

## Comment

### NEARLY FIVE CENTURIES OF SCIENCE BOOKS

# Farmers for the kingdom of Heaven. Agrarian catechisms in southern Italy in the late enlightenment and the limitations of technical publications

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*ABSTRACT: Catechism, a literary genre of a religious origin, was once employed in the teaching of 'lay' subjects, especially of a technical nature. This is a review of this past editorial tradition which illustrates the potentialities and the limitations of agrarian catechisms, with a special focus on their spreading across Southern Italy in the late Enlightenment. This paper reflects on whether a book was the best instrument to hand down procedures and notions to people who supposedly were illiterate or unschooled.*

*Q. Are you a Christian?*

*A. Yes, I am a Christian, by the grace of God.*

*Q. Why do you say: By the grace of God?*

*A. I say: By the grace of God, because to be a Christian is a perfectly gratuitous gift of God, which we ourselves could not have merited.*

*Q. Who is a true Christian?*

*A. A true Christian is he who was baptised, who believes and professes the Christian Doctrine, and obeys the lawful Pastors of the Church.<sup>1</sup>*

These are the first lines of the famous Greater Catechism, or Catechism of Pope Pius X, published in 1905 to “provide for the religious education of children as far as possible.” It consists of a long series of notions to be memorised by the people of God to inspire devotional behaviour and ultimately attain eternal life. Through this popular and somehow sclerotic version of a literary genre they had already exploited at many levels over the previous centuries, the Catholics were about to complete a long appropriation process. Afterwards, the Catechism would be a very popular teaching instrument for a few decades, but then, after the Second Vatican Council, its popularity would drop.<sup>2</sup>

This genre became popular centuries before, especially among the Protestants and had been employed up to then with remarkable results – if not practical, at least literary – to spread ‘lay’ information, frequently technical-scientific subjects. This paper contains a reflection on such non-religious tradition: yet not strictly in historical terms, it is an attempt to survey the potentialities and the limitations of the agrarian catechism genre, with a specific reference to its diffusion across Southern Italy in the late Enlightenment.

### Catechism or dialogue?

A form of teaching styled in questions and answers: this essentially is catechetical communication (from the Greek *katecheo*, ‘I orally instruct’). So, what are its relations with a genre characterised by a similar structure, namely philosophical-scientific dialogue? Plato used dialogue to preserve, also in writing, the intrinsically maieutic rhythm, typical of oral speech, of speaking by brief sentences (*kata brachu dialegesthai*), thus overcoming the limitation of books “that have nothing to reply and nothing to ask... and when asked even the simplest questions, ... like bells once struck go on sounding, until one touches them,”

they would repeat something already said, unable to interact, and therefore of co-philosophising, with their interlocutor-reader.<sup>3</sup>

The history of this genre is way too long to be reviewed in this paper. However, it is worthwhile to mention a few facts. After having met with great success towards the half of the 17<sup>th</sup> century, thanks to high-profile scientists and writers like Galileo Galilei and Robert Boyle, the dialogic text became very popular in books as a consequence of the style of ‘early’ popularisers: by combining duty with pleasure, they used dialogue as a Trojan horse to lightly instruct an audience rhetorically consisting of women and children that could be addressed paternalistically, with a top-bottom approach, without any fear of offending someone. Hence, some science communication classics were written in a dialogic or para-dialogic form: in France, le *Entretiens sur les sciences* (1683) by Bernard Lamy and *Entretiens sur la pluralité des mondes* (1686) by Bernard de Fontenelle; in Italy, *Newtonianismo per le dame* (1737) by Francesco Algarotti; in Great Britain, some sections of *Evenings at Home* (1792-96) by John Aikin and his sister Anna Laetitia Barbauld, *Harry and Lucy* (1825) by Maria Edgeworth and most of all the *Conversations on Chemistry* (1805) and the *Conversations on Natural Philosophy* (1819) by Jane Marcet, as well as the *Scientific Dialogues* (1846) by Jeremiah Joyce. Of course, the list would be much longer and each case should be discussed to establish whether it truly belongs to this genre, as there are lots of hybrids (in terms of literature theory, ‘conversation’ not always corresponds to ‘dialogue’).<sup>4</sup>

So the question is: what are the differences between dialogue and catechism? Although constantly evolving literary genres are not easy to define, the characteristics of dialogue can be briefly summarised as follows: 1) Dialogue requires more or less articulate fiction, namely a well-defined narrative framework, where two or more characters, often portrayed also in physical, psychological and linguistic terms, meet and discuss. 2) It is built by actors whose relation, though unbalanced, includes compensation mechanisms: for example women, pupils ‘by their own nature’, are often described as noble, differently from teachers; children, thanks to their freshness of mind, offer their teachers original empirical observations that only a noble savage could propose. Moreover, characters usually are not divided into those asking questions and those providing answers. In the overall course of dialogue, all the participants question and answer at the same time. 3) Dialogue dissimulates its teaching purposes. 4) Through an argumentative procedure, it aims at demonstrating something, or at least at persuading the reader about the truth of certain assumptions. 5) It has a style which can be defined as inductive, i.e. from a specific case to a general rule: therefore, theoretical reflections are often introduced by unexpected and/or curious and/or anomalous events and the conclusions of the text (or of any of its sub-sections: day, chapter, conversation, etc.) contain, at least in rhetorical terms, wide-ranging statements, namely Q.E.D. 6) It emphasises the reason *why* of the phenomena. 7) It includes arguments contributed by at least one of the interlocutors in favour of beliefs the author deems erroneous. These arguments are invariably disproved and are exploited in heuristic terms to reach new and shared conclusions. 8) Its style is rather fluent and is designed according to the pace of reading and is not articulated through too many details. 9) It is addressed to a fairly or highly knowledgeable audience. 10) It is conceived to be read, or listened to, only once, at least theoretically.

On the other hand, in its late 18<sup>th</sup>-century golden age, catechism had the following general features: 1) Leaving literary embellishments aside, it often reduces its narrative structure to the interaction of two voices, rather than real characters, devoid of any physical, psychological and linguistic characterisation. They are almost always called simply ‘Q’ and ‘A’, question and answer. 2) It uses these voices as an expression of a constitutional status asymmetry: the questioning teacher vs. the questioned pupil. They are somehow omniscient. The teaching process involving them has already been successfully completed: the text only recaps some knowledge which was previously acquired by the pupil-voice. 3) It emphasises its teaching purposes. 4) Rather than demonstration and/or persuasion, though featured in the text, the focus is on the transfer of knowledge, frequently of an encyclopaedic nature (at least with regard to a specific subject). 5) It has a style which can be defined as deductive, i.e. from a general rule to a specific case, starting from extremely generic definitions, to subsequently introduce increasingly specific and practical knowledge. 6) It emphasises *how* phenomena and procedures take place. 7) It never contributes provisional arguments in favour of unapproved viewpoints. Erroneous assumptions are immediately denounced as such and credited to third-party characters and not to the two voices that, as they are omniscient, share the only possible viewpoint. 8) Its text is designed for rote learning (as well as according to the intrinsic style of the subject). It is often divided into multiple paragraphs and sub-paragraphs with titles designed for consultation when needed, like an encyclopaedic manual. 9) It is addressed to a fairly or completely illiterate audience. 10) It is conceived to be listened to or read many times, to be memorised.

### From religion to technics

What are the origins of this genre? Undoubtedly religious. Already used in the Middle Ages by preachers who wanted to spread the principles of Christian doctrine, catechism enjoyed a great success in the modern age when it was first chosen by the reformed Church, and subsequently by the counter-reformed Church, as an irreplaceable educational instrument. However, starting especially from the second half of the 18<sup>th</sup> century, there was an international diffusion of non-religious catechisms, with legal, moral, political, agrarian or sanitary subjects, among others. What are the reasons behind this phenomenon? Firstly, the new Enlightenment interest in the education of working masses; then, the renewed value of technical knowledge which, for example, had resulted in the *Encyclopédie* by Diderot and D'Alembert. Whereas dialogue, triggering reasoning mechanisms, was the privileged instrument to communicate science, catechism, guaranteeing the memorisation of procedures, was the most suitable genre to teach technics.<sup>5</sup>

Being usually addressed to a fairly or completely illiterate audience, this genre was sometimes employed for a 'multilevel communication', such as the case of sanitary catechisms, frequently addressed to both experts (midwives, chemists and surgeons) and laypeople: the use of Latin was reserved to more intriguing topics, especially of a sexual nature, which remained unattainable to anyone without a higher education. Having left theoretical discussions aside, popularisation had to deal with everyday life issues. An emblematic case is the German model. Drawing on a style already shaped in the *Enchiridion. Der kleine Catechismus (Small Catechism, 1549)* by Martin Luther, this model attached to *Nützlichkeit*, 'usefulness', a practical, ethical and religious value. It is worthwhile to mention, for example, the *Rechtlicher Catechismus (Legal Catechism, 1760)* by Johann Heumann, which insisted on the knowledge of law as a prerequisite to elevate yourself spiritually and reach a religious education; the *Versuch eines allgemeinen Hebammen-Catechismus (An Attempt at a General Catechism for Midwives, 1784)* by Johann Philipp Hagen, which showed that individual bad behaviour can affect the whole community; or the *Catechismus der gesunden Vernunft (Catechism of Sound Reason, 1786)* by Friedrich Eberhard von Rochow, which fell into the Enlightenment tradition according to which children would be able to self-educate and produce new knowledge.<sup>6</sup>

Within this context, a particularly interesting case is the *Oekonomisch-praktischer Katechismus des Kleebaus (Economic-Practical Catechism of Clover-Growing, 1787)* by Johann Ernst Werner. Aside from its title, it is a hybrid work, borrowing from dialogue the features of the characters, as well as the desire to trigger a heuristic process, vaguely reminiscent of Socrates. Its story tells about the meeting of farmer Tobias Kitx and tenant Liebhold. Although they belong to two different social-economic classes, they have a very friendly relation:<sup>7</sup>

*K. Our customary practice is to reap the summer and winter harvest, then to let the fields lie fallow. This is the way of our fathers and our grandfathers. Shall we farmers stop and change it?*

*L. Yes, abandoning the usual practice is based on a good reason when it meets the case and we see it contributes a greater advantage.*

*K. The ancients certainly were not fools.*

*L. Neither are modern economy experts. They are fair with the ancients and say: 'at their time they did what was within their reach...'*

*K. Do we need clover in fallow? Is it necessary as they say?*

*L. I shall explain you why...<sup>8</sup>*

However, a turning point in the German context was the nobleman and politician Joseph von Hazzi, the author of a number of catechisms, including the 'multi-level' *Katechismus der bayerischen Landes-Kulturgesetze sammt Unterricht der Landwirtschaft für das Landvolk, auch zum Gebrauch für Richter und Rechtsanwälte, Volks- und Schullehrer (Catechism of Bavarian Agrarian Laws Together With Agriculture Notions for Countrymen, Also for Judges, Lawyers, Popular Teachers and Schools, 1804)*, with the usual accessory parts addressed to specific targets. It was a successful book with a series of editions, and it marked the institutionalisation of the catechism genre in the German-speaking world: adopted by Bavarian parochial schools, this volume was the foundation to a real educational reform. A foreigner source wrote this satisfied remark:

*It was chiefly through his exertions that a piece of ground was added to every parochial school in Bavaria, to be cultivated by the scholars in their leisure hours, under the direction of the master. In these schools, Hazzi's catechism of gardening, of agriculture, of domestic economy and cookery, of forest culture, of orchard culture, and others, all small 12mo vols., with woodcuts; sold at about 4d. each, are taught to all the boys, and those of gardening, the management of silk-worms, and domestic economy, to the girls.<sup>9</sup>*

In the majority of cases, the catechism did not contain anything original: it essentially was an orderly and straightforward summary of 'plain science' knowledge and techniques, to use Kuhn's words, frequently subject to plagiarism. Some new publications quoted entire sections of old manuals, whereas others were only updated translations adapted to different contexts. For examples, Rudolph Ackermann edited a number of works in Spanish published in London between 1823 and 1829, addressed to a Latin-American audience and drawing inspiration from similar English pamphlets printed in the previous decade. They dealt with a wide range of subjects, from grammar to astronomy (in all, roughly one hundred popular volumes, 25 of which truly were catechisms). They were not original texts, but for the most part only total or partial translations of catechisms, then very widespread in Great Britain and edited by William Pinnock and Samuel Maunder, by Dr. Mavor, by Christopher Irving.<sup>10</sup>

If we were to widen our analysis to give an overview of the spreading of this genre at international level, it would be difficult and would not meet the goal of this paper: a quick search through the electronic catalogues of the main national libraries would suffice to count hundreds of titles. On top of that, figures would only be the evidence of the purchase of those books, rather than of their actual use. Taking a census of the category of agrarian catechisms would be a task hard enough. However, this genre is worthy of special mention. It received some attention in the France of the Enlightenment, a prominent example being the *Catéchisme d'agriculture ou bibliothèque des gens de la campagne* (1773), published anonymously drawing inspiration from German models. As early as in the introduction, the author points out some of the communication strategies of the book: following the pedagogical trends of the period, adults have the task of directing children's unbridled curiosity:

*To that purpose, we have chosen a family education or catechism; yet the child is to ask questions and the father is to give answers. This way is more natural. The child is curious and willing to learn, and the father has the experience to teach... Therefore, this catechism should not be learnt by heart, as they say: unfortunately experience has taught us that anything you learn by heart hardly ever affects your spirit and your behaviour.<sup>11</sup>*

Using a para-dialogic style, the author gave things a new order, allowing the child to ask questions, as rarely happened before. Despite the good intentions, the diffusion of this genre met with intrinsic difficulties: for example, its supposed audience was usually made up of illiterate people, lacking the economic means to introduce into the agricultural work the new practices. But who actually read the catechisms? Were there intermediaries between the authors and the addressees? Then, there is the questionable issue of the ability of written words to explain working procedures that could be imitated only if seen in real life and adapted to different contexts. A reviewer once made an exemplary comment:

*Among all the possible books, an agriculture catechism is probably the hardest to do well. Theoretically, it is addressed to children or men who know nothing at all... It no longer surprises to see so many bad quality books of this genre and so few real agronomists. The work we are announcing does not fully belong to this category. It is possibly useful if it reaches the farmlands, and above all if the curates bother to explain it to their parishioners. The advice the author gives on the mixture of lands would be excellent, if farmers were rich enough to bear the expenses. We'd appreciate further analysis of agricultural physics and especially slightly more precision and clarity. Each question and each answer require commentaries to develop the truths they contain. The State should sustain the expenses of such a work and of its free distribution to the curates, who would then take care of applying the doctrine to the different lands of their parishes. All the general principles of this genre are unsatisfactory owing to their general character.<sup>12</sup>*

This initiative, though valuable from a literary point of view, enjoyed limited success at practical level, so much that in France the success of agrarian catechisms, then evolved into actual textbooks to be used at school, would come only in the second half of the following century.<sup>13</sup>

Also English-speaking countries had their catechisms, especially in the 19<sup>th</sup> century, when the institutionalisation of agrarian teaching was deeply changing the nature of this genre. In Great Britain, aside from the pamphlets edited by Pinnock & Maunder, such as the *Catechism of Agriculture* (n.a.) by George Roberts, or the one of *Botany* (n.a.), written “by a friend to youth,” a model book was the renowned and thriving *Catechism of Agricultural Chemistry and Geology* (1844) by the Scotsman James F.W. Johnston. The text contained many pictures, simple and self-explanatory: however, they clearly demonstrated the shift in the purpose of the book, that was gradually losing the fake oral style used up to that point to become a modern school textbook, rich in explanations and experiments to be read rather than reproduced. Therefore, it was too complex a book for farmers, but an excellent one for students or (aspiring) landowners. This model was an inspiration to Henry Stephens, the author of the *Catechism of Practical Agriculture* (1856), which divided the subject into seasons and exploited extremely articulate icons to illustrate machines and procedures, above all. Later, a more accessible work, yet still addressed to a now literate audience, was *An Agricultural Catechism or the Chemistry of Farming Made Easy* (1867) by Benjamin Franklin. Originally addressed to the teachers of North Carolina, this book offered short theoretical digressions in which the author spread the results of the research by Justus von Liebig, Julius Adolph Stöckhardt and Johnston himself.<sup>14</sup>

### Neapolitan Catechisms

*D. What is agriculture?*

*R. Agriculture is the art of cultivating the land to reap as much harvest as possible.*<sup>15</sup>

This is a clear-cut statement, the expression of an effective will to intervene on nature, to make the most of it to the advantage of humans. It is the beginning of the *Catechismo di agricoltura pratica e di pastorizia* [*Catechism of Practical Agriculture and of Sheep-Farming*] (1792), published anonymously in Naples, but written by the Celestine Teodoro Monticelli. The book, which called for more economic freedom and less taxes, trade intermediation, parties and devotional practices, also suggested a number of innovations, such as the introduction of new machinery and crops and the replacement of fallow with forage, as well as structural interventions, such as reclamation and reforestation. Conceived “for the public education of the farmers of the Kingdom of Naples,” the agrarian catechism genre started to face the competition of the new normal schools, established in order to provide a basic education to those who could not afford the more elitist teaching methods of private tutors.<sup>16</sup>

*I write solely for the education of farmers and children: hence, I deemed it suitable to use a clear, simple style, without embellishments nor elegance ... For the same reason I have not left dialogue aside, as it is now the usual practice in normal schools ... And a single teacher does this school to sixty, perhaps one hundred pupils with excellent results, for their simultaneous instruction.*<sup>17</sup>

Monticelli, as many other Neapolitan intellectuals – or rather “philosophers”- followed the model of Antonio Genovesi and Gaetano Filangieri, taking it upon himself to spread knowledge among the social classes that could not benefit from it before. The assumption – not to be taken for granted back at the time – was that better education at all levels would have implied an improvement of the living conditions throughout the country. The late 18<sup>th</sup> century therefore was the golden age of the so-called “catechisms of the life states:” obviously technical (agrarian, nautical, legal, military, etc.), but often also intrinsically political.<sup>18</sup> The scholars could leave their ivory tower and “spread across the farmlands”, if not personally, at least through their books. In this case, agriculture would thrive only “when either philosophers work the land or farmers philosophise.”<sup>19</sup>

The issue was always the same: who read what? The problem was non-existent in the case of textbooks at school: a teacher would have the task to read, explain and teach them to his or her pupils. But how to spread them across the farmlands, where the State itself did not manage to reach? As it is known, the number of the people who could read was limited and in any case they were not used to a relatively sophisticated medium such as a book. Intermediaries were needed and Monticelli identified them in the clergy. In his “Speech to the Bishops of the Kingdom” he invited the representatives of the Saint Roman Church to become engaged: indeed, peoples “willingly obey” them and the farmers in particular “blindly” believe them. Therefore, it was agrarian teaching disguised as a pastoral practice:

*Nobody dare tell me that I would call you on a task outside your mission aimed at the spiritual health of the soul ... if among other sciences, you taught agriculture and sheep-farming, which undoubtedly are the most apt to prevent sins and to maintain the purity of the customs, as they are opposed to idleness and poverty, the main causes of the corruption of the peoples.*<sup>20</sup>

Monticelli was too optimistic, just as his French counterparts had been too trustful of countryside curates. Not only because priests could not or did not want to take on an additional task, but most of all because in agriculture it is not enough to have a master leading pupils through the memorisation of absolute and unquestionable principles. What was needed was an expert to ‘give life’ to the catechism, starting from it to subsequently show on the field the farming practices most suitable to the various contexts. Going beyond words was the imperative. Technics, much more than Christian doctrine, and possibly than science itself, required learning by imitation. The philosophers, or rather their books, should of course go to the farmlands, but they were also bound to use the distinctive communication techniques of the subject of the teachings. Reading an agrarian catechism, if not supported by demonstrations on the fields, would produce results similar to the effort made by farmers to learn prayers and invocations in Latin. This would cause them to memorise words and utter variously distorted expressions, of which they did not know the meaning (obviously this analogy did not occur to the prelates of the time). A reviewer of Monticelli’s work, though praising it for its exemplary clarity, rightfully objected that priests could not “successfully teach somebody else any art without putting their hands to it, only by means of bare instructions.”<sup>21</sup>

Inspired to equally noble intentions, the *Catechismo agrario per uso de’ curati di campagna e de’ fattori delle ville* [Agrarian Catechism for Countryside Curates and Farmers] (1793) was published by the abbot Giovanni Battista Gagliardo the following year. The author enlarged the circle of intermediaries by enrolling, aside from the usual clergy, the stewards, or so-called farmers, people employed to manage another’s property. They were those who could have benefited from the “land enclosure”, i.e. fencing the land entitled to them. The operation would have made it possible to increase the harvest, to protect animals and plants, and to make lands more fruitful. The problem was that this class – generally not welcoming innovations – was granted little autonomy from the feudal power in many areas of the Bourbon Kingdom.

*Q. What is the purpose of agriculture?*

*A. Making lands fruitful [...].*

*Q. So, must the farmer know all of these things?*

*A. Certainly. This is the main duty of a farmer, whose duty we will dwell upon after establishing the other two equally necessary or universally still neglected.*

*Q. What are they?*

*A. Enclosing the land and building the villa.*

*Q. What advantages derive from enclosing the land?*

*A. This is the only way to prevent the passage of men and of animals, so that those lands unfruitful by their own nature may become fertile.*

*Q. How?*

*Q. Many lands are full of stones, others are swampy. And therefore they cannot be worked. By removing stones from the former and draining water from the latter, they shall become easier to work, and consequently suitable to produce.*<sup>22</sup>

It was the same old story, but on the other hand it was inevitable for a book whose supposed addressees were not interested (priests) or unable (stewards) to translate into practice what they read or were totally illiterate (farmers)! There were mentions of the actions promoted in 1746 in Sweden, then in Italy, in Vicenza and Florence: printing handbooks for priests of the countryside regions, who “not only have to teach their parishioners the things of religion, but also the farming practices and the duties of the farmer’s state.”<sup>23</sup> Rich in practical advice and ‘exercises’, the catechism was mainly addressed to priests who, acting once again as intermediaries with illiterate farmers, entered – as it would soon be the case with smallpox vaccination campaigns – a long chain of controlled-controllers.<sup>24</sup>

Far from being naive, Gagliardo’s operation had a precise purpose. In 1789, at Taranto’s seminary, a true course of agriculture had been established, having the purpose of training priests able to help their parishioners in managing farming techniques (however, it was cancelled the following year). The abbot, entrusted with the task to teach there, wrote this *Catechismo* for the occasion. Monticelli and Gagliardo

certainly were not the first in Italy to suggest to turn religious people into intermediaries and popularisers of farming knowledge. For example, elsewhere a broad debate had been triggered by proposals of people such as Giovanni Targioni Tozzetti and Francesco Pagnini – and yet, the relation between clergy and peripheral administration, closer in the Bourbon Kingdom than elsewhere, made them think success was attainable. However, it hardly ever came, and the protestant model became an inspiration which was never repeated.<sup>25</sup>

According to Gargliardo, the issue probably lay upstream. What language to use? The agrarian language, much more than any other technical language, was extremely variable according to the geographical contexts. So, first of all a common language was to be created to allow everyone to understand the message to be conveyed:

*It is now time to amend all the sciences so that each of them contributes to the intelligence of the others. If the agronomist is to know chemistry, natural history, geonomy, botany, etc. he should not use arbitrary words, which express nothing, but terms belonging to these sciences when he speaks of the analysis of the lands, of names of plants.*<sup>26</sup>

The hope that each priest acted as a good shepherd and gathered around adults and children to teach them agriculture soon faded away. Already in the ‘French decade’, the catechisms started to appear as textbooks following a question-answer structure. And even as encyclopaedic manuals for teachers, judging from their size: the *Lezioni e catechismo di agricoltura* [*Lessons and Catechism of Agriculture*] (1808) by Paolo Nicola Giampaolo consisted of over 900 pages divided into three volumes. Later, the term ‘catechism’ would have moved on to designate in generic terms “the elementary teaching of a subject other than religion, styled as a question-and-answer text”<sup>27</sup> or also, such as the *Catechismo agrario ad uso delle scuole elementari* [*Agrarian Catechism for Elementary Schools*] (1841) by Granata, a type of manual no longer written with questions and answers.

This shift was even denounced in a true treatise, one of the most famous in Italy, which also had a Neapolitan edition, but was conceived in Veneto. In his *Catechismo Agrario* [*Agrarian Catechism*] (1819), Ciro Pollini made it clear: “However, I have not dictated such instruction for the rude countrymen who mechanically work the soil. It would be useless for them, as they cannot read, and if they can, they do not read or comprehend. I have deemed it should be useful for farmers, landowners, tenants, stewards and workers, in short for those governing the estate... But the agrarian catechism should also be of use to municipal schools.”<sup>28</sup> Those who firstly had been the addressees of the catechism, the poor illiterate farmers, were then considered deaf to any form of literature. Those who were not interested in knowing the scientific principles underlying the techniques they had to learn were left to their own devices. Then, a theory was reintroduced, without which the masters, educated in academies, were not able to justify their own choices:

*Q. What is the purpose of agriculture and how can it achieve it?*  
*A. Agriculture aims at deriving from the land the largest harvest with the smallest expense possible and it does so putting together practice and theory, namely agrarian science. The theory is to identify the general farming rules, adapt and change them according to the specific circumstance. The practice is to farm the soil according to sound theoretical instructions, amending those that by chance our forefathers erroneously handed down to us, and introducing better uses.*<sup>29</sup>

## Notes and references

<sup>1</sup> *Compendium of Christian Doctrine prescribed by His Holiness Pope Pius X to the dioceses of the Province of Rome* (1905), Vatican Press, Rome: Preliminary Lesson. On Christian Doctrine and its Principal Parts.

<sup>2</sup> L. Nordera (1988), *Il Catechismo di Pio X. Per una storia della Catechesi in Italia (1896-1916)*, Libreria Ateneo Salesiano, Roma. In 1930, an abridged version was published with illustrations, addressed to children and young people in particular. It is worthwhile to mention that among the teachings given in a catechetical form in pre-republican Italy was the fascist doctrine. For example, the *Primo libro del fascista* [*First Book of the Fascist*] (1938) begins as follows: “What is the meaning of the name DUCE? Duce comes from the Latin Dux which comes from duco and means ‘He who leads’: the Leader. Who is the DUCE? The DUCE, Benito Mussolini, is the creator of Fascism...”

<sup>3</sup> Plato, Protogoras: 328a-b.

- <sup>4</sup> G. Myers (1989), *Science for Women and Children: The Dialogue of Popular Science in the Nineteenth Century*, in J. Christie and S. Shuttleworth (eds.), *Nature Transfigured: Science and Literature, 1700-1900*, Manchester University Press, Manchester: 171-200; G. Myers (1992), *History and Philosophy of Science Seminar: Fictions for Facts: The Form and Authority of the Scientific Dialogue*, *History of Science* **30**: 221-47; G. Cantor (2000), *Science for Women and Children*, and A. Fyfe (2000), *Young Readers and the Sciences*, in N. Jardine and M. Frasca-Spada (eds.), *Books and the Sciences in History*, Cambridge University Press, Cambridge U.K., pg. 276-90; A. Fyfe (ed.) (2003), *Science for Children*, Thoemmes Press, Bristol; M. Rogers (2003), *Newtonianism for the Ladies and Other Uneducated Souls: The Popularization of Science in Leipzig, 1687-1750*, Peter Lang, New York; M. Mazzotti (2004), *Newton for Ladies: Gentility, Gender, and Radical Culture*, *British Journal for the History of Science* **37**: 119-46; L. Anscomb (2005), 'As far as a woman's reasoning can go: ' *Scientific Dialogue and Sexploitation*, *History of European Ideas* **31**: 193-208.
- <sup>5</sup> In 1529, Martin Luther published two different catechisms, one for pastors, preachers and teachers, and the other for children and common people. Calvin published its own children's version in 1541. The catechism of Heidelberg in 1563, followed by an abridged version in 1585, were soon thereafter aimed at providing a 'standard version' of the reformed Church doctrine. After the Council of Trent, the Catholics wrote similar works: Petrus Canisius (Peter Kanis), in 1556-57, Edmund Auger, in 1563, and Roberto Bellarmino, in 1597, were the masters of this pedagogic activity. The doctrinal reference was in any case the so-called Roman Catechism, of 1566, addressed only to priests. Its writing, required by Pius V, was directed by Carlo Borromeo. B. Marthaler (1995), *The Catechism Yesterday and Today: The Evolution of a Genre*, Liturgical Press, Collegeville (Minn.).
- <sup>6</sup> N.F. Schott (2010), *Catechisms and Enlightenment: The Conversion of Knowledge from Paul to Bahrdt*, PhD thesis, Johns Hopkins University, Baltimore U.S.A., pp. 340-414.
- <sup>7</sup> This procedure is reminiscent of certain communication methods employed by the Italian radio in the fascist era. Established in 1933, the 'Ente Radio Rurale' used to air mannered radio shows with apparent teaching purposes. The best example was L'ora dell'agricoltore [The Farmer's Hour] (1934-45), aired on Sunday mornings which gave quite elementary agronomy notions, along with 'nuggets of domestic wisdom' exploiting the dialogue among characters – Menico, Timoteo and Dorotea – so stereotyped that they appeared to be a farce. G. Isola (1990), *Abbassa la tua radio, per favore... Storia dell'ascolto radiofonico nell'Italia fascista*, La Nuova Italia, Firenze Italy, pg. 115-41; G. Isola (1998), *L'ha scritto la radio. Storia e testi della radio durante il fascismo (1924-1944)*, Bruno Mondadori, Milano Italy, pg. 250-60.
- <sup>8</sup> J.E. Werner (1787), *Oekonomisch-praktischer Katechismus des Kleebaus*, G.A. Keyser, Erfurt, pg. 10-11.
- <sup>9</sup> (1835), *The Farmer's Register*, **2**:169.
- <sup>10</sup> E. Roldán Vera (2001), *Reading in Questions and Answers: The Catechism as an Educational Genre in Early Independent Spanish America*, *Book History* **4**: 17-48.
- <sup>11</sup> G.L.C.A. Bexon (1773), *Catéchisme d'agriculture ou bibliothèque des gens de la campagne*, Valade, Paris: Avertissement, IX-X.
- <sup>12</sup> (1773), *Observations et mémoires sur la physique, sur l'histoire naturelle et sur les arts et métiers*, **2**: 168.
- <sup>13</sup> On the limitations of this popularisation method, see A.J. Bourdé (1967), *Agronomie et agronome en France au XVIIIe siècle*, S.E.V.P.E.N., Paris France, **1**: 70-73; M. Simonetto (2001), *I lumi nelle campagne. Accademie e agricoltura nella Repubblica di Venezia, 1768-1797*, Canova, Treviso Italy, pg. 353-54; A. Sandri (2007), *Les catéchismes au temps des philosophes, Dix-huitième siècle* **39**: 319-34.
- <sup>14</sup> H.A.M. Snelders (1981), *James F. W. Johnston's influence on agricultural chemistry in the Netherlands*, *Annals of Science* **38**: 571-84; C. Merchant (2010), *Ecological Revolutions: Nature, Gender and Science in New England*, The University of North Carolina Press, Chapel Hill, sec. ed., pg. 198-231.
- <sup>15</sup> T. Monticelli (1792), *Catechismo di agricoltura pratica e di pastorizia*, A. Cons, Napoli Italy, re-edited by M. Mainardi (2002), Edizioni Panico, Galatina, pg. 41.
- <sup>16</sup> On agrarian education in Southern Italy, see R. De Lorenzo (1998), *Società economiche e istruzione agraria nell'Ottocento meridionale*, Franco Angeli, Milano Italy; L. Terzi (2001), *Le scuole normali a Napoli tra Sette e Ottocento: documenti e ricerche sulla "pubblica uniforme educazione" in antico regime*, L'Orientale, Napoli Italy; R. Pazzagli (2008), *Il sapere dell'agricoltura. Istruzione, cultura, economia nell'Italia dell'Ottocento*, Franco Angeli, Milano Italy, pg. 279-92.
- <sup>17</sup> Ivi, 33-34.
- <sup>18</sup> For Genovesi's Naples see the classic VIII chapter by F. Venturi (1969), *Settecento riformatore. I. Da Muratori a Beccaria*, Einaudi, Torino Italy, pg. 513-644. Specifically referring to the issue involved are: P. Matarazzo (1997), *La formazione civile del suddito nel Regno di Napoli alla fine del XVIII secolo: i catechismi degli stati di vita*, *Atti della Accademia Pontaniana* **46**: 173-94; P. Matarazzo (ed.) (1999), *Catechismi repubblicani: Napoli 1799*, Vivarium, Napoli Italy.
- <sup>19</sup> *Analisi ragionata de' libri nuovi*, May 1793, pg. 60. It is a review of Gagliardo's *Catechismo*.
- <sup>20</sup> T. Monticelli (1792), *Catechismo di agricoltura pratica e di pastorizia*, cit.: VIII-IX.
- <sup>21</sup> *Analisi ragionata de' libri nuovi*, February 1793, pg. 27-36.
- <sup>22</sup> G. Gagliardo (1973), *Il Catechismo agrario*, s.e., s.l., re-edited by E. Imbriani, Congedo, Lecce Italy (1990), pg. 1-2.
- <sup>23</sup> G. Gagliardo, *Catechismo agrario*, presentation to the inhabitants of the Salento province.
- <sup>24</sup> R. De Maio (1970), *Società e vita religiosa a Napoli nell'età moderna*, vol. 2, Edizioni scientifiche italiane, Napoli Italy; G. Biagioli (2004), *Agricoltura come manifattura. Istruzione agraria, professionalizzazione e sviluppo agricolo nell'Ottocento*, vol. 2, Leo S. Olschki, Firenze.



- <sup>25</sup> T. Arrigoni (1987), *Uno scienziato nella Toscana del Settecento*, Giovanni Targioni Tozzetti, Gonnelli, Firenze Italy;  
R. Pasta (1993), *L'Accademia dei Georgofili e la riforma dell'Agricoltura*, *Rivista storica italiana* **105**: 484-501.  
About Pagnini, a source says that "he had published a pamphlet to inculcate priests with the duty of teach agriculture to countrymen, but it did not work out. Because Catholic priests are absorbed by religion practices, whereas Protestant priests, especially in Germany, contributed very much to the agrarian progress over the past century." *Enciclopedia agraria italiana* (1880), Roma, Pisa, Napoli, Italy: part 1, 102.
- <sup>26</sup> G.B. Gagliardo (1804), *Agli studiosi di agricoltura*, in *Vocabolario agronomico italiano*, Agnelli, Milano Italy.
- <sup>27</sup> N. Tommaseo and B. Bellini (1865), *Dizionario della lingua italiana*, Società L'Unione Tipografico-Editrice, Torino Italy, vol. 1, part 2, 1290.
- <sup>28</sup> C. Pollini (1819), *Catechismo agrario, second edition*, in *Memorie dell'Accademia d'agricoltura, commercio ed arti di Verona Italy, da Memorie a Italia* **8**: 9-10; 11.
- <sup>29</sup> Ivi: 15.

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