

## CONCLUSION

German socialists had an ambiguous relationship with Darwinism in the late nineteenth century. They were elated with Darwin's elimination of teleology from nature, which they regularly summoned in defense of their materialist world view. Religion, they thought, had been delivered a fatal blow by science. Thus they--like many of their contemporaries--used Darwinism to support non-scientific philosophical positions and ideologies. Many German Darwinists were likewise hostile to religion, especially in the form of traditional Christianity, and thereby won the admiration of socialists. However, most Darwinian biologists were liberals politically, and many supported laissez-faire economics and militarism, positions opposed by socialists. They often appealed to Darwinism as justification for their liberal views and tried to paint the socialists as unscientific.

In order to defend themselves against social Darwinists, who reproached them for holding views contradictory to the Darwinian laws of evolution, many socialists--especially Marxists-- developed two main strategies: (1) they denied that natural laws are directly applicable to society, because humans are qualitatively different from animals; and (2) they denied the mechanism of natural selection and favored non-Darwinian theories of species change. By maintaining a sharp distinction between humans and animals, socialists opposed Darwin's non-saltatory approach; but in doing so, they risked undermining the naturalistic, non-teleological thrust of his theory, the very aspect of his thinking that they most admired. Darwinian biologists--including Darwin himself--were intent upon demonstrating the continuity between different species, including humans and their anthropoid ancestors, and the variety within species, such as human races. Their position was far less tenable if humans were qualitatively different from animals.

Socialists did not all agree on how to integrate Darwinism or biological evolution into their world views, and two main forms of socialist Darwinism developed: a Marxian and a non-Marxian variety. Marxists came to control the leadership and theoretical organs of the Social Democratic Party in Germany in the late nineteenth century, and thus their views on Darwinism and evolution exercised great influence in the SPD. There were many similarities in the way that Marxists, including Marx, Engels, Bebel, Kautsky, and Bernstein, incorporated biological evolution into socialist theory. However, some non-Marxian socialists--including Lange, Büchner, and Kautsky before his conversion to Marxism--took a position on Darwinism quite different from the Marxists and spread their ideas widely in socialist circles.

One difference between these two camps was that the Marxists rejected the application of the Malthusian population formula and the struggle for existence to human society, while Lange and Büchner considered the struggle for existence inevitable, even for humans. However, Lange and Büchner did not embrace the social Darwinist stance, since they believed that human rationality and morality could intervene in the struggle for existence. They saw no need to cooperate with the struggle or to submit to its more brutal aspects, as many social Darwinists did.

When applied to human evolution, strict Darwinism with its stress on natural selection and the struggle for existence was inconsistent with Marxian social theory. This forced Marxists to adopt non-Darwinian evolutionary theories, at least with respect to humans. While sometimes admitting that natural selection might play a role in the evolution of non-human organisms, they generally stressed other evolutionary mechanisms. Their views on biological evolution paralleled their materialist conception of history, since they emphasized the role of the environment in influencing the course of evolution. They were very open to Lamarckian explanations, which were more compatible with their concept of social progress than Darwin's Malthusian position. To a greater extent than they would have admitted, their social views shaped their receptivity to scientific theories. There was a rough

--correlation between evolutionary theories and the political and social positions of their adherents in late nineteenth-century Germany.

Another distinction between the Marxian and non-Marxian socialists was that Marxists advocated social revolution, while Lange and Büchner preferred peaceful, gradual social evolution (though Lange's and Büchner's political agendas were actually quite radical). While their gradualism was not borrowed from biological theory, Darwinian gradualism seemed to support their position. Evolutionary theory probably also played a significant, albeit subsidiary role, in the conversion of Bernstein from revolutionary to evolutionary socialism.

However, it is doubtful that Darwinism stripped orthodox Marxism of its revolutionary edge in the late nineteenth and early twentieth centuries by replacing the praxis-oriented dialectic with evolution, as some left-wing critics of Bebel's and Kautsky's centrist position have alleged. Some version of biological evolution was upheld by all major Marxist theorists, even the most revolutionary, including Marx, Engels, and Lenin. They saw no contradiction between it and the dialectic. Practical politics and economic developments account for the centrist position far better than the infiltration of biological evolution into socialist theory.

Like so many of their (and our) contemporaries, socialists displayed a remarkable ambivalence toward science. Sometimes they touted scientific theories as evidence supporting their philosophical, political, and social positions. However, when scientific theories threatened their philosophical and social beliefs, they retreated to a nature-society dualism and claimed immunity for their social theories. Since evolutionary theory was still hotly contested ground in the late nineteenth century, they adopted only those evolutionary theories most amenable to their social philosophy (such as Lamarckism) and opposed ones less compatible with their world view. In this manner, they illustrate quite clearly the interconnectedness of scientific and social thought in late nineteenth-century Germany and confirm that Darwinism was indeed social.