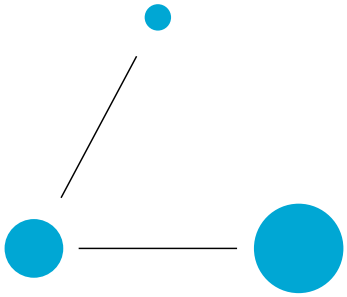
Annales Henri Lebesgue
0 (2017) 7-12



ANNALES
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THE ANNALES HENRI LEBESGUE

LES ANNALES HENRI LEBESGUE

Abstract. — Once an article is written, there is still a long process before its final publication. In this, we mathematicians play a major role: as authors, as editors, as referees. Currently, we still rely on commercial publishers for several services which could easily be supported by public institutions in today's digital world. In so doing, we are not only obliged to buy unnecessary products at a prohibitive cost but also to hand over our intellectual property, our theorems. An enthusiastic group of young mathematicians has found the energy to create a new journal: the Annales Henri Lebesgue. This electronic journal will be generalist, free and open. We have set up an editorial board, which is more or less representative of contemporary mathematics, from Statistics to Algebraic Geometry, Analysis and Probability. The continued relevance and balance of the board will be ensured by its regular renewal. Give us a warm welcome and send us your most beautiful mathematical discoveries!

(*) Translated from the French by P. D. Hislop.

Résumé. — De l'écriture à la publication d'un article, il y a tout un processus où nous, mathématiciennes et mathématiciens, jouons un rôle de premier ordre : nous sommes auteurs, nous sommes éditeurs, nous sommes rapporteurs. Pourtant, nous continuons à faire appel à des éditeurs commerciaux pour des services que la recherche publique a les moyens d'assumer elle-même à l'heure du numérique. Ce faisant, nous ne nous voyons pas seulement imposer des produits superflus et des tarifs injustifiés qui nous étouffent, nous sommes aussi contraints à céder la propriété intellectuelle de nos théorèmes. Un groupe de jeunes mathématiciens a eu l'enthousiasme et l'énergie de créer une revue vertueuse : les Annales Henri Lebesgue. Cette revue électronique sera gratuite, ouverte et généraliste. Nous avons constitué un comité éditorial large représentant peu ou prou les mathématiques contemporaines, des statistiques à la géométrie algébrique, en passant par l'analyse et les probabilités. La pertinence et l'équilibre de ce comité seront assurés par un renouvellement périodique de ses membres. Réservez-nous un accueil chaleureux et envoyez-nous vos plus belles inventions mathématiques.

1. Of fleeting and long-lived mathematics

Mathematical theorems, their proofs and ideas that give them life, do not belong to anyone, not even their authors. Upon writing this, one can easily imagine the small smile appearing on the mouth of the reader, as if to betray the beginning of a small resistance to this statement. These somewhat exaggerated statements, however, are able to open the way to reflection. It is in the same way that from an indistinguishable block of stone, certain sculptors of Antiquity were able to carve beautiful and graceful figures rivaling nature. One has to mention the story of a certain Cypriot Pygmalion, who created such a lifelike sculpture and who loved it with such passion, that Venus gave her life[(1)]. There are also many legends in which men assume the character of demiurges[(2)] who give life to shapeless and inert objects. We remember, for example, the wise men Deucalion and Pyrrha, saved from the flood by Jupiter, who recreated humanity by throwing stones (probably clay stones) behind them[(3)]. Beyond the symbolism of these stories, it is in clay that the first mathematical calculations and the first recitation of these myths (eastern and western) were written, as if the authors were like the artisans and mythical creators. Of course, the Ancients not only wrote on tablets: the texts from Antiquity mention that the geometers drew their figures on sand in order to remember their reasoning and to transmit their ideas to future generations. In this manner, Socrates led a slave to publicly solve the problem of the duplication of a square[(4)]. But, dear reader, perhaps you did not choose to read this article in order that we snare you in Ovid's *Metamorphoses* or tell you Platonic reminiscences. What remains of the sand that anchored the geometers' arguments in the moment, or of the clay tablets of the scribes that was supposed to preserve their works?

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(1) Ovid: *Metamorphoses*, Book X, 243.
(2) From the Greek $\delta\eta\mu o\zeta$ (people) and $\epsilon\rho\gamma o\nu$ (work): originally meaning artisan, now creator
(3) Ovid: *Metamorphoses*, Book I, 325.
(4) Plato: *Meno*, 80d.

Figure 1.1. Deucalion et Pyrrha, Rubens (1636), Musée du Prado

2. A giant with feet of clay[(5)]

A little in the Platonic spirit that, worn down by time, joins desire and forgetfulness, let's leave antiquity and together leap over the centuries to the present. Chalk replaced sand, university amphitheaters and specialized schools welcome assemblies of students. Classes and recitations, at the core so fleeting, fight there regularly against the forgetfulness, and safeguard the fabulous sum of knowledge acquired since antiquity. This knowledge calls for our responsibility: the question of scientific memory and its diffusion is urgent. But what has become of the clay tablets? Not so long ago, works of mathematics were exclusively published on paper. Perhaps, dear reader, you yourself have lingered in mathematics libraries and wandered from aisle to aisle in search of some elusive mathematical theorem? Perhaps you have sat in a comfortable chair, an article in one hand and a pen in the other, secretly charmed by this precious pleasure? Little by little, mathematical works have been digitalized. From now on, these works inhabit many public and private servers; they are immediately accessible and are no longer weighed down by paper. Of course, they have not become pure spirits and printing them has not yet become a spiritual endeavor. They are still material and most of them are lodged in the servers of the commercial publishers that, by convention, we'll call Elsa and Sponz.

This commercialization exerts a continuous financial pressure on public institutions (laboratories, research centers, universities, etc.) serving science. Elsa and Sponz only

[(5)] Book of Daniel, verses 2.31–2.45, Bible.

care about the preservation of knowledge as an afterthought: they decide our needs to satisfy theirs. In this way, access to works of mathematics is not only for a fee, it is also submitted, for example, to the rule of the bouquet of journals: in order to access one journal, we must also access a collection of other journals that we might not desire. A research center might want a bouquet of roses and tulips, but the obscure florists require it to add some daisies, dandelions, and, sometimes, an entire haystack. Where is the scientific coherence in that strategy?[6] The more that we consider these practices normal, the less we find them astounding, all the while we see considerable sums of money leave the budgets of research centers each year.

3. The birth of Annales Henri Lebesgue

Despite the fact that many colleagues regret this situation, many don't know how to change these publishing practices. They remark, however, that the authors of many of these articles are very often financed by public research agencies and that the editors and referees donate their work for free. How can one imagine that the fruits of this work are the source of private profits when the fruits depend on the public funds that finance the authors, editors, and referees? This question is all the more gripping when public means of distribution and conservation are readily available for mathematics articles. The recently-founded Centre Mersenne[7] is, in effect, able to furnish all the services necessary for the publication of mathematics articles: establishing a web site for the journal, standardization, distribution, and archiving of articles. To summarize: this can be done with public funds and for far less a cost.

It is in this context that the Annales Henri Lebesgue came to life. For more than two years, researchers in the west of France have worked to create the journal. In the beginning, to be honest, the Annales was only a vague and elusive idea. However, the sentiment that these ideas incarnate: open access, free publication, and high standards, led them to return to these conversations with new vigor. The Centre Henri Lebesgue[8] aided in nourishing these ideas, molding them, and giving them structure.

We have contacted several colleagues in order to constitute a strong and motivated editorial board. These colleagues were enthusiastic to participate in this community movement of mathematicians supported by the Centre National de la Recherche Scientifique. The positive responses were overwhelming and we feared having too many editors! Zealous colleagues installed the Open Journals Systems[9] and adapted it to the needs of a mathematics journal. The new journal was legally registered

[6] One may consult the article by F. Hélein (*Gazette des Mathématiciens* **147**) in which the author considers this question.

[7] The Centre Mersenne provides comprehensive scientific publishing infrastructure, and is a joint project of the CNRS and Université Grenoble Alpes: http://www.centre-mersenne.org/en/mersenne/

[8] https://www.lebesgue.fr/fr

[9] https://pkp.sfu.ca/ojs/

and a graphic artist created a web site for article submission. The Annales Henri Lebesgue[(10)] became a real and independent journal.

4. Readership and Editorial Committee

The Annales Henri Lebesgue is a general mathematics journal, completely electronic, that strives to publish high-quality articles. It is freely accessible to all. Although the initiative was born in the west of France, the diverse editorial committee represents many fields of mathematics. Roughly half of the committee is composed of mathematicians from other regions, the majority of whom are foreigners. Of course, this new journal will not resolve all the problems of for-profit publishing by itself. It will join the collection of mathematics journals having these reasonable publishing practices[(11)]. The editorial committee will be renewed regularly in order to both involve other mathematicians as well as to cover, over time, a large spectrum of mathematical fields taking into account the broadness of mathematics.

5. Publish your papers in a free-access journal!

The Annales Henri Lebesgue is accessible and open to all, from advanced graduate students to experienced researchers. Many might hesitate to send a good paper to a newly-established journal whose reputation is not yet fully established. One might wonder if papers published in this journal will enjoy immediate recognition. One would be surprised, however, by the growing enthusiasm of mathematicians, especially young mathematicians, for these editorial initiatives and by their desire to be associated with the journal and these initiatives. In creating this journal, we are responding to this desire in offering them a journal worthy of their best papers. So it is without hesitation and with enthusiasm that we ask mathematicians to give life to the Annales Henri Lebesgue.

In fact, good reputations, for the most part, do not spring from the thigh of Jupiter: it is necessary to attract high-quality works, and that a serious editorial board be open to their evaluation. The research papers, in a certain sense, are more important than the journals themselves. Quality papers do not need journals to be well-written or to have an important scientific value. On the other hand, they need the care of the editorial board and quality referees. It is the work of these people who make, over time, the reputation of the journal. This idea has been key in the discussions around the creation of the Annales Henri Lebesgue.

Mathematicians have the means to supervise the totality of the publication process and to participate as well in the coherent editorial policy. The Annales Henri Lebesgue are among the clay stones that we wish to leave behind us. Contribute to giving them life!

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(10) https://annales.lebesgue.fr/index.php/AHL/

(11) A non-exhaustive list may be found at http://cedram.org/

Manuscript received on 1st January 2017,
accepted on 4th December 2017.

Recommended by Editor H. Lebesgue

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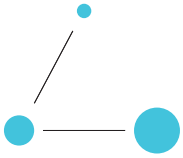

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