Mankind

The human race shares with the animal kingdom an urge to survive and when this urge is secure, a preference for comfort, pleasure and prosperity. But when these have been moderately satisfied, men and women differ from beasts in pursuit of what they call higher ideals, summarized by philosophers under the convenient headings of goodness, beauty and truth. And these ideals have been pursued not only by individuals but collectively, by societies which have devoted significant material resources to their advancement.
The pursuit of goodness has long been associated with the rise of modern religion. (with the teachings of religion, which have inspired moral behav. arc 3m inspir. its encouragement to morality and its comfort its misery. And both religion is promoted by a profession of moralists philosophers and moral philosophers and theologians, priests and priestesses, monks and nuns, who have been maintained by society to wax in varying degrees of comfort and prosperity. But support from the States for religion is no longer a significant item of the budget, and there is no great call for its growth.

The sponsors were motivated perhaps by social goals, or by hope of heavenly reward; but those who engage in religious life are expected to devote themselves to religious ideals and holiness, above and beyond all material concerns of their benefactors.
Beauty

The pursuit of beauty has also been strongly promoted by public finance: the public buildings in the cities of Ancient Greece and Italy, the art and sculpture of the renaissance, the music of the baroque period were all sponsored by powerful political patrons of the day; and the tradition is maintained on a less significant scale by large banks and insurance companies, (and to a lesser extent by government subsidy) in the interests of tourism. Base motives perhaps: but those who receive the subsidy, the artists, musicians and actors, are paid to pursue—
the ideals of their profession with total dedication, and total indifference to motives, of the sponsors or incidental effects or spin-off from their activities.
The pursuit of truth was the aim of the philosophers of the ancient world from before the time of Socrates. The use of experiment and observation, pursuit of mathematical truth by means of postulates and theorems has Euclid among its earliest proponents. The pursuit of scientific understanding by means of experiment and observation, certainty dates more recently from Aristotle before Aristotle, and has Galileo among its best-known champions. But until recently the research into physical and biological science has been the part-time activity of clergymen, eccentric dilettante, and those entrusted with the education of young people around the age of twenty. And for that there is good reason. A subject is best taught by a teacher who is passionately interested in it; and a small amount of research is the best way of maintaining that interest.
But now the situation is dramatically changed. The resources (now dedicated to the pursuit of truth) exceeds by a large factor the total expended on the pursuit of goodness or of beauty, not only at the present time but throughout history. Physicists have developed an almost complete understanding of the fundamental constituents of the physical universe at a level of detail unimaginable only fifty years ago, and astronomers have been able to tell an amazing story of the origins of the planets, the stars and galaxies, far more fantastic than those of the ancient mythologies. Each new advance in understanding seems to open up yet another vast unknown field for biologists to explore.
These discoveries have been made almost by scientists of great brilliance, conducted motivated whose primary ideal is the pursuit of truth; and the satisfaction of curiosity by and their vast experiments have been generously supported by public funds on an international scale. However, but however much they discover, each of their brilliant discoveries seems only to uncover a host of new and unexpected problems, all worthy of which cry out for resolution. In the past, the inhibiting factor has been the number of scientists capable of working in the field, and the delays involved in building experimental apparatus. But now increasingly it is limitation of public funding that slows down the progress of basic science. And rightly so: why should we not leave some discoveries for future generations to enjoy and pay for. Beauty and goodness
are also human ideals, worthy of public support. But we have no respect for a civilisation that destroys itself by devoting too much of its resources to its religion or to its castles and cathedrals.
Now I come to the moment of disillusionment. The scale of support for scientific research today is far greater than can be explained by the pure pursuit of truth, even when combined with beauty and goodness. How I have even misled you about fundamental human propensities, those that distinguish us from brute animals. After survival and comfort, we see it is not goodness nor beauty nor truth that we seek—it is victory in war. For that we are prepared to sacrifice certainly all our comfort and even risk our survival.
But only a small proportion of modern research is motivated by curiosity. The momentum of the idea that anything goes has been going on for some time. And if the prospect of the new war has been to ensure victory in the next war, then the motive has been to ensure victory in the next moment. If there happens to be no war, the motive has been to ensure victory in the next moment. But the moment of research is momentous. Its aim is not so much to make the world a better place, but to make the moment better.