

Honorable President Marialuisa Stringa, Honorable Mayor of Florence, Secretaries General, Distinguished Delegates, Ladies and Gentlemen:

I am grateful to all the officers of the UNESCO Center in Florence, especially its President, who have deemed it appropriate to confer this honor upon me today. There is hardly anything in return that I can offer except for the promise to live up to the expectations raised by the occasion. Thank you all for your graciousness.

In the history of western civilization, the cultural accomplishments of Florence are matched perhaps only by those of Athens in its golden age. The stirrings of renaissance first occurred in Florence---and the city's writers, painters, architects, and philosophers made the city perhaps the most exciting and intellectual center in the 14th and 15th centuries. Today's Florence is thus not simply a city of great museums, beautiful cathedrals and churches, interesting streets and

squares with elegant buildings and shops---all of which it indeed is---but, even more properly, it is a city with which the great poet Dante, incomparable artists like Leonardo, Michelangelo and Donatello, and the extraordinary scientist Galileo, were associated. One can list more great people who were either born or lived here, and influenced the early renaissance tremendously and, through it, the substance of the western civilization.

Consider Dante. He is one reason why Florence, rather than Rome, symbolizes Italy. Dante was instrumental, I think, in getting Italian accepted as a language suitable for sophisticated literary work; he was also the symbol that loosened Italy's connection to its imperialist Roman past. Although Italy had emerged nearly free from the shadow of that glory long before Dante, the long-gone that still presented itself as an ideal was further watered down by Dante, who projected the view that famous men and events are often disappointing upon closer scrutiny---and that fame is often empty. This

skeptical attitude, prevalent even in today's Italy, must have come from there. Galileo defined modern science and freed it from religious constraints and Aristotle's legacy. I will not belabor the point that Leonardo and his interdisciplinary approach is the hallmark of what UNESCO promotes: that art, science, technology and medicine are all part of broader education.

The impressive aspect of renaissance is the rise of humanism and the evolution of a certain societal structure that allowed individualism to flourish, thus unleashing the latent power of people, independent of empires and kingdoms. At least on hindsight, one cannot but marvel at the positive gains made during the period.

Alas, several hundred years later, there are large parts of the world where the benefits of renaissance have not yet reached. In those parts which were enlightened long before the Italian renaissance occurred, matters have regressed due to centuries of neglect and the lack of continuity with the past. The human

potential is still held in bondage in many places because of the lack of opportunities, the absence of foresighted leadership and decent governance, as well as the constant meddling by powerful nations: Florence readily understands this last point, considering how often it was a pawn of outside influence. We have to be able to mine creativity from the extraordinary depths to which countries and regions have sunk, in order to solve the multitude of problems that face us and our planet today. This cannot be done unless the spirit of free inquiry soars again--- this time on a much larger scale than was touched by Italian renaissance. Just imagine: if 1.6 billion people in today's world live without electricity, how much they must have missed! More importantly, how much the world as a whole is diminished by losing them in our collective enterprise! The more the human knowledge has advanced, the bigger is the part of the world that is being left behind. A different type and scale of renaissance will be needed if we have to extricate ourselves

from this ridiculous situation; our task is to initiate actions that will bring about the needed changes.

From these somewhat shallow remarks, I shall now come down to making a few specific remarks about ICTP, which is the Centre that I presently have the honor to direct; I will connect my remarks with Trieste at large, return to Florence and to the spirit of the general remarks already made.

Allow me to state that, in seeking the type of advancement that we are considering here, a certain level of scientific development and maturity will be needed of every population and nation. Scientific development of a nation requires a good base of competent scientists working effectively in that country. Steady migration of scientists away from a poor country erodes its scientific development, but long-term isolation of scientists renders them useless and debilitated. A worthwhile goal, therefore, is to empower the mobility of scientists without encouraging their permanent migration, expose them to the best science possible, so, they, in turn, can advance and

ensure sustainable progress of their own countries. This is the essence of building scientific capacity. Building scientific capacity in the world has been ICTP's central goal since its inception in 1964. Today more than ever, all of us are aware that no part of the world can be held too far back---if only for reasons of our self-interest of common survival.

Our Centre helps to build successful scientific careers of young scientists working in developing countries by providing them guidance, access to scientific knowledge (through well-chosen programs at ICTP and in their own countries), and by giving them other opportunities as appropriate. It also maintains a strong culture of scientific research within ICTP, so that, together with similarly strong scientists from all other countries, we can act as a connecting thread for needy scientists and, perhaps, as a source of inspiration as well.

For the programs that we conduct at ICTP, we invite about 5000 visitors every year who stay at ICTP for periods on the order of weeks to months (and sometimes longer). The

programs are tailored to meet various perceived needs, and cater to the young (immediately past their Bachelor of Science degree) as well as to the experienced (occasionally even past fifty years of age). We support more than a dozen affiliate centers outside Italy to nurture scientific groups working together. Overall, the Center has hosted from the start some 100,000 of the best scientists drawn from all parts of the world, about half of whom are from developing countries. We believe that the roughly equal mix from the scientifically advanced and disadvantaged countries is the right thing to do.

Taking ICTP's lead, Trieste has created several more institutions with similar objectives: TWAS, the Academy of Sciences for the Developing World, which supports scientists from the Third World in different ways from ICTP; the ICS, the International Centre for Science and Technology, and ICGEB, the International Centre for Genetic Engineering and Biotechnology, both of which have their own programs. Even though SISSA, the School of Advanced Studies, which is next

to ICTP and works closely with it, is primarily an Italian institution of higher learning, some of its elements are focused on developing countries. The University of Trieste as well as Elettra---the Laboratory for Synchrotron Radiation---have strong ties with scientists from developing countries, partly for reasons of association with the international institutions of Trieste.

I will not add details here but hope that you will take me on faith that the Trieste institutions as a whole have had an immense impact on developing countries. In many countries, scientists have learnt what it means to do research through contact with Trieste and other collaborating institutions. Many would have stopped doing science had it not been for Trieste, particularly ICTP. Presently, ICTP operates under a tripartite agreement between two United Nations Agencies—UNESCO and IAEA—and the Government of Italy. While some base funding is provided by UNESCO and IAEA, and some specific programmatic funding comes from other sources, more than 80% of the Centre's budget comes from Italy. It is only in Italy

that one can find this sense of altruism to translate into practical terms. I applaud its citizens and its governments for this spirit.

As you well know, Trieste is placed in a geographic location that links well the East and West of Europe. Because of its international institutions such as ICTP, it is also a strong bridge between the North and the South. Thus, Trieste is unique in character; also for reasons of its international past, the city can indeed play an important role in enabling the fruits of science to reach all countries.

I have sometimes considered as to how Trieste can reach a higher level of accomplishment---and the comparison I have offered on a few occasions to my Trieste colleagues is Florence in its heyday. To make Trieste a hub of science for all parts of the world---just as Florence once was, for a few hundred years, for culture, arts and science---the pulse of science has to resonate in every quarter of the city, somehow touching most of its citizens. This is yet to happen and, for a

variety of reasons, it has been difficult to move such discussions beyond a point. Only the beginnings have been made. But then, renaissance was not completed in a day.

I mention again that only in Italy is it possible to dream of such things and hope to get supported. Italy should be proud of its attitude that does not have the knee-jerk reaction, “what’s in it for me?”

I now close by expressing my thanks again for the honor you have done me today, and hope we can work together for our common goals symbolized so well by Florence, UNESCO and Trieste.

K.R. Sreenivasan

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