

## Accounting in the abstract world of figures

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**Abstract.** Almost any area that wants to be called a science cannot take action to demonstrate the truths of the reality that it governs and manages without resorting to modelling, to mathematical model and hence to figures. Thus, figures become vectors of transparency and a message about and with relation to the scientific nature of the studied realities; they, the figures, manage to translate into practice, actually to translate behaviours, situations and moments taken, gone through and lived in the evolutionary course, why not calling it that way, science of the surrounding reality.

**Key words:** accounting, mathematics, social

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### 1. Introduction

The behaviour and actions of the human being as a social being, basically the being-action binomial, raised interest in capturing all elements that can participate in the consecration of a theory, not only an old one but also a very debated one: "The human being, a reasonable being". This aspect of human reasoning, a strong argument in emphasizing and consecrating humans as superior beings, is based on thought, abstract representations and operations. And as an instrument of such approaches he used, uses and will certainly use the numerical symbol. We all know that each figure has its own history, has its own vocation and transcends beyond the mere sequence on a certain bar. These figures support both the quantitative and the qualitative representation of any of our actions, of the phenomena that govern our realities, so basically they belong to us and we belong to them until identification. But, each figure both carries the objectivity of the information represented and holds some reality, truth constraints, basically a small universe of living and feeling. And there are not few those who consider mathematics as the poetry of the human soul. Mathematics is poetry.... But can poetry be mathematics?!

### 2. Accounting and mathematics

The heart, the free spirit, the imagination, the creator, the creation are all elements that can be modelled to one or another of concerns, whether it is *the poetry of mathematics*

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or *the mathematics of poetry*. And all seem likely to be made by the one who belongs to mathematics by his thinking and abstract representing, and to poetry by soul, contemplation and reflection – the human being. Abstract meanings, feelings of substance, consumption of idea, glimmer of hope and above all, the enthusiasm make the human being subject to the most profound social transformations, and identify him as the universe of creation and human knowledge. Making a shift from the individual, from the universe of his concerns, worries and needs to another stage of his development – the human society, we will discover the greatness of this building made by him, the human being, in response to all the struggles of the mind and the soul of human nature.

One of his oldest concerns was, even if not under this name, ACCOUNTING; and related to this, the symbolic representation of accounting operations. Yes, accounting, the social science of management suggests and brings into the light of knowledge the economic environment and the specific human behaviour, this time as a binomial of the structure, of the representation and presentation of facts for the development and the social evolution. It is a little too fast the transition from sciences, represented and supported in our approach by appeal to mathematics, to the sciences of management, from the mathematical concreteness and rigor to the relativism and subjectivism that characterizes the social, from universal truths to particular truths, from universal theories and postulates to an extremely flexible area as far as the dogmatic heritage is concerned. However, it is not a too abrupt transition, not abrupt at all, being made on a very solid, precise and exact bridge, called mathematical modelling. This space, where you try to understand other meanings, to delight your mind with facts, or if not at least with positioning, is dedicated and belongs to the accounting profession. Accounting is the science that borrows and operates greatly with the rigor and the insight of the mathematical models promoted and commonly used in sciences, it is the science whose dogmatic heritage is also based on mathematical calculus, it promotes and supports its basic concepts and on the bases and mathematical models, it translates and changes the economic reality also by modelling, using and inevitably resorting to figures.

By all that it means and represents, accounting is a step towards capturing and explaining a small part of the social, it is an approach materialized through and with numerical symbols. The figures represent the truth of the social reality that is experienced and built, being the messengers of socially useful signal. If we consider the final products of accounting, that is the financial statements, when seeing them, we will notice figures, figures and again figures... If we seek to understand the accounting approach in its completeness and depth, we will not succeed without trying to discern the numerical symbols. Basically, in accounting, information is encoded, it is encoded by a digital representation, which helps and directs you if you are initiate, and if you are an onlooker it incites you to debate, to discuss, to try to penetrate into something related to the surrounding reality where you cannot be indifferent in terms of connotations given by the dictum: the human being – a social being.

### 3. Accounting and figures

Accounting abounds in information rendered by digital representation. The figure is used in capturing the actionable approaches of social actors, having at this level of discussion the roles and positions of sellers or buyers; in the investment approach – shareholders and creditors; in the competitive climate research - the competition; in monitoring and evaluating the environment development - members or supporters of organizations interested in preserving the bio-natural environment of life on earth; in the elements of social protection - current and former employees; in taking and ensuring the financial resources at national level - agencies of the State; and in local and regional development - local and regional actors, the respective communities. Each of these categories, even types of users of accounting information, needs one or more segments of financial reporting, but all of them mainly need the objectification and concreteness of digital symbols. It is undoubtedly the most representative type of information, although lately we note an assault of non-financial information – the text information, the explanations, which belong to the other type of representation, namely the representation by resorting to letters. But the two are neither different nor supplementary, they are complementary, by not excluding one another, but supporting and motivating each other. And in order to strengthen this digit-letter symbiosis, let's discuss the first accounting writings, that are those abstract representations made of notches on the bones of animals, abstract representations of a given household's wealth. And if we analyse the notch (the line), we can understand either figure 1 or letter I. And if we take into account the Roman alphabet, the two symbols are identical. It is basically a sign of a root, of a common origin for both systems of abstract representation: letter or digit. If we consider that it was intended to surprise the quantitative aspect of wealth, we have the mathematical representation of the first economic transactions, about whose existence we have evidence from 3000 BC.

Using symbols through figures is not limited solely to the final product of the financial accounting activity conducted at the level of the microsocial named economic entity – the financial accounting information, but it abounds in the necessary stages for its preparation and delivery. In the previous paragraph, we emphasized the practice of the transposition of economic operations/transactions in the accounts as documents. On that which, in terms of affiliation, can be identified with early emergence and evolution of the accounting science, and without daring to consider it exhausted of meanings for other scientific fields and categories, we can say that the accounting record has become a practice that is not compromised even today, by using digits instead of notches, in fact explained by the contribution of the development of knowledge in the evolution of human society, of the specialization of mathematical tools. And if, after these notches, there were drawings, such as circles (another abstract representation of the quantitative aspect), in the modern era of accounting, records of economic transactions provide a correspondence between accounts, basically between symbols, symbols made of figures also.

#### 4. Conclusions

Figures, numbers, operations and mathematical reasoning are not today, as they have never been episodic appearances in the accounting practice and theory. From *Summa di Aritmetica, Proportioni et Proportionalita of Luca di Pacioli* to the contents of IFRSs, there are enough similarities between mathematics and accounting, between natural sciences and social sciences. Yes, we went further than accepting the use of mathematical tools in the development of approaches and in offering answers, by considering *accounting as social mathematics*. And probably we are not far from the truth, at least through the first accounting people (both writing and maintenance) belonging to the group of mathematicians, then by the speech of mathematical formulas and methods that accompany professional judgment, so that finally to bring the discussion of mathematical models, models that represent the basis for empirical research approaches, with results that provide knowledge and objective recognition to social realities that are subject to the scientific concerns of accounting. Although many things could be said to support our initiative, one thing is certain: accounting and figures represent and present one another, in the former's attempt, helped by the latter to explain some of the present and lived social.

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