Letter from the editors

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Abstract The editors of the *Lettera Matematica International Edition* introduce vol. 1 no. 4 and explain its scope and aims

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‘Evaluate’ is one of the keywords of this issue of the *Lettera Matematica International Edition*. By now, in the areas that are of interest to the university—and to schools more generally—there is a feeling of the need to find quantitative methods that facilitate the analysis of intellectual products: both for evaluating the work of individual researchers, and for subjecting entire departments or other structures in the research and teaching system to scrutiny. This is not to say that the ‘merit’ has been discovered only

now, but now—in the last few years—the problem of judgment that is not only of a qualitative nature but rather guided by numerical parameters (which some currents of thought declare ‘objective’) has become more acute. For this reason several quantitative measurements—for example, with the formative credits, which measure the workload required of students—have entered the school world, and various kinds of public ‘agencies’ have arisen that propose diverse principles and methods—for example, on the basis of ‘averages’ and ‘medians’—often with the total disapproval of a large part of the interested parties. Chiara Faggiolani, in ‘Research evaluation and mode 2 science’, provides us with an overview of some of the issues involved.

Doubts remain, but, you might say, what could be better than a mathematical model? The article by Enrico Rogora, ‘Evaluating and choosing: the role of mathematics’ is aimed precisely at our faith in mathematical models, in order to take a critical look at the belief that the results of models are considered absolute truth, independent of the initial choices and of questions of method. Yes, but will the objectives—the ends to be reached—be well defined in a unified manner, for example, to understand the way in which funds are optimally assigned? Here too the discussion is detailed, and an ulterior intervention is aware of the risk that methodological questions—how are they evaluated?—take precedence over significance: what is being evaluated, and why?

The job of a journal such as the *Lettera Matematica International Edition* is to ‘look ahead’, and discussions relative to the methods of scientific evaluation, its risks, the possible limitations or advantages, are part of the baggage that we must have in order to face the future. They are also part of an analysis of the great changes that await us in regard to the tools we use to work and to the sources of

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scientific activity, in view of the fact that communication is increasingly doing away with the forms we are used to in favour of various kinds of digital supports: the role of libraries—today and tomorrow—is addressed in the article by Giovanni Solimine, ‘The role of libraries and transformations in scientific communication’.

But an attentive view to the future must not lead us to forget today’s world—typically that of schools—nor history, both personal and that of our community: for this reason the *Lettera Matematica* has always made space for articles about education and history. In this issue the article by Laura Catastini, ‘Why I think “Mathematics for the Citizen” is an unfortunate slogan’ discusses the value of mathematics teaching for those who will never be a mathematician or use mathematics again (or at least believes that to be the case). In her article entitled ‘The 1943 programs for elementary schools: mathematics’, Lucia Ciarrapico reveals that as early as that date there was an attempt to formulate new programs, textbooks and methods for teaching mathematics in elementary schools (ah, what nostalgia for teaching taken serious, then the prime objective of reconstruction and neglected in the reconstruction needed today).

As regards history, the second part of the exposition entitled ‘Particles of man, part II’ (part I appeared in the previous issue of the *Lettera Matematica*) by Giulio Maltese the reader will find more on the fundamental steps in particle physics, recently concluded with great success at the CERN: a fresco that is complex and comprehensive, rich in methods and leading figures.

The reader will also find other topics belonging to the history of our discipline and that of the thinking that guides it. In particular, we celebrate the 150th anniversary of the birth of Corrado Segre, who contributed to creating one of Italy’s important Schools of geometry, as well as entering into the meander of scientific theories. Here you will find articles by Livia Giacardi (‘Corrado Segre. A life dedicated to educating young researchers’), Paola Gario (‘The birth of a School’) and Ciro Ciliberto and Claudio Fontanari (‘Corrado Segre and the courses of higher geometry in Italy’).

But what would Karl Popper have thought about all this? Carlo Veronesi explains it to us with an oxymoron: to learn more, see ‘Falsifications and scientific progress: Popper as Sceptical Optimist’.

Translated from the Italian by Kim Williams.

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(Bruno Mondadori, 2012).

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