

Like Sex with Gods

Sample Pages

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INTRODUCTION

Human flight is not a simple matter of science and technology. It is a continuing epic of dreams and obsession, of yearning and striving to harness the intellect in the service of the emotions. Humanity's drive toward the heavens has many wellsprings and multiple streams, all of them interacting with and reinforcing the others. Technological ingenuity is simply one outlet for the ancient dream. This book integrates both aspects of this quest, the psychological and the technological, as expressed in art and artifact.

For millennia, people of all cultures have dreamed of flying. Their dreams have had overtones of religion, of liberation and redemption, of sexuality, and of empowerment. Flight is fraught with symbolism, the stuff of legend and myth. Flying has been an end in itself, and a means to other ends. This book explores these complex and varied underlayers of a universal urge, an urge which has not been satisfied by the accomplishments of the twentieth century. Humankind continues to dream of flight: ever higher, further, faster.

The power of these dreams is reflected in the persistent efforts over the millennia to bring them to fruition. From magic carpets and har-

nessed eagles to kites, balloons, and ornithopters, people have devised an astonishing assortment of mechanisms in pursuit of their objective. They have risked, and in many cases lost, their lives. The flight of the Wright brothers marks just one point on a continuing path which extends through the present and into the future, as humanity takes its first steps into space. The psychological aspects of human flight reinforce the technological, showing their mutual relationship and reflecting the complexity of humanity's motivation and ingenuity.

The path from dream to invention has broad implications. Economists studying capitalist systems emphasize the importance of technological development to the health of the economy and our rising standard of living. What are the driving forces behind technological change? How can we understand, and perhaps harness or guide, those forces?

Historians of technology agree that invention is part of a process embedded in society and intended to satisfy values held by members of society. It does not occur in a vacuum; it is not the disconnected product of a single mind or of progress along one "correct" path. The dream of flight, and its fruition, provides one example of this general truth. The various roots of this development include religion, curiosity, literature and the fine arts, the intellectual playfulness of mechanically minded people, and the general social attitudes toward inventiveness in general and flight in particular.

The old proverb says "Necessity is the mother of invention." All too often, Necessity is construed as simple economic pressure, part of the drive for survival. As historian George Basalla points out, plants and animals of all sorts survive very well without invention.¹ The wellspring of invention might be better sought in play, in imagination, and in the capacity for abstract thought. The general direction in which imagination flows is provided by the values and social structure of the community, although there is the rare case of imagination "flowing uphill," as it were, apparently supported only by the sheer persuasive force of genius.

For an invention to become more than a figment of the imagination, however, the time must be ripe. The social and material environment must provide a nourishing atmosphere; materials must be available to construct the invention in a workable manner; there must be rewards for the inventor, and a mindset favorable to adopting the innovation. The cultural reaction must be "oh, that's just what we've been looking for, and didn't realize it" rather than "that might be a clever toy, but it's not really important." Modern Westerners often assume that if some-

thing *can* be done, it *will* be done, ignoring the very real fact that rejection has occurred, that technological and behavioral choices do not always embrace things that seem alien to cultural values.

All these factors are visible in the story of humanity's long-term and universal fascination with flight.

THE APPROACH

There are many ways to approach history. One is to begin with one event or artifact, and look for antecedents; the operative question then is "how did this come to happen?" This is like saying "I'm here: who are my parents, my grandparents, what is my heritage?" You could imagine this as a group of brooks and streams, combining along the way to form one mighty river. If we start with the Wright brothers and their airplane, we would look backwards in time to see where and when the ingredients were developed, and say "See, here we have investigation into the properties of air, there we have development of small motors, over there we have the discovery of cambered airfoils" and so on. We might then draw some more or less straight lines connecting these points, and call it the history of flight.

This approach makes it much too easy for us to judge each stream or brook by its contribution to the river; to assume that the primary purpose of each little watercourse is to ultimately become part of the river, and if it does not do so then it has somehow "failed." If we think of "flight" as meaning only the airplane, we would dismiss everything that did not lead directly to airplane development, ignoring all the other aspects of flying. This approach invites such summaries as "misguided and eccentric characters ran riot over the field of aviation in the 19th century, while a few wise men strove to keep it on the right lines of development."² We would regret the time "wasted" trying to imitate birds, or to utilize human power. We might ignore the balloon, the kite, and the dirigible as irrelevant to the "real" history, as dead ends on the road to the airplane. Or we might notice these things, but consider them quaint minor diversions along the mainstream. Grudgingly, we might concede that they helped keep the dream alive, and provided means for scientific exploration of the atmosphere. They would deserve only a brief mention before our attention turned to the Wright brothers and their contemporaries. We would miss a lot of fun, and some important lessons.

It is also much too easy to get caught up in the image of accumulating waterflows, and ignore the fact that life is seldom so tidy.

