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The Function Theory and Its Application on Manuals of Economics

Abstract
In this paper, we analyse manuals of economics from the function point of view. Our proposal is focused on the classification and typology of manuals based on the communication purposes. In addition, we put forward and suggest certain improvements in the internal composition of the manuals based on a detailed analysis of their contents architecture and the rhetorical movements in which they are arranged. In general, we are suggesting that the new generation of manuals of economics, mostly multimodal ones, means and is going to be a significant step forward in the relationship between situations of use and learning processes.

1. What do we know about manuals of economics?
I deal with manuals of economics in this paper. We should note that we know little about manuals in general, as texts of a particular subject, and far less from a perspective of the function theory, which is the one I am going to use in my analysis. However, I will refer to some works that have been done on manuals and their rhetorical organisation from other perspectives (Paradis 1991; Valls Montes 2001; Lassen, 2003; Parodi 2010a; Parodi 2010b; Ibañez 2010), although basically to suggest a proposal of my own applied to manuals of economics based on the function perspective (Tarp 2008).

Manuals of a particular subject – be they for school, university or technical use like instructions manuals – have become key tools in the teaching-learning and explanation-application processes. Therefore, in recent years research has been initiated concerning the external and internal rhetorical arrangement of such texts as a «macro-genre» (Martin 1992), but above all regarding the context of use and the ways in which these texts may be used (school, university, professional and daily use). At a later stage it may be interesting to establish in as much detail as possible how they are used by the inexperienced (students, apprentices) and experts (teachers, specialists).

Although research on manuals based on the function theory is still limited (particularly on university manuals), some research areas have begun to be established, for example about the operational function of instructions manuals (Rodríguez Gallardo 2012). In this paper, I noted that in products such as instructions manuals or books, access to their data assumes a lexicographic structure. This kind of instructions manuals have textual elements of external access – similar to the lexicographic mottos –, such as *information triggers*, which appear as header of contents or indexed entries. These usually appear in the instructions manuals of machines such as TV sets or washing machines. Many of these products, which we could consider *para-lexicographic*, have a relatively sophisticated access structure. These products are articulated based on the accessibility of the data, which have an information structure of an instructional or indicative nature. The data are brought together based on their inferential capacity, so that the so called *information triggers* – i.e., key information elements of the product – may reach a special status in the communicative framework. For example, in the instructions manual of a washing machine, an information trigger of an indicative nature is «installation», which is a heading of the set of data regarding the instal-

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lation of the washing machine. These indications and instructions are organised into a hierarchy in manuals. These processes of organisation into hierarchies or dosage of information are key for the equipment to work properly (if it is an instruction manual) or for learning (if it is a student teaching manual).

The function theory has assumed that products such as dictionaries should be developed depending on the type of possible user and situations. In our view, the same happens with instructions manuals, users' guides and manuals of particular subjects. Each user has a series of specific needs depending on the social situation in which the manuals are used. It is not the same to read a text, translate it, understand it or have to apply it based on a range of instructions or indications guiding the development of an object or leading to the application of a series of theoretical concepts. The range of possible functionally relevant social situations is a core element of the function theory (Fuertes-Olivera/Tarp 2008a: 78).

In the case of manuals or other specialised rhetorical textual genres such as lectures, the functionally relevant social situations have determined their architecture, not so dependent on contents but on basically practical contexts of use (Pingel 1999: 16). Although focused on history, some studies have shown the difficulties of students to correctly understand their textbooks. These works highlight their dificulties to properly understand written and visual information covered in such texts (Angvik/von Borries 1997). In some cases, the limited efficiency of the text manual has been attributed to either a not very clear formal and educational structure, or a lack of connection of a rhetorical or argumentative nature with the practical and creative knowledge of the students. However, in our opinion, text manuals assume very different situations of use. In such situations, you have to take into account the time devoted to using them. Several works have noted that manuals tend to be used in a biased way, ignoring some or many of the issues they propose, so certain decisions of the teachers determine their use (Johnsen 1997: 133-203). These facts make manuals as a type of textual genre dependent on both the context of use and the active users (the students) and the mediating users (the teachers), all in the framework of a particular scientific community, be it specialised, professional or school.

The function theory can help us analyse the needs of users of text manuals. The improvements in information access must come from the particular needs of the manuals users. For example, in a manual of economics in Spanish it is useful to include a separate glossary of terms translated into English or even including them in the section called *conceptualisation and exercises*, as we will see below. Both levels of access facilitate the connection of the terms in both languages, but also with the real context of use, where basically the economic terms in English predominate, as a communicative and urgent need nowadays.

One of the most interesting issues for the function theory regarding manuals has to do with the cognitive learning and communicative skills processes. Achieving this communicative learning in a subject such as economics is highly complex; it varies depending on the contexts and becomes apparent in a wide variety of different products and manuals (Tarp 2008b). We will refer to this plurality in the following two sections.

2. Present and future of manuals of economics

For this paper, we have considered the degree of acceptance and use of the manuals of economics analysed[1]. Therefore, a first selection criterion has been the availability of manuals in universities through teaching guides and/or syllabuses. That degree of acceptance allows to put in context the use of the manual analysed as a textual reference for those participating in the teaching-learning process. In spreading that use a number of different, and sometimes complex, criteria are involved, including to what extent they are new, the prestige of their authors and, in some cases, the status of such authors in the academia and administrative power networks. Also, the innovative

1 We have used as a source of analysis the manuals of economics used in the University of Vigo.

approach of the educational proposal or the commercial capacity of the publishers and distributors may be relevant (Valls 2001).

In our opinion, in the research on manuals of economics there has been a process of complex implementation. Manuals have thus changed from being almost exclusivively based on written text – an approach still used and persistent in examples such as the manual of economics coordinated by Martín Mayoral (2009) – to incorporating all kind of multimodal expressions, like iconic representations, with or without written support, or like synthetic multimodal indications in the form of significant boxes, key words, iconic-linguistic recommendations, pro-active learning sections, real case studies, quick review sections and review questions, etc. In this paper, we will initially refer to "classic" manuals of economics, where written text almost exclusively dominates, linked to the professional prestige of the specialists responsible for the manual or the authors of the various chapters thereof. However, we intend to show that the multimodality of the new manuals of economics – in some cases, extremely plural and advanced – appears to improve the learning and comprehension processes of the key concepts and tools of economics, as it is more suited to the speficic needs of the various users in a university classroom. As we will see, Krugman, Wells and Olney's manual of economics (2011) is part of this new generation of «multimodal» manuals, linked to the specific needs of a very wide range of users, from the perspective of providing a conceptual learning by means of real examples, educational tools to improve learning, family links with the knowledge of the students, real data associated with the concepts explained and learning gateways to more advanced levels in the subject of economics. Actually, Krugman, Wells and Olney (2011) are thinking of a reader-friendly manual enabling students to be prepared for advanced subjects, i.e., they are thinking of a manual of economics intended for a wide range of specific needs of different users.

3. Types of manuals

Manuals of economics take on different features depending on their specific end users. Although we have usually known them in hard copies, more and more manuals are in electronic format as a means to develop specialised knowledge more open to new languages. The e-format has incorporated mechanisms to get closer not only to specialised knowledge, but also to the rhetorical structure of such knowledge (Parodi 2010: 144)[2].

Manuals may be classified based on their communication purposes (practical-operational, predictive, operational, cognitive, lexicographic), their specific users (teacher's or student's manuals) and their educational objectives as a teaching method of a segment of knowledge, sometimes in a particular territory. Practical or operational manuals are focused on skills relevant to the subject. When focused on mainly practical situations, they become operational manuals. Cognitive manuals are intended to understand theoretical contents. In other cases, manuals have lexicographic features in a dictionary format. In table 1 you can see a classification based on the title and the content of the different manuals. In some cases, and as can be foreseen, manuals could be part of two or more of the suggested subclassifications:

2 An example of heterogeneity in learning tools can be found in www.reverte.com/microsites/krugmanwellsgraddy2ed or in www.worthpublishers.com/krugmanwellsgraddy_essentials2

Type of manual	Title
Practical-operational	Economics, theory and politics: exercise book Pratical manual of mathematics for economics and business Practical manual of prices review of contratcs of public and private works Manual of foreign trade techniques Case studies of financial accounting discussed and solved Practical manual of financial accounting Public accounting manual: cases Case studies of business investment and financing Manual of competitive strategy for the European market : theory and cases International movement of goods : practical manual Pratical manual of accounting consolidation Manual of commercial research Working in Europe : manual for small and medium sized companies : Spain Manual of real estate valuations Manual of tax audit Manual of human relations: their practical implementation in Spanish companies Money, exchange and banking : in their practical, theoretical and legal aspects: a complete manual for bank officials, businessmen and students
Predictive	Manual for sustainable economics Manual for environmentally-friendly economics
Cognitive role in a territory	Manual of Spanish economics: theory and structure Manual of economics and politics of the European Union Manual of the Spanish financial system Manual of regional and local government finance Manual of the financial system : institutions, markets and means in Spain
Cognitive segment	Manual of mathematics for economics and business Manual of environmental and natural resources economics Manual de political economy Employment, people, markets: manual of labour economics Manual of employment economics Manual of applied economics Manual of public accounting Manual of financial management. I. Investments Introduction to accounting: theoretical aspects Manual of fixed income instruments : structured of interest and credit rates Manual of foreign trade of the Spanish economy Company Economics Manual of derivatives : three decades of Black-Scholes Manual of costs accounting Manual of Business Administration Manual of logistics for commercial distribution Manual of economics analysis of civil law Manual of strategic management of technology : production as a competitive advantage Manual of theory of economics Manual of economic policy Analysis of the general balance : manual of micro-economics Manual of econometrics
Operational	Practical manual to set up companies of social economy How to develop a brand: usage and management manual Manual of the responsible company Economic valuation with stated preference techniques : a manual Manual of company assessment Manual to develop and manage social insertion companies Instructor's manual to accompany Experiments with economic principles The Art of closing a deal: manual of the perfect seller Manual of Projects of Economic Development
Lexicographic	Dictionary manual of economics Manual or handbook of modern political economics
Specific users	Teacher's manual: contemporary economics

Table 1. Types of manuals classified based on their communication purposes

4. Manuals of economics' functions

In the function theory, use is a key element. Manuals of economics are products of use, just like dictionaries, phone books or instructions manuals. Data design and architecture are developed based on the information demands of users. Any rhetorical-structural theory should, therefore, have a function purpose to efficiently implement these demands. Nevertheless, this funcionality is made more complicated by dealing with the so-called extralexicographic situations, because they generate, inside them, the needs requiring consulting lexicographic products (printed, electronic dictionaries) or similar products (manuals, guides, etc).

By enlarging the proposal of Tarp (2008b) and Bergenholtz/Bothma (2011), we identify five kinds of social situations relevant for the consultation and use of manuals as para-lexicographic products:

a) *Communicative situations* put in context the development, reception, translation and comprehension of texts. Manuals are abundantly used in these situations because they allow the communication between authors and receivers.

b) *Cognitive situations* are controlled by the users' increasing knowledge on any specialised topic. They are the result of different circumstances, sometimes in an unstructured and *ad hoc* basis; sometimes in a structured and articulated way to be able to access a kind of complex knowledge. Manuals are used to meet these needs.

c) *Operational situations* are clearly special situations. Users are obliged to follow instructions of physical attachment (installing or operating a machine) or of an intellectual nature (managing the annual accounts, learning the basics of economics). No detailed studies of these situations are available (Tarp 2007), because leaflets, instructions books, DYI books and instructions manuals «have lived a life of their own regardless of any systematic and guiding theory» (Fuertes-Olivera and Tarp 2008: 79).

d) *Interpretative situations* lead users to be forced to interpret non-linguistic signs such as traffic signs, the explanatory tables of some manuals or the graphics common to manuals of economics. These situations are guided by processes of right inference to validate the interpretations. As noted by Bergenholtz and Bothma (2011), the information of these situations comes from corporations, authorities, organizations, etc.

e) *Evaluative situations* usually take place in academic contexts (exercises, exams, oral tests, etc.), although not only in such contexts (driving licence exams, etc.). They combine mechanisms typical of other situations (communicative, cognitive, operational and interpretative ones) in order to achieve a minimum knowledge status, always within a sliding scale. In fact, these situations thoroughly determine the use that is made of manuals. In some cases, it may well be that the manuals are exclusively arranged to obtain at least the minimum in such an evaluative scale.

The function theory may help analyse the needs users have in any of these situations. Although the function theory is more developed in the lexicographic aspect, some proposals may be applied to other similar products such as manuals, particularly anything that has to do with data selection and preparation depending on the specific needs of users. Therefore, the function theory suggests linking theory and practice, i.e., linking the development of manuals with social situations controlled by the informative uniqueness.

Moreover, manuals of economics are intended to promote learning processes and to obtain communication skills in the area of economics. This kind of learning is extremely complex, varies depending on contexts and appears in products such as manuals, introductions to some subjects or manual dictionaries (Tarp 2008b).

In many cases, manuals are operational products, in such a way that their development can be extremely complex, above all if they have to assume an evaluative nature as well. These products are arranged around an informative architecture focused on applicability (instructions, guidelines, practical processes, exercises, practical cases, etc.). They have an explanatory and applicational purpose, i.e., they explain the applications of a subject or a sub-discipline. The more contextualised in the operational situations of the user, the more necessary it is they are planned in a way that is similar to dictionaries, as they have similar design, arrangements and development characteristics. In other cases, manuals are evaluative products, operating as consultation tools for specific social situations. One of them is the evaluative academic situations: exams, oral tests, tests, etc.

A manual's use is driven by the informative need to master the basic principles of a subject or to understand how an economic institution operates. Just like dictionaries usually offer easy and fast access to data, manuals seek –although they don't always succeed– to do the same. In Tarp's view, the lexicographic theory and the scope of *access* (Wiegand/Fuentes Morán 2010) can help develop and design a new generation of instructions manuals and books based on a number of common features[3]:

a) Manuals are not always read in a consecutive way, but they are looked up on an *ad hoc* basis, in a non consecutive reading.

b) Access to data of an informative nature is turned into indications, orders, instructions and recommendations to act in certain fixed operational situations and certain complex evaluative situations, many of them turn into a ritual, such as exams or tests.

c) Operational situations distinguish between knowledge and skills. Some specialists know a lot of theory about machines or programmes, but it is the technicians and the workers who master their operation because they normally use them.

d) There is a user typology depending on the operational situations, so a general variability in the form of a *continuum* between expert, semi-expert and apprentice can be established.

e) Users change the command of their skills depending on the operational situation and the issues discussed.

f) There is a user typology depending on the evaluative situations, so a textual *continuum* can be established, within which manuals are usually arranged. Thus, there may be manuals with evaluative sections (questions, problems, tests, etc.) similar to those found in the evaluative situations. Because of this, they tend to be regarded as paradigmatic or proto-typical manuals. The presence of an evaluative section in a manual of economics involves getting into the "workshop" of the specialists, who normally design evaluative tests, which are equivalent to the real tests.

5. Contents, structure and accessibility

Contents, structure and accessibility of manuals of economics have changed in recent years. Still, a tripartite structure, in the form of rethorical-communicative steps or progress (Parodi 2010), appears to predominate:

a) Preamble
b) Contents and Exercises
c) Corollary

Every one of the rhetorical-communicative stops is composed of other parts of expression, which are not usually fixed or established.

Thus, the Preamble normally includes – in a changing order – a prologue or foreword, a table of contents, an index of tables, symbols and abbreviations, and possibly an introduction. This communicative section introduces the book and provides suitable and useful information for its reading. Authors may include in the preamble some comments about the contents in the book and, particularly, a note of gratitude to other people who have helped write it. Many manuals do not

3 Gouws (2009: 73) suggests that users have grown used to an increasingly faster access to data. The *speed/access to data* binomial is a driving force in the changes in the design of many textual products. Users of a dictionary seek a fast and unrestricted access to information as varied as possible to discriminate, choose and isolate specific data. It is obvious to infer that the access routes to the data are key in the process to develop a manual or a dictionary (Wiegand/Fuentes Morán 2010: 291).

have tables of contents or signs, making it difficult to understand its contents. It is not at all unusual for this section to be completed with an introduction in which the aims of the manual are put in context. Let us see some differences about this section.

The *Manual de Economía Española. Teoría y Estructura (Manual of Spanish Economy. Theory and Structure)*, coordinated by Martín Mayoral (2009), presents a classic structure and a set of contents drafted together with a group of twenty authors. There is no previous explanation or preamble, so the user –an undergraduate – cannot access from the beginning such significant details as the contextualization, how the contents are arranged, how auxiliary resources are arranged and the lay-out. As noted by Parodi (2010), the «preamble» section is key to understand the discourse and to properly orientate the user. Let us say that the preamble (made of several contextualization indices) is a key element for the user to internalise the objectives, the indexed processes and the learning mechanisms.

Not quite the same happens with *Essentials of Economics* of Krugman et al. (2011). This is a colour printed manual, with an extensive preamble divided into various sections. In the second and third pages, in a five column poster lay-out, we are shown an «overall visualization» of the composition and the contents of the book. The first of those pages even includes an explanation of the composition of the manual in the following terms:

> "This book uses a learning technique based on real-life stores which make reference to the different concepts developed in the book. Each chapter includes examples, stories, applications and case studies, all of it from the real world. These examples are a valuable tool to strengthen the understanding of basic concepts, while turning training in Economics into an enjoyable activity."

Authors have chosen an operational manual, in the sense that the main sections of each chapter conclude with a section called "Economics in action", where the concepts that have been studied «are applied to a real life situation ». For example, chapter 1 deals with a cooperative nursery school. The example serves to illustrate what is called «mini-economics», but always with the aim of explaining macroeconomic problems, such as recession (Krugman et al. 2011: 17-18).

But in addition the manual incorporates more examples and applications to the real world in another «optional» section, which they called "For curious minds" – which is repeated twice or thrice in the chapter – so that those users who would like to continue operating «economically» in the real world could tackle further particular situations. For example, in Chapter 18, "Money, central banks and monetary policy" highlights the fact that in the USA there are 2,500 $ in cash per person in circulation. The solution to this mystery lies in the money of the cash registers rather than the money in the hands of foreigners.

The rhetoric in the Preamble in Krugman et al. (2011) is very «close», in such a way that each author is introduced in a short introduction dealing with his/her perspective about the book, directed at those readers who «start studying Economics» (Prologue xix). What is most striking in Krugman's introduction is his determination to design a book that is "enjoyable and easy to understand, that one enjoys learning with", but also with which "students learn to use models correctly", so the authors do not give up giving a more «operational» content to their manual. This accounts for the fact that, compared to the more traditional manuals of economics, focused on theoretical issues, Krugman et al.'s manual (2011) approaches the problem as the focus, linked to «issues with significant repercussions in the real world» and without theory and concepts «overwhelming the reader».

Krugman et al.'s manual (2011) is intended for students of a semester who need «already solved» numerical examples, but clearly showing how the theory is applied. Regarding this, they have wisely included an educational tool with exercises solved (in a purely evaluative situation) and another one with advanced training, for those students who seek to train in more complex subjects. The Preamble includes the "advantages" of the book, explicitly or implicitly drafted to present it as better manual than others in the market: conceptual learning with real examples, supporting educational tools, real data, entertaining and efficient drafting, etc. In contrast with traditional manuals, which begin with the description of an economic issue (with a purely cognitive perspective), Krugman et al.'s manual (2011) prefers an operational perspective putting the user in a real context, and begins with an appealing story as the thread of the whole chapter.

Mankiw (2012) also incorporates an author's prologue intended for the student, where the importance of economics to understand the world is referred to. He does so taking «real situations» as a starting point, within which users should operate applying our knowledge («Why is it so difficult to find a flat in some cities?, why do airlines charge less for a return ticket if the passenger's journey includes Saturday night? »), in situations which require complexity and «shrewdness», just like in real life. Again, the operational character is present.

Parodi (2010: 156) considers the contents and the exercises to be the «crux or the heart» of the manual. This section has a paradigmatic role, providing concepts, definitions, examples, problems and solutions. It is usually made up of a cognitive section (concepts, definitions and explanations) and another one which is operational-evaluative (problems, exercises). Given its cyclical nature, this section is usually repeated throughout the manual, providing coherence to the textual genre of manuals and being embedded in a recursive fashion to facilitate the thematic development of the key aspects of every thematic unit.

The section on concepts and exercises operates as a standard discourse in most manuals, although it adopts an organization and discoursive unity in every product, so that depending on the connection or the relation with the previous or later units, it usually gives the manual a more overall coherence. The application and the connection of the exercises with the evaluative situations provide an added value to the manuals. Let's think about the theoretical-practical manuals which are used to validate the level of linguistic command in a particular language. In Mankiw (2012) some "review questions" are included. They have a lesser evaluative nature, and "problems and applications", which put the user in a primarily operational context:

> "You are trying to decide whether or not to take a sabbatical year to travel. Most costs (plane ticket and hotel) are calculated in dollars, but their benefits are psychological. How can you compare benefits and costs?" (Mankiw 2012: 19).

Actually, users seek well-organized and well-hierarchied manuals from the discoursive point of view, i.e., where the thematic sequences, formal cycles and rhetorical processes are easily understood.

Mediators (teachers, instructors and technicians) prioritize in manuals the fact that they quickly introduce you to the communicative rhetoric associated to the world of economics. In this regard, manuals tend to be «reader-friendly» texts (Kantor et al. 1983), such is the extent to which a way to «cooperate» with their readers is sought, articulating or arranging manuals so they are fully accessible to them. This is a key element to enable the development of a good manual depending on the specific needs of any user. For this to occur, manuals should follow several co-operative principles in its structure, thematic coherence, organizational unity and their adaptation to their audience. As noted by these authors, manuals should be clear and direct in their message, enabling the reader to elaborate the information in an efficient way and with a minimum cognitive effort.

In Martín Mayoral's manual of economics (2009), the contents are distributed in four parts:

1. factors deciding economic growth and development,
2. political economy,
3. Spain's economic structure,
4. international economy.

Each of these four parts has its own sub-sections, which vary from five to two. Each part is drafted by a specialist, who keeps a relatively homogenous structure: introduction, classifications, concepts and explanations. Moreover, the contents for each part are closed with a summary of contents, with a diversified and discussed bibliography (consulted and complementary, sometimes divided by thematic areas or levels of specialization), including Internet links and the practical section, divided in discussion topics in the lessons and proposals for individual or group projects.

Although Martín Mayoral's manual (2009) has graphics and explanatory tables numbered by chapter, it lacks a final list of contents including all tables and graphics, which, due to their volume, would enable a better access to these data. In addition, footnotes with explanatory purposes or to refer to other chapters are used, which in some cases may be seen as an «academic hindrance». Likewise, boxes explaining some terms and concepts are used, always in a smaller typography. What they call «summary of contents» operates as a synthesis of the main aspects of that part, as a sort of final reminder for academic tests, for example. In many cases, the sub-sections of the content are full of executive or operational expressions in the form of recommendations ("it is recommended", "for further analysis, please check", "frequency of use"). Also, the arrangement of some data is not fully homogenous, so the bibliography or the webliography is presented in a body text, as though it were a narrative and argumentative text, with relevant author's views (Martín Mayoral 2009: 55-57). The so-called "topics for discussion" completing the practical side of each part point towards a specific user – a student or an apprentice – and a type of operation – use these topics for discussion as an educational resource. They generally use the interrogative form, either in a short question or a long one, with or without simple introduction ("When does the largest Spanish growth take place and what are its deciding factors?) or adopt a descriptive format ("Taking the GDP in production as as starting point, describe the Spanish productive structure and its evolution in recent decades"). In other cases, the topics for discussion are presented as "lines of thought" and with a macrostructure of "key words" in a scientific text (for example, "Growth limits: environmental sustainability, competitiveness and growth", etc.).

Finally, in the case of the proposal of individual or team projects (out of about five proposals), «executive» nominalizations dominate (Spanish economic convergence in the European context; 2. Structural change in Spain, from an agricultural economy to an industralized service economy), although, sometimes, with minimal explanatory introductions of what is required «in operational terms» (5. Analysis of the socio-economic situation: discuss the impact of the economic crisis which began in 2008 about the macro-economic data based on the data issued by the National Statistical Institute (INE) in its quarterly accounting). Actually, in other cases, «analysis» projects are chosen, one example being "Check whether there is a direct relation between education and economic growth and between education and employment level and between education and the rate of employment".

Krugman et al.'s manual (2011) has a clearly operational perspective. Each chapter starts off with an "attractive" story ("The wind tunnel", "We can't stop driving", etc.):

> "Unlike other books, where each chapter begins with the description of an economic subject, we began each chapter with an entertaining story which often serves as a thread through the whole chapter. These stories have been chosen with two aims in mind: illustrating the relevant concepts in the chapter and encouraging students to continue reading to find out what is happening next."

This manual's definite operational nature emerges from its structural conception: "one of our aims is to deepen our understanding of concepts by means of real examples". We can see this in the sections of the following chapters, which allow concepts studied to be applied to one or several real situations: Economics in Action ("Working mothers", "Rich country, poor country", etc.) and For Curious Minds ("Do you have a dime?", "Paying for good marks", etc.). It is possible to check a full list of all these stories at the beginning of every chapter and every section. The titles of the chapters are short ("Basic principles", "Supply and demand", "Elasticity"), although given the manual's "narrative", «cinema style» clause structures are chosen ("the market strikes back"). There is a general tendency to brevity and simplification in a first presentation of the chapters, to later choose a more complex and sophisticated one. The way each chapter is arranged is designed to rapidly connect with the student ("standard user"), helping him/her to understand the contents by means of tools such as the list of basic concepts or inventary of objectives. Chapter 3 describes supply and demand in the framework of a scalping market for a sports event based on a story called "Gretzky's last game". Real cases put students in an "economy in action" situation, therefore operational so that they can apply their knowledge to a given real life situation.

The operational and evaluative nature linked to the cognitive and communicative function is shown in the tool "Find the solution", as noted by the authors, "specially developed for *Essentials on Economy*". The student is put in an evaluative position – self-evaluative, rather –, because it includes exercises with a key. The tool is developed to facilitate the transition from the cognitive to the operational and evaluative level, as it "enables a direct application of the principles which have just been analysed and provides the solution". For example, in Chapter 2 of the book, the concepts of "comparative advantage" and "profits from trade" are explained trough an example of two countries, Alka and Baiwan, producing two goods, X ray machines and yo-yos.

One of the variants of the evaluative function of manuals is the review and interpretative verification sections. These sections have a purely linguistic (terminological) and discursive (specialised positions and phraseological units) component. The abundant economic jargon and the abstract concepts may confuse students, so short summaries are used, shaped like lists where the major concepts in each section are reviewed. These short summaries facilitate the understanding of the units studied, but they are also used in pre-evaluative situations to adjust and ensure the knowledge incorporated, sometimes not fully stabilized in cognitive terms until a very late stage in the immersion process in the field of economics.

In many cases, the manuals usually incorporate a "verification" tool. In Krugman et al.'s manual (2011), this consists of a set of review questions. The solutions are at the end of the book, usually highlighted in a special colour, so that the resolution and verification process may be done as fast as possible, enabling a proper self-evaluation process. The question and answers section includes an evaluative function of an internal nature, so that the learner may soon find out the degree of knowledge and comprehension about what has been read. This evaluative function has a prescriptive value, so that "if the questions are not answered correctly, it clearly shows they need to review the previous chapters before moving on".

The operational and evaluative functions of manuals are essential, so when manuals do not include reviews or questions and answers, their educational value is lessened, as well as their nature applied to different users. Students tend to make better use of manuals that include these tools, especially if they are carefully made, because they help in the learning processes. Many manuals choose not to include these sections and almost completely eliminate their operational and evaluative nature.

In some cases, Krugman et al.'s manual (2011) is somewhat «revolutionary» in this regard. In the section called "For curious minds", they seek to apply economic concepts to real life situations in unexpected and surprising contexts. The aim is to enable the use of the operational function so that it allows discovering the capacity of Economics to infiltrate every social aspect. Adjusting knowledge to situations close to the learners becomes a key feature of a good manual. It is not a matter of entertaining them but of engaging them in real life on the basis of the knowledge gained. For example, in Chapter 18, entitled "Money, central banks and monetary policy", they play with the idea that in the USA there are 2,500 dollars of cash per person. Students are made to see that this fact is accounted for by counting the money of the cash registers as well as that added by foreigners: The inventary of nearly all sections appears in the table of contents or in the flyleaves at the front of book, so that it is easily noticeable.

One of the great values of this manual is its multi-dimensional character, so that many sensitive elements of the command and monitoring process of such a complex field of specialisation as Economics are taken care of. The authors have created a section called "Tricks" in order to avoid the confusion of key concepts or terms. Actually, it is closely connected with the operational and the evaluative function, as it allows rebuilding the learning process which is usually characterized by mistakes, many of them made by different users, in such a way that its repetition forces a particular strategy. In fact, the authors reproduce our usual correction mechanisms even when we learn something by ourselves. Thus, common mistakes such as the confusion between "total increasing cost" and "marginal increasing cost" are explained so that there is no further confusion between them.

Manuals usually introduce interpretative situations, so that inexperienced students are forced to interpret the graphics. In many manuals of economics, graphics sometimes fail to include additional notes, preventing to make connections with the concepts mentioned in the text. After checking and reviewing many of the manuals mentioned in the text, the best graphics are those which are shown big, clear and easy to be followed by students. Sometimes, it is good to include subtitles to complete the graphics' description and to help learners quickly understand what they are analysing.

Graphics usually require their own monitoring and adaptation mechanisms. Some manuals use non-linguistic signs to understand graphics, such as continuous arrows to understand the concept of "displacement of a curve" or an arrow with embedded arrows to express what a "displacement along a curve" means. What is most revealing in the new manuals of economics is that they may include an icon referring to a more complex chart incorporated in the web site associated to the manual. The difference is that graphics in the web are animated and can be changed. This tool can be accompanied by questions about basic concepts, so that they are closer to the characteristics of "instructions manuals", as what matters is that the user is eventually able to use it correctly.

More and more, the real data shown in graphics are accompanied by charts, so students are encouraged to carry out exercises of direct comparison with the graphics, so that such abstract concepts as the "aggregate supply" are made more visible by illustrating them by means of the actual performance of the aggregate production and the price level during the thirties. Not only that but the most recent manuals of economics such as Krugman et al.'s (2011) have a valuable annex of graphics and another one about the development, interpretation and use of graphics, so that it becomes a purely operational tool, similar to instructions manuals or users' guides. Again, the interest in these anexes is connected with their application in the "real world".

Another one of the usual new features in the new generation of manuals of economics has to do with the definition of key concepts in the margin of the text, "so that it is easier to study and review". As we know, it is an old habit, dating almost from the Middle Ages, to write key elements of the books contents in the margins of the books. So, the idea is to typographically reproduce an old mechanism, but effective in terms of remembering, memorization and learning. However, in many cases, including that of Krugman et al. (2011), manuals choose a triple discourse: the central text, the marginal texts and the iconic-visual component. Users can thus access different types of reading, complementary in many cases.

Finally, the new manuals of economics present new «narrative» features of an anticipatory nature, so sections such as "a step forward" give a short general overview of what will be discussed in the following chapters. The section guarantees students a perception of "continuity" among the differents chapters, so as to avoid the sudden discursive closures usually found in the more classic manuals.

Likewise, the chapters are concluded with a complete summary of contents and essential topics, and also with a list of key concepts with an indication of the page where they are defined, so that we see a quick and easy access to data is respected. The manual is completed with a glossary with references to other terms of the same and with a table of contents of key terms with reference to the pages where they are explained, described or defined.

Finally, every unit or lesson is concluded with a long list of problems, which allow to re-activate the students' evaluative nature and their capacity to assess important variables. Actually, Krugman et al. (2011) consider that this final section has particularly been taken care of, because they have estimated that the evaluative function is essential to check the degree of learning reached by the students. Every chapter includes "a problem with a key", which has a non-evaluative operational nature, because it intends to explain, based on instructing steps, real economic situations such as the opportunity costs of sugar and the computer components made by the United States to trade in Brazil (page 41). Each step is explained in the instructional or operational way of culinary recipes, adding specific references to the relevant and correct sections that it is good to review before dealing with the solution to the exercise.

The last element which is part of the chapter or thematic unit is a summary, usually numbered with half a dozen basic ideas, in many cases highlighted in their essential aspects. We find something similar in Mankiw (2012).

6. Conclusions

In general, in this paper we have advocated a new generation of manuals of economics, represented in Krugman et al. (2011). Despite the lack of functional papers about manuals, we have argued the need to improve access to the data that this kind of texts are made of. To a certain extent, a better access to such data is connected with features of a lexicographic nature. The better the accessibility (with glossaries, tables of contents, parallel texts, etc.), the more of a valuable product the manual becomes from the informative and operational point of view. Likewise, the hierarchisation processes – or those giving information bit by bit – are essential for the receiver to learn.

In this paper, we have justified the need that social situations – those where manuals are normally used – are used to develop this kind of learning texts, because some studies have highlighted the difficulties of students to understand the information provided by these manuals. The manuals' limited operational nature is attributed to a not very clear and hardly educational structure. In general, in many of them there is a lack of rhetorical-argumentative connection with the users' practical knowledge.

Likewise, it is worth considering how manuals are followed up, because in some cases their use is simply fortuitious and biased, destroying to some extent its overall construction or making it conditional to the context of use by students or teachers. Accordingly, the function theory can improve that construction, always depending on the users' specific needs, but also on the communicative learning processes, contexts and the texts variability.

We have considered the development of mono-modal (only written text) or multi-modal manuals (written and visual), as the latter facilitate a better learning and conceptual comprehension process. Let's say that this fact allows us to talk about a new generation of manual of economics.

We have developed a new classification of manuals based on their communicative purposes. The practical, predictive, operational, cognitive and lexicographic nature is a good starting point to continue to elaborate on the type of manual of particular subjects. This classification is based on educational and content criteria. To a certain extent we have linked this typology to the relevant functions of dictionaries in the function theory, although specifying a new situation, which we have defined as "evaluative", given that in academic contexts it is very common to do exercises, exams and tests.

Finally, we have analysed to some extent the contents, structure and accesibility of several of the manuals of economics most frequently used in Spanish universities. In almost all of them, a tripartite structure dominated by communicative rhetorical moves, in turn also made of other communicative parts, predominates. We have particularly focused on the Preamble, Contents and Exercises and the Corollary. Based on those, we have been able to go through the changes that are ocurring at the rhetorical level in the new manuals of economics in detail. We have analysed such changes using examples, structures and contents from various manuals, but above all through the requirements of the direct users (students) and the mediators (teachers). In general, the most remarkable thing about the analysis is that the more operational the nature of the manual is, the more likely it is that the contents are more clearly understood and they are made more accesible for users. In some cases, the inherent evaluative nature in many manuals determines the whole text, as it demands the emergence of a sophisticated apparatus of exercises, solutions and tests. The multi-dimensional nature of contemporary manuals is a challenge for proper access to data, but also that they are used properly.

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