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It is hard to imagine what this fine monograph is about without actually knowing Chaco Canyon, and its importance in the development of both American archeology and geomorphology. If you happen to be a tourist, Chaco Canyon is located smack in the center of a cultural mecca, Anasazi cliff dwellings of Mesa Verde and Canyon de Chelly to the north and west, living pueblos of the Rio Grande, Zuni and Hopi to the east and south, and flocks of sheep and Navajo round houses or 'hogans' throughout. The natural backdrop is an open landscape, broken by low mesas and dissected by canyons, the pastel colors of sandstones and shales.

Chaco Wash, an ephemeral and intermittent stream, begins west of the Continental Divide, cuts through Cretaceous bedrock to form the 1-km-wide Chaco Canyon, and then emerges to join Escavada Wash enroute to the San Juan River. In the late nineteenth century, Chaco Wash entrenched a deep channel or arroyo within the Holocene alluvium of Chaco Canyon, exposing in its walls the alluvial history as well as the buried portion of the canyon's impressive archaeology. The timing and causes of past arroyo formation in Chaco Canyon, and elsewhere in the southwestern USA, have preoccupied physical geographers, geologists and archeologists since the turn-of-the-century (Dodge, 1902).

Between A.D. 900 and 1150, Chaco Canyon buttressed development of a complex culture characterized by monumental architecture, advanced agricultural and water control systems, and elaborate road, trail and signaling networks that integrated numerous communities into a regional exchange, communication and resource procurement system. Twelve great houses – multistoried masonry pueblos of several hundred rooms each – occupy the Chaco Canyon core of the regional system. This regional system was in full swing in the eleventh century but collapsed during a regional drought that lasted from A.D. 1130–1180.

Speculation about Anasazi abandonment has usually entailed a complex of buried channels once thought to post-date occupation of the most stunning of the great houses, Pueblo Bonito. This led the notable American geomorphologist Kirk Bryan (1954) to call them 'post-Bonito channels' when he mapped the canyon's stratigraphy in 1925/ Conventional wisdom was that channel entrenchment spoiled the canyon's agricultural potential and the Anasazi left, never to return. The alluvial stratigraphy of Chaco Canyon has since been mapped by other geologists, notably Hall (1977) and Love (1980), both of whom recognized that the channels in question formed at the beginning, and not at the end, of the Bonito occupation. The present volume by Force *et al.* on the so-called 'Bonito' channels represents the most recent reiteration, a conscious attempt to relate drainage evolution to habitation patterns in Chaco Canyon.

Force *et al.* mapped alluvial cross-sections in arroyo walls at 150 locations, with most of the dating provided by detrital, diagnostic ceramics whose ages are known from their occurrence in tree-ring dated structures at Chaco and elsewhere. It appears from these ceramic assemblages that Bonito channels became entrenched between A.D. 900 and 1025, filling between A.D. 1025 and 1090. Great houses like Pueblo Bonito (A.D. 850–1200) were occupied from before entrenchment until after the Bonito channels had completely aggraded. Thus, at different times, the Chaco Anasazi must have figured out ways to cope with diverse engineering problems, from occasional inundation of an unincised floodplain to deep entrenchment of main and tributary channels. In

the latter case, the Anasazi captured water on alluvial fans upstream of entrenched tributaries and distributed it across gridded fields in the interfluves. Ironically, the Anasazi abandoned Chaco not during a time of channel entrenchment but during a time of unincised floodplains and valley flooding.

In what will be considered controversial by some geomorphologists, Force *et al.* suggest that both cutting and filling may have been responding to base level variations modulated by occasional breaching of an eolian dam at the confluence with Escavada Wash. Their new and improved alluvial history of Chaco Canyon raises questions about climatic forcing and regional correlation of cutting and filling 'cycles' in the southwestern USA. The new chronology makes Chaco Canyon out of phase with other sites in the region. Fluvial responses to climate variability may be intrinsic and complex, and not easily mappable across the same hydroclimatic region.

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In the UK, these are worrying times. Whilst change can be the spur to improvement, uncertainty over possible outcomes leads to consternation. Since the first edition of this book in 1985, physical geographers in the UK have had to contend with two new external drivers of change. In the 1980s, we saw the introduction of research assessment, using a methodology that has been slowly refined to its current guise, based largely upon assessment of the quality of four pieces of output published over a five-year period. As with any change that is explicitly linked to resource allocation, most of us have been increasingly subject to the dictates of ever more active university bureaucracies in an attempt to maximize performance: new targets for research income; publication goals based around ISI-ratings; expansion of doctoral training programmes; restructuring or closure of weak geography departments; mergers of geography departments with other geoscience or social science departments to create 'new strengths'; and increases in undergraduate recruitment to subsidize the improvements in research achieved but which were not fully funded. Secondly, we now have our own National Curriculum for a geography degree. It has ten benchmark statements that relate to knowledge and only two are explicitly (but not exclusively) the domain of physical geography: A2, the diversity of global environments and the operation of, and inter-relationships between physical and biological systems over a wide range of spatial and temporal scales; and A3, patterns and processes of environmental change and their inter-relationships with humans. Clear physical geographical links are provided in two others: A9, the theory and application of quantitative, visualization and other spatial techniques across a wide range of geographical contexts; and A10, the contribution of geography to development of environmental, political, economic and cultural agendas, policies and practices. To enforce these, as well as good practice more generally, we have growth in teaching bureaucracies. These have developed from our early experience of subject review into institution-managed quality control frameworks. The new 'light touch' in terms of peer review of teaching is accompanied by a 'heavy touch' in terms of the volumes of paperwork our institutions now wish us to provide (annual reviews of modules and programmes, skills audits, quality of life surveys, teaching planning systems, etc.). Whilst some of these are clearly beneficial (e.g., annual reviews of progress in equal opportunities and disabilities), rather like research, we have a growing number of policy makers detached