CHAPTER ONE

INTRODUCTION

The concept of ice ages is one of the great scientific discoveries of the 19th century. The path which scientists had been following up to that point was forced to turn as abruptly as the one at the foot of the Findling depicted on the front cover. As in the photo, it pointed toward new horizons, opening up new perspectives and novel explanations for hitherto incomprehensible phenomena, with numerous points of departure for further inquiry. Too often this discovery has been overshadowed, surely unjustifiably, by other great scientific achievements of that century. Consider, for instance, the foundations of organic chemistry, or the development of modern historiography, or the theory of evolution. This book intends to put an end to this shadowy existence. It presents the exciting and multilayered history of the discovery of the ice ages seen from an international perspective and casts light on its consequences.

1.1 Basic Preliminary Thoughts

In his Concluding Unscientific Postscript the Danish Philosopher Søren Aabye Kierkegaard (1813–1855) probed the nature of historical knowledge. He arrived at the view that all historical knowledge and all scientific inquiry was at best an approximation. Kierkegaard saw the reason for this, on one hand, in the impossibility for an investigator to identify perfectly with the object of his or her interest. On the other hand, historical knowledge always relates to past events and therefore to the nature of recollection.

As concerns history, all knowledge of it or all apprehension is at most an approximation, even as concerns the individual’s own knowledge about his own historical exterior. The reason is partly the impossibility of fully identifying with objectivity, partly that all history, by having to be known, is eo ipso past and has the ideality of memory.1

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1 Kierkegaard [1846] 1959, 78ff.
The theologian, philosopher, and historian Ernst Troeltsch (1865–1923) came to a similar assessment. In his study *Historismus und seine Probleme*, published in 1922, he distinguished four principles of the then prevailing understanding on history: the assumption that humans are the subject of history; furthermore, the orientation toward analogy, correlation, and probability. The last Troetsch understood as that historical research can always only arrive at judgments on likelihood. Historical knowledge never leads to philosophically existential certainties. Latest by the 1950s and 1960s, the historicism advocated by Troeltsch and many of his contemporaries stood under increasing fire and now largely counts as superseded. Growing awareness of ecological relationships also raises doubts about the assumption that people be the only subject of history. Almost necessarily this anthropocentricity must come at the cost of nature. History is also about civilizations interacting with nature.

It is intrinsic to historiography that history never be its sole subject matter. It itself is embedded within the historical events and hence is historical, too. Consequently there is no historical knowledge independent of the interests and issues of its day. Nevertheless it would be problematic to regard this temporal dependence of historical understanding only as a predicament. For, if the past is set within the horizon of the now, it can be made fruitful for the present.

Strictly speaking, the writer of history would even have to try to look beyond the field of view of the present. The exercise thus is to weigh the relevance of transmitted facts also for the future. The future alone reveals the full importance of an event. It is the dilemma of the historical sciences, however, that the significance a past event will gain for a given aspect is mostly unpredictable. That is why the historiographer actually first ought to wait until the end of a story in order to be able to ascertain the full significance of its elements. In the meantime, the historian—as do humans generally, as historical beings—always lives in anticipation of the future. Historical accounts are thus always preliminary. Any social or political change—in short, any historical change—sheds new light on the past. This means that history constantly has to be revised and rewritten under different statements of the problem. The philosopher Hans-Georg Gadamer (1900–2002) formulated this situation in his work *Wahrheit und Methode* thus: “In view of the finitude of our historical existence, there is,