have been built more solidly. Many farmers now have television sets, telephones, and motorbikes.

With the adoption of a market economy, the Vietnamese people have faced the challenges of globalization. We hold that this is an inevitable trend. It occurs when the productive forces in the capitalist countries, supported by the development of science and technology, particularly of information technology, have grown speedily and socialize at a high level. In other words, their development crosses the borders between countries and becomes

globalized. Thus, economic globalization is, in essence, capitalist globalization. In the globalization process, the Vietnamese economy, like other economies, confronts both opportunities and challenges. Globalization directly impacts not only the economy of Vietnam, but also its cultural and social environment.

In fact, due to economic globalization, the capitalist market economy has the opportunity to penetrate deeply into many countries, including Vietnam. With the emergence of the market economy and globalization, Vietnamese culture and society have undergone major changes and turbulence.

In the previous subsidy system, material and spiritual demands had no opportunity to develop. People were easily satisfied with the things they already had and waited for the state to meet the needs of all citizens. The psychology of dependency and passivity weakened the dynamism and creativity of workers. This psychology results in stagnancy and backwardness in many aspects of life, including cultural and social aspects.

Engaging in a market economy, all individuals know that they are responsible for providing for themselves and their families. When the economy just shifted from a subsidy base to a market base, a rather popular saying was, "save yourself before the heavens can save you." Everyone should have this thought in mind in the new historic period. It is this thought that helps bring about dynamism in economic, cultural, and social activities. In recent years, this thought has been encouraged by the impact of globalization, especially by the achievements recorded in the information and communication technologies. In Hanoi, for example, when economic relations were recently broadened, many joint ventures with foreign partners were created. Those joint ventures require a rather large workforce, partly solving the issue of unemployment in Hanoi. In addition, Vietnamese workers have opportunities to access modern technologies and to increase their intellectual level and job skills. As a result, their demand for knowledge develops. Another survey in 2001 showed that, among 382 households, 94% of the people acquired world news from television, 76% from the Voice of Vietnam (radio), 81% from newspapers, and 10% from the Internet.

It is noteworthy that the globalization trend, motivated by the development of science and technology, has stimulated the creativity of the individual and the society as a whole. This is unprecedented in Vietnam's history of wet-rice civilization as well as the previous subsidy economic mechanism. Thanks to this, the thinking and lifestyles of Hanoians in particular, and Vietnamese in general, have been positively changing. It can be said that the demands of Hanoians for knowledge are more encouraged and developed than at any other time in the city's history. The learning movement in all social strata is advancing both extensively and intensively in many fields, such as politics, economics, foreign languages, job skills, health care, environmental protection, etc.

Another survey calculated that 97% of the students and pupils wanted to learn a second language. Obviously, the purpose for doing so is different for each individual: extending their knowledge (81.9%), finding a job more easily (37%), preparing to study outside Vietnam (17%), and fulfilling employment duties (16%). Some 60% wish to learn how to utilize information technology. Besides foreign languages and informatics, the young generation of Hanoi is studying different educational topics, such as population studies (66%), gender studies (83%), drug prevention and protection (71%), AIDS prevention and protection (76%), and traffic regulations (78%).

The increase in need for knowledge also manifests itself in the public's utilization of the mass media. Some 87% of interviewees say that they usually read books and newspapers; 58% routinely watch TV; 40.4% watch films and listen to music. Many programs on such television channels as VTV1, VTY2, VTV3, and Hanoi Television and Radio attract the attention of the majority of television viewers in Hanoi. They watch programs such as *International News*, *The World within 24 Hours*, *Vietnam and the World*, and *Culture and Sport* (on VTV1), making up, respectively, 69%, 64%, 68%, and 67% of television viewers in Hanoi. The programs, such as *Scientific Films*, *Around the World*, *Science and Life*, and *Culture and Sport* (on VTV2) attract 82%, 75%, and 80% of those viewers. And the programs on VTV3, namely *Maybe You Do Not Know*, *Culture and History*, *Culture and Sport*; *Foreign Films*, *The Country and Its People*, and *Unknown Lands*

are watched by 88%, 78%, 76%, 88%, and 74%, respectively, of the viewing public of Vietnam.

The adoption of the market economy and participation in international integration have contributed considerably to the development of education and training and science and technology. After the August Revolution in 1945, President Ho Chi Minh called for making every effort to eliminate hunger, illiteracy, and foreign aggression, confirming that even then national education was a priority. During the resistance war and in the framework of the subsidy system, however, education and training were fraught with major difficulties—backwardness of learning content and methodology, shortage of teaching equipment, and the degradation of the educational infrastructures. After the victory of the resistance war, those difficulties grew further. Consequently, the society did not focus on education, especially during the late 1970s and early 1980s. Social and cultural activities took on a more dynamic character after the Sixth Party Congress, with the renewal in thought, first and foremost in the economic sphere, and the resulting dynamism in economic activities.

In the new thinking, in which culture constitutes both the objective and the motive force for economic development, the state and people of Vietnam gave greater attention to social and cultural activities. The Party and the state regard social policies as a lever for development. Many new ways of implementing the new policies have been adopted. In the past, all social and cultural activities were organized by the state. Today, socialization of these activities has turned into a basic principle. This means that the whole society is mobilized to take part in the development of culture in order to gradually uplift the people's levels of enjoyment in culture, education, science, and art. In education, this mobilization accelerated the movement for study, materializing the slogan "education for all," aimed at turning the whole society into a learning field, with diversification of all forms of educational support organizations. The campaign called "the entire nation builds a cultured life" has developed into a broad mass movement that is changing spiritual life step by step in a healthy and diversified direction.

In this manner, visible progress is quite noticeable in education. By the end of 2000, all sixty-one provinces and cities reached the standards set in the primary education universalization program. Some provinces implemented the secondary education universalization program. Between the school years 1994/95 and 1999/2000, the number of pupils in nursery schools multiplied by 1.5 times and in primary, secondary, and tertiary schools by 1.6, 2.3, and 3 times, respectively.

In the cultural field, the movements under the slogans “the entire people united to build a cultured life,” “to instill a civilized lifestyle and cultured family,” and “good people and good deeds” have gradually enhanced the culture of every community, family, and individual. Despite geographical, financial, and technical difficulties, the state has in recent years widened television and radio coverage to mountainous, frontier, and island areas. By the end of 2000, 95% of communities nationwide have gained access to central radio broadcasts and 85% to central television broadcasts.

The introduction of the market economy and international economic integration has caused major changes, both positive and negative, in the social sphere. Many complicated social issues have emerged. In the old way of thinking, Vietnam did not adequately concern itself with the role of the individual. The individual had been regarded as a means for development. The renewal in thought sees the human being as the target of all socio-economic activities. Only after this recognition were the policies on human development mapped out and implemented and social policies viewed as the motive force for development.

From the historical circumstance (decades of liberation wars had just passed) and the traditional morality of “remembering the source while drinking water,” the Party and state implemented policies of paying debts of gratitude to persons with meritorious services rendered to the country. In addition, numerous social issues emerged from the market economy and integration with the world economy, notably the disparity in income among different sections of the population and among various regions, as well as the trend toward individualistic enjoyment, erosion of ethical values, and social evils.

Against this background, several guidelines and policies

have been drawn up and carried out: the hunger eradication and poverty alleviation program; the policy of paying debts of gratitude; the policies of job creation; family planning; public-health protection and care; child care and protection; and the campaign to combat crimes. These policies have been implemented fruitfully to minimize the negative affects of the market economy and the process of international economic integration.

The Ninth Party Congress in 2001 nevertheless made the assessment, in reviewing recent years, that certain pressing and acute sociocultural problems are being solved too slowly. The rates of urban unemployment and rural underemployment have been high. The quality of education and training has been lower than required. There have been certain worrisome negative practices in education and training. Education and training in mountainous, remote, and isolated areas have met numerous difficulties. The environments of urban areas, industrial centers, and many rural regions have suffered from increasing pollution. Certain cultural values and social ethics have been on the decline, and superstition and backward habits on the rise. The material base of the public-health service has been insufficient and outdated, especially at the district and commune level. The living standards of the population, especially farmers, have been too low in certain localities. The rich-poor polarization has augmented rapidly in various regions, between urban and rural areas, and among different sections of the population. Traffic accidents are occurring at a serious magnitude. Social vices, especially drug abuse and prostitution, have been spreading. The number of HIV carriers and AIDS patients has increased.

Obviously, this state of things is partly the result of the negative side of the market economy and the process of international economic integration. A survey in Hanoi and some other regions shows that, after the adoption of market economy, the desire for material consumption has increased rapidly. This desire can be a motive force for productive development. But for any country, especially one with a low standard of living, it can easily result in the lowering of spiritual values, even the degeneration of personal morality.

The current international economic integration is an unfair

game not only for nation-states but also for each region and each family. It produces disparity in income, thus disparity in level of enjoyment, facilitating serious violation of the principle of equality. If that occurs, the society will become unsafe and the potentials of social crisis certainly materialize. It is no accident that in many countries, even the high-tech ones, various sections of the population have demonstrated against globalization. When the principle of equality has been violated within a country and a segment of population has been plunged into a state of need and unemployment, negative practices and social vices will be more serious. Much crime has become global.

The living conditions of the population of Hanoi have improved in recent years. However, the disparity in income among industries and professions and between the inner and outer city remains great. The number of unemployed, drug addicts, and HIV carriers is still at an alarming level. Some forms of organized crime, such as that exemplified in the Truong Van Cam case, are present. Although the stronghold of this octopus was in Ho Chi Minh City, its tentacles had even reached Hanoi and other localities.

While it is very important to determine precisely the negative sides of the market economy and international economic integration, establishing the subjective causes of the weaknesses in recent years is more important.

Analyzing and assessing these weaknesses, especially in the social and cultural fields, the Ninth Party Congress pinpointed direct causes. The economy has yet to develop in a balanced way; its efficiency and competitiveness still remain low. The mechanisms and policies have not been adequately synchronized and have failed to create a strong driving force for development. Corruption and degradation in political ideology and ethics of no small segment of officials have been rather serious. A number of guidelines have yet to be uniformly followed or thoroughly grasped by different levels and sectors, such as those for the shaping of a socialist-oriented market economy, the building of an independent and autonomous economy, and proactive integration into the international economy.

The social and cultural issues cannot be detached from

economic issues. The nature and level of development of the economy, in many cases, have great impact on social and cultural issues. Industrialization and modernization are necessary to increase the economy's strength and competitiveness. Yet to ensure sustainable and efficient development, industrialization and modernization must follow a healthy social orientation—the human being is the motive and objective for development. On that fundamental principle, the Party congress pointed out the need to focus every effort to develop such fields as education and training and science and technology. These are crucially important for the human-development strategy. In the cause of industrialization and modernization, the human-development strategy is at the center of the socioeconomic development strategy. This is the dialectics of the relations between economic issues and cultural and social issues.

On that orientation, the Ninth Congress of the Communist Party of Vietnam mapped out the policy of concentrating on developing education and training, science and technology, culture, art, information, physical training, and sports. It also stated that all social policies must be fruitfully implemented.

The Party regards education and training as the national top priorities. To do so, we have to increase state budget allocations for them and emphasize socialization or educational training, strongly encourage investment by all economic sectors in educational development at all school levels, meet the diversified demands of society, ensure schooling for children of persons with meritorious services and children of poor families, and put into practice standardization, modernization, and socialization of education.

In regard to science and technology, it is important to develop a market for technical and scientific advances, create a competitive environment, protect intellectual property rights and copyrights, thereby facilitating activities in the scientific and technological fields. The state will design policies motivating and forcing enterprises to make investments in research for technological and scientific development, bring into full play all their initiatives, renew their techniques, and rationalize their production. The state will also give direction to the research institutions.

A necessity in the social field is the conservation and promotion of the national cultural heritage and historical relics as well as humanity's cultural quintessence, but with increasing resistance to pornographic and noxious cultures. It is also necessary to heighten the cultural level of all economic, political, and social activities, and, in the day-to-day life of the people, to promote cultural socialization, encourage the population to participate practically and efficiently in cultural and sports activities, increase the state budget allocations for culture in keeping with economic growth, and concentrate on building certain major centers integrating culture, sports, and tourism, such as the Vietnam Village of Cultures and National Sports Center.

Based on the achievements and experiences in building a new culture and new model of citizenship over the decades since the victory of the August Revolution in 1945, Vietnam has drawn up a strategy to build a new culture in the period of industrialization and modernization, namely the building of an advance culture deeply imbued with national identity. With this strategy, the culture of Vietnam will inherit and promote the nation's traditional cultural values while acquiring humankind's cultural values to modernize the national culture. Thanks to both the political orientation and the target set forth by the Ninth Party Congress—building a prosperous people; a strong country; and an equitable, democratic, and civilized society—and the nation's humanitarian tradition, all social policies have been increasingly perfected, especially the policies for such fields as family planning and job creation, hunger eradication and poverty alleviation, salary-system reform, public-health protection and care, protection against and prevention of social evils and AIDS. These are the acute, current, and global fields.

A lesson drawn from the renewal in Vietnam is that the more Vietnam adopts a market economy and integrates into the world's economy, the more important is the role of the state's management. We should have a common perception that the market economy playing the dominant role in the world's economy is the *capitalist* market economy. Basically, economic globalization is capitalist globalization. In this context, looseness in macrosocial and microsial management will definitely result in injustice and

inequity, and the ones who suffer most are the working masses. The capitalist character of economic globalization further means that a state of social crisis and insecurity will become unavoidable, as has been occurring at different levels in almost all countries of the world. Moreover, the negative side of the market economy and international economic integration has been gradually overshadowing the achievements recorded by the nations that had defeated colonialism—weakening their traditional values, and, in Vietnam, causing deviation from its socialist orientation. I would like to remind you of the sentences of Louis Henry Morgan quoted by Engels in *Origin of the Family, Private Property, and the State*:

Since the advent of civilisation, the outgrowth of property has been so immense, its forms so diversified, its uses so expanding and its management so intelligent in the interests of its owners, that it *has become*, on the part of the people, *an unmanageable power. The human mind stands bewildered in the presence of its own creation. . . .* The dissolution of society bids fair to become the termination of a career of which property is the end and aim; because such a career contains the elements of self-destruction. Democracy in government, brotherhood in society, equality in rights and privileges, and universal education, foreshadow the next higher plane of society to which experience, intelligence and knowledge are steadily tending. (1990, 276)

In agreement with Morgan's opinion, Engels, assessing the achievements of capitalist production, wrote, "Every advance in production is at the same time a retrogression in the position of the oppressed class, that is, of the great majority" (1990, 275). To avoid perils and failures in embracing a market mechanism and integrating into the world's economy, to ensure better lives for the Vietnamese and to realize the goal of a prosperous people, a strong country, and an equitable, democratic, and civilized society, the leading role of the Party and the state's management become more and more crucial. Wherever the Party's guidelines fail to be thoroughly grasped, or intensively and extensively carried out, standstill and perplexity remain. It is the same story in the management of the state. A looseness in management is often followed

by violations of the law that are detrimental to the national interest and to consumers in particular. Of course, to confirm the leading role of the Party and the management of the state in a new circumstance means to uplift this role and management to a new level of development.

It should be noted that in the period of economic globalization, human intellect, efficiently supported by the achievements in science and modern technology, especially information technology, has an opportunity to develop quickly and is required to do so. However, because of the corrupting effects of the capitalist economy, degradation in spiritual life has become more and more serious and global. Under this circumstance, the Marxist-Leninist parties and the states representing the legitimate rights of their peoples must fulfill their responsibilities to their peoples with more intelligence and conscientiousness. More than ever before, Lenin's instruction, "the Party represents conscience, wisdom and honor" must become a motto for all parties, organizations, and states. Vietnam is now implementing the resolution on Party building and rectification with the aim of raising the capacity of practical activity, morality, and ethics of Vietnamese Communists. At the same time, Vietnam is perfecting the state's apparatus, making the state really "of the people, by the people, and for the people." We regard both as the preconditions for activity toward integration into the world economy.

Originally presented at the conference, "The Global Economy and the National State," Hanoi, Vietnam, 9–10 January 2003.

*Faculty of Socialist Culture*  
*Ho Chi Minh National Political Academy*

#### REFERENCE LIST

- Engels, Frederick. 1990. *Origin of the Family, Private Property, and the State: In the Light of the Researches by Louis H. Morgan*. In vol. 26 of Karl Marx, Frederick Engels: Collected Works, 129–276. New York: International Publishers.
- Sontag, Susan. 1968. *The Trip to Hanoi*. New York: Farrar, Straus and Giroux.

# Gender, Unfree Labor, and Globalization

**Jeffrey R. Kerr-Ritchie**

During the eighteenth century, the typical enslaved worker was an adult West African man who lived, toiled, and died in the sugarcane fields of the British Caribbean or Portuguese Brazil. In the early twenty-first century, the typical unfree worker is a woman or a child locked into contract or debt bondage in agricultural production, domestic work, or the sex industry in South Asia and parts of Africa. This shift in gender and unfree labor should be viewed in a global context. We begin with the enslavement of African men in the seventeenth and eighteenth centuries. We turn to the ending of the transoceanic slave trade, the natural reproduction of slave societies, and the emergence of more even gender ratios among enslaved people during the nineteenth century. We conclude with the gendered and youthful dimensions of unfree labor at the dawn of the twenty-first century. Much of our concern is with the ways in which enslaved and unfree labor has emerged out of the interconnections between the nation-state and globalization over a long period.

New World slavery was largely the result of a transatlantic exchange of physical bodies, cash crops, and market commodities over a three-century period. This exchange linked the imperial ambitions of European nation-states; the civil society of captains, merchants, planters, and consumers; and the forced agricultural production of indentured Irish/English servants, enslaved indigenes, and African peoples (Blackburn 1997, Kerr-Ritchie 2000b).

The rise in demand for a cheap, available, and exploitable labor force in new colonial areas promising rich profits from plantation products like sugar, tobacco, indigo, cotton, and rice contributed to the rise of unfree labor systems.

In England and Ireland in the sixteenth and seventeenth centuries, a surplus of young men displaced from the countryside as a result of the development of capitalist agriculture and colonialism in Ireland spurred indentured servitude to the Chesapeake and Barbados (Blackburn 1997, 217–76). Servants signed articles of indenture binding them to serve without pay for three to seven years in return for transatlantic passage, “freedom dues” of goods, and perhaps some land at the end of their labor service (Games 1997, 365). Men made up nearly three-fourths of indentured servants sent to the English colonies during the seventeenth century. Planters were less enthusiastic about indenturing women because of potential pregnancy, childbirth, and nursing (Blackburn 1997, 229, 243). Planters in the English, Portuguese, Spanish, Dutch, and French Americas eventually settled on enslaved African labor for several reasons: the developing slave trade promised a far readier supply of exploitable labor; “heathens” were much easier to enslave and work to death than Christians; and African slaves became easier to control than English/Irish indentures because they were a racialized subject (Blackburn 1997, 217–76).

Partly because of the constant demand for physical labor and the need to transform the New World’s landscape, the slave trade favored adult male over female or child slave labor. It has been estimated that twelve million Africans were exported and nearly ten million Africans were imported during the Atlantic slave trade between 1500 and 1870 (Blackburn 1997, 3; Curtin 1969, 268; Thornton 1998, 304). Most historians agree that the gender breakdown of this trade was two men to every woman imported into the Americas. The Royal African Company, the official slave-trading entity for England during the late seventeenth century, sought men over women (Thomas 1997, 403; Curtin 1969, 121–4). Men constituted two-thirds of all African slaves brought to the English colonies during the seventeenth century (Blackburn 1997, 243). In the Dutch slave trade between 1675 and 1795, 18,000 African

women were enslaved compared to 34,000 men (Thomas 1997, 403). In eighteenth-century Chesapeake and Lowcountry in mainland colonial North America, most slave vessels carried two men for every woman (Philip Morgan 1998, 70). Moreover, these were adults not children. Children under twelve represented from one-fifth to one-seventh of all slave shipments to the Chesapeake and Lowcountry in the British mainland colonies (Philip Morgan 1998, 70). Between eight to thirteen percent of slaves shipped by the Dutch West India Company were children. It has been estimated that a maximum of ten percent of those enslaved throughout the Atlantic slave trade were children (Thomas 1997, 403).

African men were preferred over women and children in New World slave societies for several reasons. First, African societies valued slave women and their labor. Women were prized as the major agricultural workers. Women were also central to the production and reproduction of the lineage family in West African precolonial societies. Consequently, African courts, merchants, and slave traders chose not to export them (Fox-Genovese 1997, 813; Robertson 1996, 18–22). Second, planters and buyers preferred slaves they could work hard physically, dispose of once they had been worn out, and dispense with the expense of supporting a family. In Jamaica, the jewel of the British sugar and slave crown, the physical demands of plantation cash-crop production favored young men. The heavy manual labor demands of sugar plantations had Jamaican planters seeking men over women for their labor gangs. Importing wives for slave men and reproducing the future labor force were of secondary concern. These planters imported almost two to one males over females from Africa. For instance, it has been estimated that 465,000 male compared to 285,000 female African slaves were imported to Jamaica between 1655 and 1807 (Dunn 1993, 49–51). Moreover, these choices were reflected in different market prices with greater prices for male over female slaves. It has been estimated that in 1700, it cost forty-four pounds to buy an enslaved man, twenty-three pounds for an enslaved woman, and sixteen pounds for an enslaved girl in Barbados (Thomas 1997, 807). Males consistently sold higher than females and children in the antebellum American South, with

a high of \$1,450 for prime-age male slaves in the cotton boom of the late 1850s (Robertson 1996, 22; Engerman 1997, 590–92). There is little doubt that this gendered slave trade contributed to the demographic devastation of West and West Central Africa over a long period of time. Indeed, because the demand for prime male slaves was so high, and the major means of enslavement was warfare fought by African men, it is clear New World slavery promoted war and the militarization of West and West Central African societies whose echoes we continue to hear today.

If African women and children were less prone to enslavement than men, it should also be noted that they constituted the majority of women and child immigrants to the New World. Before 1800, four out of every five female immigrants to the Americas were enslaved Africans (Eltis 2000, 97). It has been estimated that eighty percent of all women and ninety percent of all children who landed in the Americas prior to 1800 came in the holds of slave ships (Miller 1999, 31). Only a minority of Europeans immigrating to the New World were women and children. Of the 2,010 immigrants from London to Virginia in 1635, less than fourteen percent were women (Edmund Morgan 1975, 163). This fact is hard to appreciate given the nature of most migration histories, which still favor stories of the European rather than African peopling of the Americas. This skewed emigration is explained in part by the very high mortality rates for pregnant women, new immigrants, and young children in seventeenth-century Virginia, especially through malaria, or “fever and ague” (Edmund Morgan 1975, 158–179; Brown 1996, 415). Life in the New World would have been nasty, brutish, and short. This gender imbalance might also explain the high incidence of interracial relations between British men and African women in the seventeenth-century Chesapeake (Brown 1996).

The late eighteenth and early nineteenth centuries witnessed an increasing shift toward a more equitable ratio among enslaved African men and women. By 1750, enslaved Africans in the Chesapeake region of the mainland British colonies were reproducing from a natural increase so that most slaves in the region were Creoles or American-born. Many of these Creoles were

native-born women who lived longer than earlier generations, were healthier, and bore children at an earlier age (Philip Morgan 1998, 84–86). These enslaved Creole women hoed tobacco, served as domestics, and engaged in general agricultural tasks. It is important to note, however, that this region was the exception among New World slave societies that continued to rely on slave imports of men over women and children. This situation was to change with the abolition of the Atlantic slave trade during the early nineteenth century. As a result of vigorous antislavery protest inside and outside the British Parliament, an act was passed in 1807 legally abolishing the slave trade throughout the British Empire. A year later, the U.S. Congress legally abolished the interoceanic slave trade.

In subsequent decades, the combination of natural reproduction, the fact that slave women lived longer lives than slave men, and equal gender births provided for more even gender ratios. In the British Caribbean, the majority of sugar workers on the plantations were women by the 1820s (Dunn 1993). By the time slavery was legally abolished in the British Empire in 1833, the enslaved population of 800,000 in the West Indies colonies, South America, and Canada had more even gender ratios than earlier decades (Dunn 1993, 51). In 1790, the enslaved African-American population in the United States was more adult male than female. With the abolition of the slave trade in 1808 and natural reproduction over the ensuing decades, the enslaved population of 3.9 million in the fifteen slave states stretching from Delaware to Texas in 1860 was roughly even between men and women. The nearly four million enslaved Africans exported to Brazil during the Atlantic slave trade were more adult men than women (Curtin 1969, 87–89). Between 1850 (the abolition of the slave trade to Brazil) and 1888 (the time of legal emancipation), the African population of Brazil achieved a more even gender ratio (Andrews 1991, 32–33).

Despite this shift toward enslaved labor's more even gender ratio, the preference for adult male labor persisted for two reasons. First, the interregional slave trade. Although the interoceanic slave trade was abolished during the early and middle nineteenth century, the search by new immigrants and old planters for prime

physical labor to develop and colonize new interior regions was met by the development of interregional slave trading. Older plantation regions in which agricultural production was less profitable were encouraged to export enslaved Africans to newer regions. Over a million American-born slaves were transported from the American upper to lower South in the several decades prior to the U.S. Civil War (Grenier 1997, 220). It has been argued that the expansion of American slavery into the southwestern regions of Alabama, Mississippi, Arkansas, Texas, etc., brought more men than women for clearing land and planting cotton in search of quick profits (Fox-Genovese 1997, 814). The same was true of the shift from the sugar-producing northeast to the coffee-producing southwest of Brazil. One scholar's detailed examination of a nineteenth-century coffee region concludes that "Vassouras slave society remained predominantly male during the municipio's growth and decline" (Stein 1985, 78).

The second reason for male labor to be preferred was the advent of Asian indentured servitude. The legal abolition of slavery in the British West Indies colonies in 1834–1838 encouraged formerly enslaved men and women to move away from working and living conditions reminiscent of their former servitude. Many freed people reorganized their households so that freed children could attend school and other activities away from intense cash-crop production (Kerr-Ritchie 2002a). Many sugar planters complained of resulting high wages, irregular work habits, and a labor shortage for sugar plantations. Between 1838 and 1918, some 536,310 immigrant laborers were transported to the British Caribbean plantation system, of which eighty percent were from India, eight percent from Madeira, and four percent from China. Over half relocated to British Guiana, one-third to Trinidad, and one-tenth to Jamaica. Elsewhere, 87,000 South Asians emigrated to French Martinique and Guadeloupe, 34,000 Indians to Dutch Surinam, and 124,835 Chinese to Cuba between 1853 and 1874. Much like the Atlantic slave trade, Asian indentured servitude favored men over women because of the demand for physical labor to be exploited quickly rather than over the long term.

Rather than view this postemancipation exchange simply

in terms of unchanging laws of demand and supply, we should situate it within the context of transformed postemancipation relations, free-market conditions, and the shifting politics of empire. India had been colonized by the British since the late eighteenth century, while slavery was abolished in 1843. As a result of British success in the Opium Wars of the late 1830s and early 1840s, coastal China was opened to the gunboats, bibles, and free trade of the British Empire. Between 1846 and 1932, some twenty-eight million Asians emigrated to Ceylon, Mauritius, East Africa, and the West Indies (Tinker 1974; Kerr-Ritchie 2002a). Many of their descendants are the new slaves in today's global economy.

While slave societies are a thing of the past, forms of enslavement and unfree labor persist into the present. According to one recent authority, there are twenty-seven million new "slaves" in the modern global economy. These modern "slaves" are defined as persons physically coerced for the purposes of economic exploitation (Bales 1999, 6, 9). Their bondage takes three major forms. The smallest number is chattel slaves who live and work in northern and western Africa and some Arab nations (Bales 1999, 19). This resembles older forms of enslavement in Africa, although it is important not to confuse modern chattel slavery with the race-based, plantation-produced slavery in the Americas of yesteryear. While enslaved children work on cacao plantations in West Africa, Dinka women and children continue to be kidnapped and enslaved by government-backed militias in Islamic northern Sudan (Bales 1999, 33). The second and largest group of modern "slaves" is some fifteen to twenty million bound agricultural laborers in India, Pakistan, Bangladesh, and Nepal. These bond-debt workers pledge their labor for a loan that they often find hard to pay off (Bales 1999, 19–21). Child bricklayers labor in Pakistan, while bonded men, women, and children toil in rice fields, stone quarries, mines, and matchbox and firework factories of South Asia (Bales 1999; 149–231). This system of debt-bondage has a long history, especially in postemancipation societies like the American South, as a means to control the labor and movement of former slaves struggling to assert alternative lives of freedom (Woodman 1995; Kerr-Ritchie 1999; Foner 1983).

The third form of modern enslavement is contract slavery. Young women and men, boys and girls, are enticed into signing contracts that end up being the legal means to control their physical labor. This is especially the case with the sex trade in poor nations as young girl prostitutes work the gold-mining towns of the Amazon and Brazil, while young Thais desert the countryside for the towns and cities of Thailand (Bales 1999, 4, 11, 18–20). I still recall my personal disgust observing a Thai boy having dinner with an adult Western man in southern Thailand—an obvious prelude to sex for money—ten years ago. Although they are more invisible, enslaved women do labor in the wealthy world. We are occasionally informed by newspaper exposés about enslaved Thai and Philippine women freed from brothels in New York, Seattle, and Los Angeles, while there are an estimated 3,000 household slaves in Paris and 1,000 in London (Bales 1999, 22, 3, 26). In short, the face of unfree labor in the world is increasingly female and young.

Several factors explain the current make-up of unfree labor. First, the economic efficiency of slave versus paid labor in the modern economy makes it simply more profitable to exploit coerced labor than to engage in wage relations with contractual obligations together with the vagaries of the free marketplace. It should not be forgotten that this efficiency was one of the major arguments of slaveholders in the English Americas against the abolition of slavery. Second, weakness, gullibility, and deprivation fuel the making of new “slaves,” which is why women and girls are more often at risk than men and boys. This is clear in militarized societies such as Sudan and parts of West Africa in which warfare is male-centered. One sees this occasionally on the frontispiece of current-affairs journals depicting heavily armed young teenagers (BBC 2002, 10–11). Third, the population explosion of young children, with over half the population in some Asian and African nations being under fifteen. This is a ready supply of exploitable labor (Bales 1999; 12). Fourth, global capitalism is destabilizing poor nations and communities, consequently creating economic refugees. Many male migrants from South Asia, the Caribbean, and West Africa drive taxis in New York, Atlanta,

Washington, Los Angeles, London, Paris, and Brussels, while others, more physically talented, might pursue soccer, basketball, and other sports on the pitches, courts, diamonds, and tracks of the United States and Europe. Young women migrants either serve as domestics in middle-class households in Europe and the United States or as prostitutes in English, Italian, and German cities. These modern “slaves” are falling between the cracks of globalization and the nation-state.

To conclude, there are several reasons why the gendered dimensions of unfree labor and globalization are significant. First, it is clear that gender played a far more important role in the centuries-long transoceanic slave trade than has usually been appreciated. Second, despite the significant shift in social relations from property in human beings to property in labor analyzed so brilliantly by earlier generations of historical materialists, we are still not rid of property in human beings. Contemporary conditions actually facilitate a return to these older forms of controllable and exploitable labor for the reasons outlined above. Third, it seems clear that the uncontested power of global capitalism still “batters down all Chinese walls” (Marx and Engels 1976, 488). The impact upon the poor world as well as poor segments within the rich world will continue to reproduce unfree forms of labor characterized by force and violence rather than disguised wage relations. Fourth, the links among enslavement, unfree labor, and globalization challenge the classic historical stages in Marxian theories of social transformation. Rather than a teleological shift from slave to free societies, the social interaction in past and present is more complicated. Finally, the progress of capitalist societies cannot be divorced from a long and bloody history of modernizing states and blooming civil society.

What is to be done? Chattel slavery could be abolished through an international boycott of those nation-states practicing modern slavery, led by United Nations member states. The implementation of the “jubilee fund” by international financial organizations with an emphasis on investment in people, the redistribution of land, and social-justice programs would challenge the poor conditions that breed modern forms of enslavement. An earlier claim at the

dawn of the capitalist age that differences of “age and sex have no longer any distinctive social validity for the working class” (Marx and Engels 1976, 491) has not proved accurate for this brave new world in which youth and women are becoming increasingly at risk to global forms of social dislocation, new forms of consumer fantasies, and prolonged exploitation.

An abridged version of this paper was presented at the conference, “The Global Economy and the National State,” Hanoi, Vietnam, 9–10 January 2003.

*Schomburg Center for Research in Black History and Culture*  
New York

#### REFERENCE LIST

- Andrews, George Reid. 1991. *Blacks and Whites in Sao Paulo, Brazil, 1888–1988*. Madison: Univ. of Wisconsin Press.
- Bales, Kevin. 1999. *Disposable People: New Slavery in the Global Economy*. Los Angeles: Univ. of California Press.
- Blackburn, Robin. 1997. *New World Slavery*. London: Verso.
- British Broadcasting Corporation. 2002. *Focus on Africa*. October–December.
- Brown, Kathleen M. 1996. *Good Wives, Nasty Wenches and Anxious Patriarchs: Gender, Race, and Power in Colonial Virginia*. Chapel Hill: Univ. of North Carolina Press.
- Curtin, Philip D. 1969. *The Atlantic Slave Trade: A Census*. Madison: Univ. of Wisconsin Press.
- Dunn, Richard S. 1993. Sugar Production and Slave Women in Jamaica. In *Cultivation and Culture: Labor and the Shaping of Slave Life in the Americas*, edited by Ira Berlin and Philip D. Morgan, 49–72. Charlottesville: Univ. of Virginia Press.
- Eltis, David. 2000. *The Rise of African Slavery in the Americas*. Cambridge, U.K.: Cambridge Univ. Press.
- Engerman, Stanley L. 1997. Slave Prices. In Miller and Smith 1997, 590–92.
- Foner, Eric. 1983. *Nothing but Freedom: Emancipation and Its Legacy*. Baton Rouge: Louisiana State Univ. Press.
- Fox-Genovese, Elizabeth. 1997. Slave Women. In Miller and Smith 1997, 813–18.
- Games, Gwilym. 1997. Indentured Servants. In Rodriguez 1997, 365–66.
- Grenier, John. 1997. Domestic Slave Trade in the United States. In Rodriguez 1997, 220–21.
- Kerr-Ritchie, Jeffrey R. 1999. *Freed People in the Tobacco South: Virginia, 1860–1900*. Chapel Hill: Univ. of North Carolina Press.
- . 2002a. Century of Emancipation. Manuscript.

- . 2002b. Slavery, Work, and Modernity: How Working Class Were African Slaves? Manuscript.
- Marx, Karl, and Frederick Engels. 1976. *Manifesto of the Communist Party*. In vol. 6 of *Karl Marx, Frederick Engels: Collected Works*, 477–519. New York: International Publishers.
- Miller, Joseph C. 1999. History and Africa/Africa and History, *American Historical Review* 104, no. 1 (February): 1–32.
- Miller, Randall M., and John David Smith, eds. 1997. *Dictionary of Afro-American Slavery*. Westport, Conn.: Praeger.
- Morgan, Edmund S. 1975. *American Slavery, American Freedom: The Ordeal of Colonial Virginia*. New York: Norton.
- Morgan, Philip D. 1998. *Slave Counterpoint: Black Culture in the Eighteenth-Century Chesapeake and Lowcountry*. Chapel Hill: Univ. of North Carolina Press.
- Robertson, Claire. 1996. “Slavery and Women, the Family, and the Gender Division of Labor.” In *More Than Chattel: Black Women and Slavery in the Americas*, edited by David B. Gaspar and Darlene Clark Hine, 3–40. Bloomington: Indiana Univ. Press.
- Rodriguez, Junius P., ed. 1997. *The Historical Encyclopedia of World Slavery*, Vol. 1. Santa Barbara: ABC-CLIO.
- Stein, Stanley J. 1985. *Vassouras: A Brazilian Coffee County, 1850–1900*. Princeton, N.J.: Princeton Univ. Press.
- Thomas, Hugh. 1997. *The Slave Trade: The Story of the Atlantic Slave Trade, 1440–1870*. New York: Simon and Schuster.
- Thornton, John. *Africa and Africans in the Making of the Atlantic World, 1400–1800*. Cambridge, U.K.: Cambridge Univ. Press.
- Tinker, Hugh. 1974. *A New System of Slavery: The Export of Indian Labour Overseas, 1830–1920*. New York: Oxford Univ. Press.
- Woodman, Harold D. 1995. *New South—New Law: The Legal Foundations of Credit and Labor Relations in the Postbellum Agricultural South*. Baton Rouge: Louisiana State Univ. Press.

## CALL FOR PAPERS for *NST*

*Nature, Society, and Thought* needs your input! To keep up with our accelerating publication schedule, we are appealing to subscribers and friends for articles, reviews, and proposed topics for special sections or issues.

Our readers are interested in keeping up with ideas across a wide range of thought on the Left, and a journal attempting this broad coverage needs continual rejuvenation from academics and activists working in economics, sociology, psychology, history, literature—in fact, throughout the natural and social sciences and humanities.

We urge you to consider submitting a contribution or proposal.

### THEMES FOR FUTURE ISSUES:

- The global market economy
- Neoliberalism and imperialism
- Progressive initiatives in the arts and popular culture

### METHODOLOGY OF DISCIPLINES:

- Papers illustrating application of dialectical- and historical-materialist methods to topics in specific fields

### PROPOSALS FOR SPECIAL ISSUES OR SECTIONS:

- Ideas welcomed at any stage of development!

For further information:

E-mail: [marqu002@tc.umn.edu](mailto:marqu002@tc.umn.edu)

Web: [www.umn.edu/home/marqu002](http://www.umn.edu/home/marqu002)

Phone: 612-922-7993

## Books and Reviews

---

### **The Nazi Attack on the USSR: Interviews with Stalin's Associates (Excerpts from *By Stalin's Side*, by Georgii A. Kumanev)**

*In 2001, in Smolensk, the historian Georgii A. Kumanev published a book under the title *By Stalin's Side*. Kumanev is an expert on the Soviet Great Patriotic War of 1941–1945. The book contains records of conversations and interviews by the author with Party and state functionaries as well as leaders of the USSR armed forces during the war and immediate postwar period. Interviewed are Molotov, Mikoyan, Kaganovich, Ponomarenko, Shukov, Vasilevsky, Budyonny, Timoshenko, Golovanov, Bagramyan, Kuznetsov, Novikov, Khrulev, and Chadayev. The sketches and interviews were recorded between the late fifties and early nineties. The questions cover an extensive field: for example, general characterizations of Stalin; his responsibility for the fact that the German attack came as a surprise to the Soviet Union; repression in the armed forces and its consequences; evacuation from the areas threatened with occupation; repression in the postwar period. In the following, we restrict ourselves to the complex of Stalin and the attack on the Soviet Union and the pertinent statements by some interviewees.*

#### **A. I. Mikoyan**

(Member of the Politburo of the Central Committee of the Party 1922–1966, leading state functions)

“Stalin in the late 1930s—that was a totally different person:

*Nature, Society, and Thought*, vol. 15, no. 3 (2002)

suspicious in the extreme, ruthless, and terribly self-assured. Not infrequently he would talk about himself in the third person. In my opinion he had simply gone crazy at that time. Incidentally, in the last three or four years of his life he was again showing such behavior.

“Our country, our people had to pay a huge price for his stubbornness, arrogance, and egotism. Really, Stalin made possible the surprise effect of the fascist attack with all its grave consequences. In spring, and especially at the beginning of summer, it had become absolutely useless to talk to him about the possibility of an imminent German attack. Stalin was convinced that the war with Germany would begin sometime towards the middle or end of 1942, after Hitler had forced England to its knees. In his opinion the Führer would never embark on a war on two fronts. ‘By that time, however,’ Stalin concluded confidently, ‘we will have successfully fulfilled the third five-year plan, and then let Hitler try to stick his nose in here.’ But if anybody undertook the attempt to convince him that there was reliable new evidence of German troop concentration, of confidential remarks and decisions by the German government—in a word, of the growing danger of an attack—he quickly flew off the handle and broke off the conversation in menacing tones.”

Kumanev reports that Mikoyan mentioned several times that the German ambassador to the USSR, Count Schulenburg, had warned in confidence about the pending attack during a state dinner, but Stalin dismissed this as German disinformation. Only two days before the start of the war, Mikoyan reports, the chief of the Riga harbor informed him, as the member of government responsible for the merchant fleet, that the German merchant vessels in port were getting ready to sail, even though they had only been partially loaded or unloaded. Although Mikoyan passed this information on to Stalin immediately, Stalin failed to draw the correct conclusions and initiate appropriate responses.

Mikoyan further reports: “On Saturday, 21 June 1941, the members of the Politburo of the Central Committee met at Stalin’s apartment at the Kremlin. We exchanged opinions on internal and international questions. Stalin was now, as before, of the opinion

that Hitler would not launch war against the USSR in the near future. Then the People's Commissar for Defense of the USSR, Marshal of the Soviet Union Timoshenko; Chief of the General Staff of the Red Army, Army General Zhukov; and the leader of the Operations Department of the General Staff, Major General Vatutin, arrived at the Kremlin. They informed us that a German defector, a sergeant, had reported that German troops were moving into attack position and would cross the border in the morning of 22 June.

"But Stalin doubted the veracity of the information and said: 'Didn't they send out that defector specially to provoke us?'"

"Since we were all extremely worried and insisted that urgent action was needed, Stalin agreed to issue a directive to the troops 'just in case,' which stated that on 22/23 June there was a possibility of a sudden attack by German units, possibly starting with some kind of provocation. The Soviet troops in the border areas were instructed not to respond to any provocation, while being prepared for battle at the same time. We broke up around 3 A.M., but only an hour later I was woken up: war! Immediately the members of the Politburo met in Stalin's study at the Kremlin. He looked dejected, deeply shaken. 'He has deceived me, the scoundrel, Ribbentrop,' he repeated several times.

"We all received the incoming information: enemy troops were attacking the border, they were bombing the cities of Murmansk, Liepaya, Riga, Kaunas, Minsk, Smolensk, Kiev, Shitomir, Sevastopol, and many others. It was decided to proclaim war measures immediately in all border republics and in some central areas of the USSR, to put the mobilization plan into effect (it had been amended by us in the spring and determined production following an attack), to call upon the conscripts as of 23 June, and so on.

"Everyone agreed that it would be necessary to launch a broadcast to the people immediately. Stalin categorically refused to deliver the address: 'I have nothing to say to the people. Let Molotov do it.' We argued that the people would not understand why in this grave moment in history they could not hear Stalin, the leader of the Party and chairman of the government, but would

have to accept his deputy. To us, it was important that the respected voice call upon the people to rise to the defense of the country. But our urging was fruitless. Stalin said that he could not speak now; he would do it another time, for now Molotov should speak. Because of Stalin's stubborn refusal, we decided that Molotov should speak. And he spoke at 12 noon.

"Of course, this was a mistake. Yet Stalin was in such a depressed state that he really did not know what to say to the people. After all, they had been told again and again there would be no war with Germany within the next few months. On record is, for example, a TASS message of 14 June 1941 assuring everybody that the rumors about Germany's intent to attack the USSR were baseless! And if it should come to war nevertheless, the enemy would be immediately smashed on his own territory, etc. But now it had become necessary to admit that this position was incorrect, to acknowledge that we had suffered losses already in the first hours of the war.

"To iron out the mistake somehow and to imply that Molotov had only represented Stalin's thoughts, the newspapers of 23 June published a large picture of Stalin next to the text of a government proclamation. . . .

"In the evening of 29 June, Molotov, Malenkov, Beria, and I met with Stalin at the Kremlin. Everybody was interested in the situation at the Western front, in Byelorussia. But no details on the situation on the territory of this republic were yet available. We only knew that there was no communication with the troops at the Western front. Stalin called up Marshal Timoshenko in the People's Commissariat for Defense. However, he was not able to say anything concrete about the situation.

"Disturbed with this turn of events, Stalin suggested we should all drive to the People's Commissariat for Defense to deal with the situation right then and there. Timoshenko, Zhukov, and Vatunin were in Timoshenko's study. Stalin was calm; he asked where the front command was located and what communications there had been. Zhukov reported they had lost contact and had been unable to reinstate communication for the entire day. Then Stalin asked more questions: why had the Germans been allowed to break through, what measures had been taken to reestablish contact, and

so on. Zhukov reported on the actions taken, stating that personnel had been sent out but nobody knew how much time it would take to reestablish contact. Apparently it was only at this moment that Stalin realized the gravity of his erroneous calculations regarding the possibility, timing, and consequences of an attack by Germany and its allies on the Soviet Union.

“In spite of this, the discussion was peaceful for about half an hour. Then Stalin exploded: what kind of a general staff is this, what kind of a chief of staff who is so disorganized that he has lost connections with the troops, that he represents no one and commands no one? If there is no communication, the General Staff cannot lead. Of course, Zhukov suffered from this situation no less than Stalin. Stalin’s outburst was deeply insulting to him. This courageous man could not help bursting into tears like an old woman and he quickly left the room. Molotov followed him. We were all feeling depressed. After five to ten minutes Molotov came back with a calmer but teary-eyed Zhukov in tow. We agreed that Kulik would establish the connection with the Byelorussian military district (as Stalin had suggested) and then send more personnel. This task was assigned to Voroshilov, accompanied by the energetic, brave, and skilled commander Tumanyan. I had suggested this companion. The main task was to reestablish communications. The situation regarding the troops in the Ukraine under Komanev was more hopeful. But the troops at the Western front were without central command. Stalin was depressed and brooding. When we left the Commissariat, he said: ‘Lenin has left us a great legacy, and we, his successors, have blanked it all.’ We were shocked by Stalin’s words. We had lost everything forever? That’s what his statement boiled down to. Stalin retired to his nearby country house at Kunzevo and broke off all contact.”

The next day Molotov, Malenkov, Voroshilov, Mikoyan, Beria, and Vosnessensky went to Stalin’s country house. “We found him sitting in an easy chair in his small dining room. When he saw us, he literally froze. His head drooped, his eyes were wide and fearful. (Obviously Stalin thought we had come to arrest him.) He gave us a questioning look and said dully: ‘Why are you here?’ This was a strange question. Normally in such a situation he should have summoned us.

“Molotov spoke up for everybody that it was necessary to concentrate power, to be able to make speedy decisions to bring the country back to its feet. He talked about the suggestion to create a state committee for defense. Stalin changed literally before our eyes. His fear was gone, he squared his shoulders. He gave us a baffled look and after a short interval said: ‘All right. And who will chair the committee?’

“Molotov said: ‘You, Comrade Stalin.’

“‘Good. And what are your suggestions for the composition of this committee?’”

***P. K. Ponomarenko***

(At the time First Secretary of the Central Committee of the Communist Party of Byelorussia and from 1942 Chief of Staff of the partisan units)

“After the commander of the air force of the western military district, Hero of the Soviet Union Major General Ivan Kopez, had learned from the latest intelligence reports that an aerial attack was imminent, he ordered the immediate launch of the district’s air force and reported on the situation to Moscow. The response was a menacing snarl: ‘Issue an immediate all-clear, or you will provoke Germany into war; this would be on your head.’ Kopez had to obey, the planes returned to base, and literally at the same time the German Armada appeared in the sky. Our losses were terrible. General Kopez was not able to bear this blow and he shot himself.”

***A. M. Vasilevsky***

(Marshal of the Soviet Union)

“If we had pinpointed the timing of the attack by the fascist bloc with reasonable accuracy, and initiated appropriate measures in a timely fashion, the war would have played out quite differently for the invaders. The enemy would have been stopped much sooner. He would have suffered losses that would not have allowed him to advance so far. What should we have done? We should have mobilized our troops before that fateful day in June,

put them into defensive positions, and organized cooperation with the artillery, the tank divisions and the air force as well as drawn upon the reserves to throw them into the breach quickly in case the enemy managed to break through here or there. Military activity would have been completely different.”

Why did the Soviet command mobilize the troops along the border so late?

“Everything depended almost entirely on Stalin’s position, as head of the Central Committee of the Party and of government. This respected and generally accepted leader of the country was in full control of the People’s Commissariat for Defense, which in a way had a good handle on things. But because of the cult of personality of that time and his own overblown self-assuredness, he was unable to listen to the opinions of leading military cadre. I must comment here that Stalin was correct in asserting that maximum caution, restraint, and a cool head were essential to move the troops into full battle readiness. To fully mobilize the entire force is not the same as leading the troops of one district into military exercises. The former was an extraordinary event that had an impact on Soviet foreign policy, its international positions. Premature battle readiness is just as damaging as a delayed one.

“His refusal to mobilize fully the troops along the border was based on the intention to give Nazi Germany not even the smallest pretext to accuse the Soviet Union of aggression. At the same time, Stalin was playing for time, mindful that the Soviet Union was poorly prepared for a major war. We needed at least one or two years of peaceful development to fulfill all demands of the military. These included the development and mass production of new types of weapons and military hardware, broadened conscription and training of new recruits, tactical and operational training for the new command staff—everything that is necessary in a modern war, full mobilization of the entire country.

“As you can see, there were plenty of reasons to try to delay the outbreak of war. In this sense Stalin’s hard line to do nothing that fascist Germany could have used as an excuse to unleash war was therefore justified in the interest of the socialist fatherland. His culpability was that in spite of all information provided by

diplomats and intelligence he did not realize at what point this line became not only irrelevant but dangerous. . . .

“That point should have been determined correctly, maximum mobilization of the armed forces should have been implemented, and the whole country should have been made into a camp ready for battle. In order to delay military aggression, it would have been necessary to take these measures in secret and sooner. There was ample evidence that Germany was preparing a military attack on our country. In this century it is very difficult, practically impossible, to hide preparations for aggression. One should not have been worried about fears that the West would make noises about supposed aggressive intentions of the Soviet Union. Due to circumstances beyond our control, we had stepped up to the Rubicon of war and should have moved forward decisively. That was what the interests of the fatherland, of socialism, demanded.

“We also made mistakes in estimating where the enemy would make his main attack. Our plan was based on the belief that the main enemy forces would attack in the southwest (from our point of view). Therefore our main forces were concentrated there, but Germany concentrated its main forces in the center, with the aim of conquering Moscow, and so was in a favorable strategic position. According to the conditions at the outbreak of the war it would have been necessary to direct our forces from the south western front to the center; this did not happen in time.

“That is my opinion on the difficulties the Soviet Union had during the first few months of the war, in spite of its favorable moral and political prerequisites to roll back the enemy forces.

“Although Stalin bears the brunt of the responsibility for the unsuccessful war efforts in the first few months (he commanded unlimited power and had always the final decision), this responsibility has to be shared, albeit to a lesser degree, by the People’s Commissar for Defense and the Chiefs of Staff. To do justice to their high positions and great responsibilities they should not have agreed with Stalin in all points; they should have put forward their opinion on the actual situation more strongly.”

**S. K. Timoshenko**

(Marshal of the Soviet Union)

“In June 1941, literally days before the fascist attack, when the reports arriving from different sources on the preparation of the aggression against the USSR became extremely serious, I was able to obtain Stalin’s agreement to receive the Chief of the General Staff, Army General G. K. Zhukov, and me. Since Stalin was familiar with my blunt manner, he usually preferred to talk to me in private. We handed him a large portfolio filled with the latest reports by our military intelligence, by diplomats, German antifascist friends, and others that clearly showed that Hitler’s breach of the nonaggression treaty and an enemy invasion were imminent.

“Pacing back and forth, Stalin leafed quickly through the material and dropped it onto a table (where it fanned out), saying: ‘And I’ve got documents of my own.’ He showed us a folder with papers nearly identical to ours. Except they contained comments by the chief of military intelligence, General F. I. Golikov, who was familiar with Stalin’s belief that there would be no war within the next few months. In his attempt to please Stalin, he categorically denied the veracity and accuracy of the reports.

“‘Furthermore,’ Stalin continued, ‘we have found a (here he used a dirty word) who runs around with prostitutes in Japan. He condescended to even give us the date of the German attack—22 June. Do you expect me to believe that too?’\* So our visit ended in frustration.”

*\*Timoshenko was referring to the German secret agent Richard Sorge, who reported to the center on 13 June immediately before the outbreak of war, from Tokyo: “I repeat, nine armies with 170 divisions will begin a broad attack at dawn of 22 June”—Note by Kumanev. [Sorge, a German antifascist and secret member of the German Communist Party, posed as a Nazi and worked as a German espionage agent for the German embassy in Tokyo. He provided the Soviet Union with other valuable information including advance notice of the Anti-Comintern*

Pact (1936), the German-Japanese Pact (1940), and Japan's plan to attack southward in the Pacific in 1941 rather than attack the Soviet Union. He was executed by the Japanese in 1944.—Ed.]

**N. G. Kuznetsov**

(Former People's Commissar for the Navy and Supreme Commander of the Naval Forces of the USSR)

“On 13 and 14 June, I saw Stalin for the last time before the war. I told him about the latest intelligence obtained by the fleet, military exercises in the Black Sea, and the de facto halt of German deliveries for the cruiser *Lützow*, which we had purchased in 1940. Stalin asked no questions regarding the battle readiness of the fleet and gave no indications of a possible German attack.

“‘Is that all?’ he asked after my report was finished. All those present looked in my direction, indicating I should not linger. I quickly left the study. I would have liked to talk about the German freighters leaving our ports, and ask if it would not be necessary to restrict the movements of Soviet merchant vessels in German waters, but I realized that my continued presence was undesirable. The next day I dealt with Molotov on some routine matters. At the end of our discussion, I decided to give my opinion on the irregular actions by Germany, and informed him of the behavior of the German merchant ships. But Molotov repeated the same words I had heard previously from Zhdanov: ‘Only a fool would attack us.’

“When I think about the behavior of Stalin and his nearest companions, I tend to conclude that until the last moment they did not believe in the possibility of an attack by Hitler. Stalin became furiously agitated by any reports—oral or written—that emphasized the growing danger of fascist aggression. Although I was conscious of my responsibility for the naval forces and the irreparable consequences of a surprise attack, I was not able to express my opinion even to close subordinates, since it was contrary to the official point of view.”

Originally published as “Stalin und der berfall Hitlerdeutschlands auf die Sowjetunion,” in *Marxistische Blätter* no. 2–03 (January–February [2003]): 70–74.

*Translators:*

*Russian into German: Willi Gerns*

*Essen, Germany*

*German into English: Hanna Gidora*

*Coquitlam, British Columbia, Canada*

# Stalin and the Cominform

By Harald Neubert

*Das Kominform und Stalins Neuordnung Europas* [The Cominform and Stalin's New Order in Europe]. By Grant M. Adibekov. Volume 1, Contemporary History of Communism and Socialism: Material and Research, edited by Bernhard H. Bayerlein. Frankfurt am Main: Europäischer Verlag der Wissenschaften, 2002. 343 pages.

Anyone who remains committed to socialist politics and perspectives in the aftermath of the decline of the international Communist movement and the failure of the socialist systems in Europe, as does this reviewer, faces a twofold demand: (1) the demand to provide a contemporary analysis of the past—what went wrong to cause decline and failure and needs to be overcome, but also what was reality based and historically effective and needs to be continued and built upon; and (2) the demand to aspire to the renewal of socialist-Communist understanding of party and politics, strategy, aims, and objectives by drawing appropriate lessons from history as well as considering the changed conditions.

The book under review is strictly concerned with the first of those demands; the second demand is not addressed. In any case, the task of objective reconstruction and largely unbiased analysis is not an easy one. Sufficient knowledge and insights remain missing. And some Marxist historians continue to be influenced by past analyses of history, largely apologetic and uncritical, making

the necessary new assessment of the past and new formulation of policies, aims, and objectives more difficult. On the other hand, the impetus of anti-Communist literature and political testimonies in the popular market creates a one-sided negative picture.

Conscious of this trend, even Bernhard H. Bayerlein, as editor of the German edition, admits in his introductory remarks that contemporary critics sometimes ignore the fact "that Marxism and Communism with their different preexisting conditions, manifestations, and all kinds of contortions and distortions are still part of the universal legacy of the twentieth century." It needs to be added that this legacy also contains remarkable achievements in terms of civilization, social politics, and culture and that the Communist and socialist movements will continue to play an important historical role in the twenty-first century, albeit in renewed form. This also contains the demand to close the considerable knowledge gaps regarding the history of the Communist movement and to approach objective assessments, a task that has become more easily achievable, or in some aspects has only become possible, through access to Soviet sources from previously sealed archives.

Adibekov has taken advantage of this opportunity to deal with the history of the Communist Information Bureau, which was in existence from 1947 to 1956. He presents numerous new sources that allow completion and considerable correction of the current picture of events in the European Communist movement during the first postwar decade, including the role of the leadership of the Communist Party of the Soviet Union (CPSU) under Stalin. These sources are mainly from the Russian State Archive, the Central Committee (CC) of the CPSU, and the archive of the president of the Russian Federation. Of importance also are the Georgi Dimitrov diaries that have been published both in Bulgaria and the Federal Republic of Germany.

A caveat is necessary: the author, like some other Russian historians since the collapse of the Soviet Union, gives preference to a one-sided negative point of view and underestimates or even denies real international interrelations, constellations of power and confrontations, real pressures as well as unavoidable decisions and political options. Since the Russian version of the

book, published in 1994, was not available for comparison, one must mention a critical comment by the editor; even though its relevance cannot be unambiguously determined, it leads one to suspect that Adibekov may have been lacking in precision and reliability. In the translation, the relation between strict adherence to the text and semantic understanding has not been resolved in a satisfactory manner, thus grotesque effects of the Russian original text have been worsened in the German translation, and colloquial passages in the author's comments remain that should have been cleaned up. Furthermore, in the longer quotations it is at times impossible to distinguish between authenticity and effect (for example, the distinction between direct and indirect quotations was not strictly observed).

The German translation of some terms, regardless of the original text, is obviously incorrect. The subject of the book, the *Information Bureau of Communist and Workers' Parties*, is referred to in the German text as the *Kominformbüro* [in English *Cominformbureau*] or simply *Informbüro* (which does not really make sense), not, as it is stated in the book, as the *Kominform* [*Cominform*].

### ***Comintern and Cominform***

The author starts with a description of the dissolution of the Comintern (Communist International) in May 1943 and asks if there had been a vacuum between this time and the foundation of the Cominform. He answers this question in the negative. In actual fact, there was a decision by the Politburo of the CC of the CPSU that created a department in the CC on foreign information with Shtersherbakov at the helm and former General Secretary of the Comintern Georgi Dimitrov and D. Manulski as deputies. In the framework of this department, a number of so-called research institutes were launched between July and September of 1943 that took over the leading cadre and some of the functions of the Comintern in relation to other Communist parties. An added task of this department was the antifascist reeducation of prisoners of war.

There are several reasons to reject continuity between

Comintern and Cominform. Adibekov characterizes the Cominform as a “product of the second Cold War,” claiming the first Cold War had begun after the 1917 October Revolution and had been interrupted during the years of the anti-Hitler coalition (29). However this may be, there was indeed discontinuity between Comintern and Cominform. Dimitrov gives Stalin’s reasons for the dissolution of the Comintern in the following way: “When we founded the Communist International we thought we could guide the movement in all countries. We overestimated our strength; that was our mistake” (35). In reality, however, it was not in the first instance about misjudging strength, but the understandable though mistaken belief in the euphoria following the October Revolution that this was the beginning of the world revolution under the leadership of the Comintern as a world party, as general staff of this world revolution. While the Comintern parties continued to cling to this belief and to proclaim it in a propagandistic manner, the leadership under Stalin had given up on the idea of world revolution by the late thirties for a number of reasons. Rightfully or not, it began to pursue power politics and made the Comintern more and more into a tool of Soviet foreign policy. One can agree with Rafael P. Fjodorov, functionary in the international division of the CC of the CPSU in the 1980s and therefore an expert on the matter, when he wrote in retrospect: “The revolutionary victory drum rolls had become mere white noise for the Soviet political class, behind which state-preserving politics were conducted that adhered to nineteenth-century concepts. The West interpreted Soviet foreign policy as subversive, even when it was only concerned with maintaining the status quo.”

This brought about another reason for the end of the Comintern. Surely the verbal commitment to world revolution and of course the pro-Soviet role of the Communist parties in their own countries were taken very seriously by the Western Allies during the war. In that sense, the dissolution of the Comintern at this time was also prompted by the desire to appease certain fears of the partners in the anti-Hitler coalition. Adibekov makes reference to a motive that was not mentioned in the decision to dissolve (35). Regarding the Cominformbureau, Adibekov states that according to Stalin’s

plans its main task was to “make the process of the development of a Soviet bloc in Eastern Europe irreversible” (30). Forgetting for a moment the hegemonic and exploitative relations between the CPSU and the other Communist parties, and considering all the contradictions in Stalin’s politics, there are two historically justifiable motives at the base of the founding of the Cominform, motives that are overshadowed by the negative aspects, motives that the author himself neither acknowledges nor mentions. The Cold War was mainly initiated by the West, as has been confirmed even by U.S. historians and politicians, in order to roll back the international influence of the USSR using military (nuclear) threat. The author does at least mention the Truman Doctrine of 1947, the Marshall Plan, and other Western activities that constituted a provocation for the USSR. As a superpower whose territory had been invaded twice in the twentieth century from Western directions, the USSR created a security buffer zone for itself with the aid of Communist politicians who looked favorably on the USSR and considered its defense as one of their international duties. In this context, it would have been important not only to put Stalin’s power politics into the center but also to emphasize that without a doubt these politics served to preserve peace in Europe. A secure peace demanded then (as now) the development of an international balance of power. Broad consensus existed on this point, not only among Communist and workers’ parties, but also among bourgeois peace proponents and scientists such as Albert Einstein, Bertrand Russell, and Leopold Infeld. A second motive was the interest of Communist parties in networking with each other, in exchanging experiences and working together. This purpose was to be served by the secretariat of the Cominformbureau, consisting of representatives of the affiliated parties (from France, Bulgaria, Italy, Poland, Romania, the USSR, Czechoslovakia, Hungary, and initially also Yugoslavia) and by the joint newspaper *For Lasting Peace and People’s Democracy*.

Following some modest beginnings as expressed by the Seventh Congress of the Comintern in 1935 and strategic orientations at the end of World War II (national paths to socialism, avoidance of the dictatorship of the proletariat, etc.), the opposite

of a renewal of the Communist movement took place. Stalin's leadership imposed a rigorous ideological and political line that led to subordination of the Communist parties and suppressed all signs of attempts at equality and autonomy. For this reason, internal CPSU documents presented by Adibekov were emphasizing even prior to the foundation of the Cominformbureau that its function should be not only information but also control and coordination, naturally under Stalin's leadership. Adibekov dedicates an entire chapter to the organizational structure of the Cominformbureau, which indicates that the CPSU was assuming the right to control other parties. All key positions in the secretariat and the chancellery (which was established later) were held by Soviet Communists, and those functionaries who were responsible for specific areas were required to collect internal information on specific Communist parties which they passed on to Moscow (237–63). In addition, the CPSU representatives in the Cominformbureau would frequently lecture other parties, from the point of view of Soviet experiences and without regard to the real conditions with which the other parties were dealing.

***1947: Yugoslav criticism (from the Left!) of ICP and FCP***

The founding meeting took place at the end of September 1947 in Szklarska Poreba, Poland. Of interest is the account of the coded telegrams that were exchanged between the Soviet representatives Zhdanov and Malenkov and the nonparticipant Stalin.

By criticizing the politics of the Italian and French CPs, which had, under pressure from the United States, resigned from the antifascist postwar governments in their countries, the founding meeting sent a clear signal that the strategy of independent national routes had come to an end. Adibekov provides comprehensive documentation on the arguments that formed the basis for this criticism. Contemporary reports on the founding meeting failed to mention any of this. It is indicative of the mutual mistrust, destructive intolerance, and self-righteousness within the Communist movement that the Yugoslav representatives E. Kardelj and M. Dilas were in the forefront of this criticism, considering that at the second session of the Cominformbureau in

1948, Tito and the Yugoslav CP would be condemned and excommunicated, later even denounced as agents of imperialism and as fascists. Adibekov claims Yugoslavia had criticized the ICP and FCP to show its commitment to Moscow, perhaps even acting on its orders. That does not seem credible, especially since he states that the Yugoslav CP rejected the peaceful road to socialism (97); its criticism was therefore entirely in line with its position. He further reports that Kardalj made a comment to Zhdanov confirming his and Dilas's critical opinion on the two CPs (96). There are numerous indications that the Yugoslav CP was the closest to the CPSU on the ideological level; for example, the Cominformbureau was first located in Belgrade. This also proves that the break was less based on ideological differences, and more on Stalin's politics of power. In spite of their "submissiveness," Yugoslavia still aspired to equality and national autonomy, something Stalin was not about to accept. The author did not elaborate on the content of the Yugoslav criticism: parliamentary illusions, opportunism, improper collaboration with bourgeois forces, renunciation of the revolutionary path to power, lack of orientation towards the Soviet Union. This was delivered by Kardalj, not Zhdanov, in a hectoring and orthodox manner.

Naturally, to properly assess the conflict one must consider the polarization due to the Cold War and the bloc mentality present on both sides. Any attempt at autonomy was seen as a weakening of the bloc. Under those conditions, in combination with the growing nuclear threat and acute war danger, a Communist grasp for power in France or Italy as advocated by Kardalj would have led not only to civil war, but likely to U.S. intervention and the defeat of the Communist forces. One must add that the ICP had truly succumbed to parliamentary illusions in the sense that it did not consider its withdrawal from government as an irreversible watershed in the postwar period, but believed it to be only a temporary interruption.

#### ***Zhdanov's analysis of the international situation***

The author gives a detailed account of Zhdanov's analysis of the international situation in his speech at the founding

meeting, especially the formation of two camps: one imperialist and antidemocratic, the other anti-imperialist and democratic (93). But the formation of blocs was not based on ideology, as is often claimed. It was indeed the basis of the Cold War, originally initiated by the United States and Great Britain. There were two problems of strategic significance with the Soviet point of view. These two problems served to isolate not only the Soviet Union but also Communist parties in the West. First, Stalin's practice of an ideological-political either/or in the international arena was no different from that of the other side. As a result, many social-democratic and left-liberal forces that may have had a favorable view of the Soviet Union were pushed away, mostly into the Western camp, a loss of potential nonsocialist allies. Secondly, the "main contradiction" between capitalism and socialism on the international level was put forward in such a way that any successes by socialist and Communist forces in capitalist countries were measured against the resolution of this main contradiction, and were also considered an increase in Soviet power. This limited the socialist perspective in Western countries. Since Adibekov adheres strictly to his sources, those strategic consequences are not to be found in his book.

The expulsion of the Yugoslav CP from the Cominformbureau and the ridiculous accusations in connection with the expulsion have caused great moral and political damage to the Communist movement, and effectively put an end to its necessary renewal (as mentioned earlier, the author does not address this topic of renewal). As early as September 1947, the foreign policy department of the CC of the CPSU had developed data on Yugoslavia claiming there were "tendencies among the leadership of the Communist party to overestimate their achievements, as well as endeavors to establish the Yugoslav CP as the 'leading' CP in the Balkans" (149). In March 1948, the Soviet ambassador in Belgrade reported on a change in approach by the Yugoslav leadership towards the Soviet Union and leadership claims in the Balkans. In an analysis of that time, the Yugoslav leaders are accused of anti-Marxist attitudes, both internally and externally, as well as disregard for Marxist-Leninist theory. In addition they were being accused

of not allowing the Soviet advisers to examine the Yugoslav economy freely; apparently that was a common expectation. It is also significant that in April 1948, the Politburo of the FCP passed a resolution that accused Yugoslavia of “underestimating the decisive and leading role of the Soviet Union and the Bolshevik party under Stalin’s leadership” (149), possibly as a response to the Yugoslav criticism of the FCP at the first meeting. This was followed by a well-documented exchange of letters between the CPSU and the CP of Yugoslavia.

### ***1948/49 “Excommunication” of the Yugoslav CP***

The second session of the Cominformbureau took place in June 1948 in Bucharest. The Yugoslavs had been asked several times to participate, but they refused since they did not want to face the expected criticism. On 29 June 1948, the remaining eight parties passed a resolution stating the Yugoslav CP had positioned itself outside of the family of fraternal Communist parties. The secretariat of the Cominformbureau moved to Bucharest. Adibekov cites extensively from the minutes of speeches by Zhdanov, Duclos, Togliatti, Rakosi, and Slansky. Aside from minor differences, all of them support the verdict against Yugoslavia (155). Other questions such as the structure of the Cominformbureau, methods of cooperation, and the character of the people’s republic appear to be taking a back seat.

The third and final session of the Cominformbureau took place in November 1949 in Budapest. The discussion centered around Suslov’s paper “On the Preservation of Peace and the Struggle against the Warmongers.” Prior to this, the first World Peace Congress had taken place in April 1949 in [Paris and simultaneously in] Prague [for those denied visas by the French—Ed.], mostly due to Soviet initiatives that are documented with relevant sources. Obviously Adibekov is doubtful of the sincerity of these activities, which were intended to win over a wide range of forces of different political, ideological, and religious outlook to the Soviet peace policy, since he states: “In response to the military challenge posed by the Western ‘hawks,’ the Soviet Union wanted to appear to millions of people as the ‘dove with the olive branch’” (199). As previously mentioned, he obviously

misinterprets the problems of war and peace during the Cold War era as well as the corresponding policies by the Soviet Union and Communist parties.

***“A gang of spies and murderers”***

The second main theme of the session proved to be disastrous: G. Gheorghiu-Dej of Romania presented a paper under the title “The Yugoslav Communist Party under Control of Murderers and Spies,” which served to escalate the malicious accusations against the Yugoslav Party. The paper talked about “a gang of spies,” as well as “fascist animals,” and “an agency of imperialist aggressors and warmongers.” Adibekov shows a number of draft documents proving that this paper had been created in the international department of the CC of the CPSU. On the other hand, representatives from other parties agreed with the accusations and added to them. At the same time, Hungary and Bulgaria reported on court trials against L. Rajk, a leading Hungarian Communist who held the posts of minister for internal and later external affairs; T. Kostov, a leading Bulgarian Communist and deputy prime minister; as well as a number of others who were falsely accused of being agents of imperialism and subsequently sentenced to death (212).

Following the third meeting, there were a number of meetings of the secretariat. A fourth plenary session of the Cominformbureau had been planned for December 1950, but it was postponed several times and in the end it did not take place. The CPSU had developed plans for reorganizing, strengthening, and broadening the Cominformbureau. Those plans were discussed in the secretariat meetings and included “the formation of a standing working secretariat and the creation of the position of General Secretary of the Informbureau” (288). In the ensuing tug-of-war, Stalin tried to get Palmiro Togliatti to apply for the position. Togliatti refused, stating that he was needed in Italy, that people would not understand such a move and would interpret it as desertion. At the same time, Togliatti in his response to Stalin criticized the work of the Cominformbureau (307). Adibekov cites Soviet sources that claim “the majority of the ICP leadership” had supported Togliatti’s refusal. Obviously Adibekov is not familiar with data from the Italian Party that show a different picture. Towards the

end of January 1951, L. Longo and P. Secchia, the most prominent leaders of the ICP besides Togliatti, were invited to a meeting with Stalin in Moscow. Stalin repeated his offer, but Togliatti stood firm. Following Longo's and Secchia's return, the national leadership of the ICP met in Rome and decided that Togliatti should accept Stalin's offer. Apparently Togliatti was deeply hurt by this decision, which constituted a serious conflict between him and the majority of the leadership. After his return on 10 February, a heated debate reportedly took place in the national leadership.

The author sums up: "Be this as it may, a whole year of serious efforts of the external affairs sections of the VKP(B) [Russian initials of the then name of the Soviet CP—All-Union Communist Party (Bolshevik)] in search of a way out of the unexpectedly difficult situation that arose from the confrontation between Stalin and Togliatti failed to yield any results. The fourth plenary of the Cominformbureau was never called, the secretariat did not meet even once. It is possible that Stalin lost interest in the Cominform" (315).

### ***1956: Dissolution of the Cominform***

On 17 April 1956, the paper *For Lasting Peace and People's Democracy* published a document signed by all participants on ceasing the activities of the Cominformbureau. This was the result of a partial overcoming of Stalin's legacy by the new CPSU leadership under Khrushchev that had become manifest at the Twentieth Party Congress in February 1956. An important element of this process was the Yugoslav question. Adibekov does not mention that a Soviet delegation of Party and government representatives under the leadership of Khrushchev went to Belgrade in May/June of 1955 to reinstate relations. Against the will of Molotov, who had played a decisive role in the condemnation of Yugoslavia, Khrushchev admitted that the CPSU (supposedly Beria) was primarily responsible for the break of 1948. The other parties that had participated in the conflict were advised about this act of reconciliation.

Prior to the end of activities of the Cominformbureau, but following the Twentieth Congress, on 14 April 1956, a letter by Khrushchev was sent to those parties who were part of the paper

*For Lasting Peace and People's Democracy*. It stated: "This is to inform you that the CCs of the Communist and workers' parties in the Informationbureau have agreed to put an end to the activities of the Informationbureau and to terminate publication of the paper *For Lasting Peace and People's Democracy*." The Informbureau and its paper had played "a positive role in the development and strengthening of fraternal ties, the mutual exchange of experiences by the Communist and workers' parties, in postulating questions on Marxist-Leninist theory and its application to the concrete circumstances of individual countries and the world Communist movement." This had contributed to "the ideological, organizational and political consolidation of the fraternal parties and to the strengthening of the mass influence of the Communist parties." At the same time, the last few years had seen changes in the international situation; socialism had become a world system; a new "zone of peace" had been formed, which included socialist and peace-loving nonsocialist countries in Europe and Asia; many Communist parties in the nonsocialist world had experienced growth, etc. (322). Neither the letter nor the published document made any reference to deficiencies, errors, the accusations against the Yugoslav Communists, or the subsequent withdrawal of those accusations.

In spite of the weaknesses and gaps in this book, Adibekov uses a multitude of previously unknown sources to show how the leadership under Stalin exploited the ongoing rise of the international Communist movement, how they made it subservient to hegemonic interests, and in this way caused immense damage that was never really mended, especially since the necessary reality-based structural, strategic, and theoretical renewal of the Communist movement did not happen after the Twentieth Party Congress.

Originally published in *Marxistische Blätter* 2-03 (January-February [2003]): 75-82.

*Berlin*

*Translated by Hanna Gidora*

*Coquitlam, British Columbia, Canada*

## ABSTRACTS

**William T. Whitney Jr., “Becoming a Physician: Class Counts”**

—Despite affirmative action, the proportion of minority students in U.S. medical colleges is unchanged. Affirmative action has failed to remedy discrimination based on class that affects entrance into medical schools.. Data relating to income, education, and occupation of the parents of medical-school applicants indicate that most entering medical students, Black and white, are from middle- or upper-class origins. Working-class Black youth suffer discrimination that relates principally to the adverse conditions of childhood poverty. Equity in medical-school admissions will occur in the context of improvements in early childhood that relate to the attainment of social justice.

**Eftichios I. Bitsakis, “Complementarity: Dialectics or Formal Logic?”**

—Complementarity constitutes one of the pillars of the Copenhagen interpretation of quantum mechanics. Eminent physicists like V. Fock and L. Rosenfeld, and some contemporary Marxists have viewed complementarity as a dialectical principle. However, complementarity considers as mutually exclusive attributes such as the position, the momentum, and the corpuscular and the wave properties of a particle. Dialectics, on the contrary, considers opposite attributes not as mutually exclusive, but in their unity and struggle. Consequently, complementarity conforms to formal logic and the positivist epistemology, not to dialectics. Also, its generalization in order to include phenomena of biology and psychology is without foundation. In conclusion: complementarity is neither a principle nor a concept. It is not verifiable or falsifiable, and it has not produced new knowledge.

**NST Conference in Vietnam: “The Global Economy and the National State”**—*Nature, Society, and Thought*, in cooperation

*Nature, Society, and Thought*, vol. 15, no. 3 (2002)

with the Ho Chi Minh National Political Academy, sponsored a conference and study tour in Vietnam, 5–17 January 2003. In volume 15, no. 2, we presented a report on the study tour, including principal features of the socialist market economy in Vietnam, and a selection of papers presented at the two-day conference in Hanoi. In this issue we present the second selection of papers. Additional papers will be presented in volume 15, no. 4.

## ABREGES

**William T. Whitney Jr., «Devenir médecin : La Classe comte»**—En dépit des mesures anti-discriminatoires en faveur des minorités, la part des étudiants issus de ces communautés aux facultés de médecine des Etats-Unis reste la même. Ces mesures n'ont pas réussi à juguler la discrimination, provenant de la classe qui ouvre ou non les portes des facultés de médecine. Les données en rapport avec le revenu, l'éducation, et le métier des parents des candidats indiquent que la plupart des étudiants admis, noirs et blancs, sont issus des classes moyennes ou supérieures. La jeunesse noire et celle de la classe ouvrière souffrent d'une discrimination qui a son origine principale dans les conditions défavorables d'une enfance vécue dans la pauvreté. L'équité dans l'admission aux facultés de médecine viendra dans le contexte d'une amélioration des conditions de l'enfance en relation avec l'épanouissement de la justice sociale.

**Eftichios I. Bitsakis, «La Complémentarité: La Dialectique ou la logique formelle?»** — La complémentarité a constitué un des fondements de l'interprétation de la mécanique quantique par l'Ecole de Copenhague. D'éminents physiciens marxistes, tels que V. Fock ou L. Rosenfeld, ainsi que des physiciens ou philosophes contemporains, ont considéré la complémentarité comme un principe dialectique. Pourtant, selon ce principe, des attributs tels que la position et l'impulsion d'une particule, les propriétés corpusculaires et ondulatoires etc., s'excluent mutuellement. La dialectique, au contraire, considère les attributs opposés dans leur unité et opposition. En conséquence, la complémentarité est

conforme à la logique formelle et l'épistémologie positiviste, et non à la dialectique. Aussi, la généralisation de ce principe dans le domaine de la biologie et de la psychologie est sans fondement. La complémentarité, enfin, n'est ni principe ni concept. Elle n'est ni vérifiable ni falsifiable. Elle n'est pas opératoire pour la production de nouvelle connaissance.

**Le Congrès NST au Vietnam: «L'Economie globale et l'état national»** — *Nature, Society, and Thought*, en collaboration avec l'Académie politique nationale Ho Chi Minh, a organisé un congrès international et un voyage d'étude au Vietnam, du 5 au 17 janvier 2003. Au volume 15, numéro 2, nous avons présenté un rapport sur le voyage d'étude, y compris les caractéristiques principales de l'économie socialiste au Vietnam, et un choix des communications présentées lors du congrès de deux jours à Hanoi. Dans ce numéro, nous présentons le deuxième choix de communications. Des communications supplémentaires seront publiées dans le volume 15, numéro 4.