

Virtual realities and farming systems

Monica A.M. Commandeur

Wageningen UR, Alterra, Landscape centre, The Netherlands, monica.commandeur@wur.nl

Abstract: *The exchange of scientific information is still dominated by articles in refereed journals and oral presentations at symposia and conferences, although the appreciation of information exchange outside the rigid environment of citation scores has shifted from paper to visual and from directive to interactive. As scientists we need to relate to these developments and evaluate the scientific value of other media. This contribution to the IFSA symposium is an exploration of visual representations of farming systems using fragments of two examples: the documentary “Meat the Truth” and a tube clip called “Purcelli è Tumbera”. Both documentaries have a scientific claim. The aim of this article is to explore the options to validate these visual representations from a scientific perspective by the following criteria: (i) the contents of the films; what indicators should be used to evaluate the fit with scientific truth? (ii) the way in which the film addresses the audience; to what extent does it invite scientific reflection and dispute? and (iii) the way the film appeals for appreciation; what attitude is used (expert, promotion, etc.)*

Keywords: *farming systems, tube films, scientific evaluation, Corsica, pigs*

Introduction

Imagine, next time at IFSA you will probably all be sitting with a laptop at the meeting. A good part of the audience presentations will no longer be supported by simple slide shows. You will show tube films, and a direct web connection will be available for interactive use. Is that exciting? Yes, but... at the end of the day the image material that we produce does not count. They are only the number of articles that we publish in Journals, in particular with high citation scores, which determine our ranking as a researcher. Implicitly we have been taught that film is something unworthy of our science. In this article I make just that the subject for discussion.

What is the purpose of using film as a medium to show agriculture? And what type of films are used for it? Behind this question is the matter of control: where does the original assignment come from to make a film in the first place? To a large extent these questions are not the prime interest for a farming systems researcher. So I refrain myself to a short introduction to these matters, focussing on our key. The important issue for researcher is that they are nowadays confronted with images and tube films whether they like making them ourselves, or they are confronted with the productions of others, e.g. on the internet.

This contribution to the IFSA symposium is an exploration of visual representations of farming systems using fragments of two examples: the documentary “*Meat the truth*”, made by the Dutch Political Party for the Animals – PvdD (Everaerts and Zwanikken, 2007) and “*Purcelli è Tumbera*”, a compilation of the work of a Dutch interdisciplinary expert group. The shot were taken during an excursion to Corsica in 2009 (Commandeur and Levie, 2010).

Both films are focussed on farming systems and were intended to have impact based on scientific truth: there is an intention to advance science with them. This article explores the origin of both films: with what purpose were they made, who assigned for them, and how scientific are they? The aim of this article is to explore the options to validate these films from a scientific perspective by the following criteria: (i) the contents of the films; what indicators should be used to evaluate the fit with scientific truth? (ii) the way in which the film addresses the audience; to what extent does it invite scientific reflection and dispute? and (iii) the way the film appeals for appreciation,; what attitude is used (e.g. expert, extension, promotion)?

Agriculture in the movies

Agriculture in movies is nearly as old as the movies themselves. As early as 1910 European governments funded rural cinema campaigns designed to educate farmers about progressive farming techniques. In the 1920s the French government started a combat against the *rural exodus* to the cities with agricultural films. It is an early example of the state use of film for social change (Levine, 2004). The image of the Soviet Union was a nation in which agriculture and industry, the countryside and the city were co-created as a “*smoothly operating, reciprocally functioning system in which each side of the equation adds to the other symbiotically*” (Caroll and Banes, 2000). The image of what the Soviet Union hoped to become was vividly represented by Eisenstein’s film: *The Old and the New* (1929). The United States government hired film writer-reviewer Pare Lorentz for the New Deal’s Resettlement Administration to produce films that encourage the abandonment of unproductive farming during the Great Depression (1930s) and the relocation of families away from impoverished rural areas (Martz-Mayfield and Hallahan, 2009). In the years 1940-1970 numerous movies to encourage agricultural development were made all over Western Europe, often with the support of the Marshall Aid Program. They show instructions about how farmers can use modern technologies to increase food production. Actually these movies were either meant to instruct the workers in agricultural extension (Bieleman, 2009), or to instruct the consultants of farmers wives to convince them that a modern ‘urban’ lifestyle and living on a farm do not need to conflict (Burg van der, 2009).

These films showed what the governments offer to the farmers as means for progress: new techniques, more production, less hard work and prosperity. In retrospective they give us interesting insights in the position and motives of the governments. The governments see in film a powerful instrument to combine multiple objectives: to instigate their agricultural development policy, to propagate their general ideology, and/or to advertise the economic health and wealth of the country. In conclusion: for about 100 years the making of agricultural movies were firmly in the hand of governments; they controlled their discourse, supported by both technical and (rural) sociological sciences, and with little public dispute.

“Documentary film is a broad category of visual expressions that is based on the attempt, in one fashion or another, to “document” reality” (Wikipedia, 2010). In the pre-1900 period the documentary was used as “studies with the help of the cinematograph”. In 1900-1920 so-called “scenics” were among the most popular sort of films at the time, which embraced primitivism and exoticism. In the 1920s three types of documentary making developed. Some film makers embraced romanticism. The continental, or realist, tradition in documentary making focused on humans within human-made environments. The newsreel tradition became also important in documentary film; newsreels were sometimes staged but were usually re-enactments of events that had already happened. 1920s-1940s. The propagandist tradition rose in the 1920-1940. It consists of films made with the explicit purpose of persuading an audience of a point. In the 1950-1970 the direct film became popular. The fundamentals of the style include following a person during a crisis with a moving, often handheld, camera to capture more personal reactions. There are no sit-down interviews. In the 1960s and 1970s, documentary film was often conceived as a political weapon against neocolonialism and capitalism in general, especially in Latin America. This film genre has become increasingly successful in theatrical release (e.g. “An inconvenient Truth”). Modern documentaries have some overlap with television forms, with the development of “reality television” that occasionally verges on the documentary but more often veers to the fictional or staged. The making-of documentary shows how a movie or a computer game was produced. Usually made for promotional purposes, it is closer to an advertisement than a classic documentary. Modern lightweight digital video cameras and computer-based editing have greatly aided documentary makers, as has the dramatic drop in equipment prices (Wikipedia, 2010).

Since the turn of the century a personal video camera has become a common good in western countries, and the latest series of mobile phones are equipped to make a film clip. They are expected to release soon even in futuristic appearing eyeglasses (Maurer, 2008). As a consequence of the

dissemination of personal cameras, people make films about everything that triggers their interest and very often they make it bluntly available for everybody in the world to see through the internet.

If you scan the internet nowadays for movies and tube clips about agriculture, what do you find? Depending on the key word, “agriculture” farming”, “livestock”, etc. there are always numerous hits. And with every hit there suggested links to related film clips. They give the spectator the idea that their numbers are countless.

Focussing on the subjects of these film clips, there are still a good number of films about technological development; some of them include modern policy issues, like animal welfare and sustainability in highly developed technological systems. However there is an increasing number of films that dispute highly productive agriculture, by showing nasty images of animal cruelty, water, air and soil pollution, and erosion, etcetera. On the other hand there is a substantial number of films advertising organic farming often supported by romantic landscape views (personal observation after 2-days of quick scanning).

The variety of films on the internet reflect bluntly the fact that governments lost their control over the means (film making). The variety of the contents of the films also reflects which issues trigger the makers of these films to take the effort to make that film and show it on the web. The potpourri of films pinpoint the global debate about modern agriculture and farming systems. They represent various angles of the issues at stake in the debate. In the potpourri governments and scientists still participate in the debate, but they do no longer control it.

The shift of the image agriculture

Unlike in the colonized parts of the world (USA, Australia, etc.) Western European farmers have never had a reputation of large scale entrepreneurs, industrials and innovators. They were thought to lag behind in modernization, and therefore in gain and profit (Hayami and Ruttan, 1985). In historic literature and in arts, European farming show two faces. Sometimes they are presented as traditional and materialistic barbarians, unintelligent, lacking sentiments, and with natural superstition against all unknown. Sometimes they are posed as representatives of idyllic, harmonic country life. Both images have never been part of the farmer’s own reality, for whom the perpetuate struggle with the elements is the everlasting core of all focus (Berger, 1979).

Modern farmers still identify themselves with an elevated vocation (Schnabel, 2001). They take it as their superior duty to plod on to feed the ever increasing world population. They have this mission to carry on with what was handed over by their ancestors and what they should pass to their descendants. Failing to do so is a failure of life (Schnabel, 2001).

However, the majority of the farmers have failed to remain farming in the last century¹. The ones who did remain in the business, did so at the expense of scale increase, production intensification, and result-driven management measures, sometimes even up to a level of estrangement from their self-imposed elevated mission.

The societal appreciation of farmers is estranging simultaneously with the progress in European farming. What the urban society wants to appreciate of farming is well illustrated by the popularity of television series, like “*Farmer wants a wife*” (Longly, 2001, 2009), which was released in countries all over the world. The series is a reality television program. Bachelor farmers are preselected to perform in the series, based on the number of letters they received from women in the preselections. At the start of the series the farmers have chosen five women to stay with them on the farm. During the course of a week the women are successively dismissed, until one women remains. In some countries (i.e. the Netherlands) the series boosted the image of agriculture as a side effect. The preselected farmers appeared to combined a modern ‘urban’ lifestyle with artisanal entrepreneurship and the

¹ E.g.: in the Netherlands the number of agricultural and horticultural holdings of a size of at least 16 European Size Units (ESU) dropped from 410.000 in 1950 to 72.000 in 2009 (source: www.cbs.nl)

ease of country life and cosiness. In the public comments to the series this image is put forward as an ideal to pursue. The farmers became unsolicited role models of what the citizens expected from farmers. Subsequently the image contributed also to the general aversion of society against the exponents of synthetic farming beyond human standards for recognisable artisanality². The popularity of the series should however not be mistaken for an indication of the economic sustainability of the farms that were shown.

“Meat the Truth”

The documentary *“Meat the Truth”* (Everaerts and Zwanikken, 2007) is produced by the scientific bureau of the Dutch political Party for the Animals (PvdD) and presented by the political leader of the party (Marianne Thieme). It is easy to encounter at several sites on the internet. Since the movie was shown at the Copenhagen climate summit in December 2009, it is also available with subtitles in various languages.

In an opening statement *“Meat the Truth”* refers to the famous documentary *“An Inconvenient Truth”* (Guggenheim, 2006), presented by Al Gore about climate change. Marianne Thieme, claims in her own film that *“...although such films have convincingly succeeded in drawing public attention to the issue of global warming, they have repeatedly ignored one of the most important causes of climate change, namely: intensive livestock production. “Meat the Truth” has drawn attention to this by demonstrating that livestock farming generates more greenhouse gas emissions worldwide than all cars, lorries, trains, boats and planes added together”*.

The film *“Meat the Truth”* has the same presentation form as *“An Inconvenient Truth”*: Marianne Thieme gives a video conference about the production of Greenhouse gasses in animal production. The presentation style is *“these are the facts”*, similar to the way that scientists present their research at symposia. Her speech is supported by scientific data and comments of scientists, concerned citizens, and people in the streets. The scenes are intermitted with films and animations about animal feedstuff production, animal mass production in present day livestock farming, and related animal welfare issues. The contributions of scientists support the line of reasoning to the final conclusion: people should largely reduce (or cut entirely) their meat consumption in order to stop the livestock sector with the cruel production methods and to save the world from a greenhouse disaster. The appearance of multiple scientists in the film, and the fact that they all contribute information in support of the theorem supports the idea that the film presents an undisputed truth.

Purcelli è Tumbera

The film material for the documentary *“Purcelli è Tumbera”* (Pigs and Slaughter), (Commandeur and Levie, 2010) is collected during an excursion of a Dutch group of mixed professions. Their shared interest was the Corsican pig farming business from different perspectives. The excursion was a follow-up after a research project, conducted a few years earlier about the farming styles and the motives for cooperation of Corsican pig farmers. (Commandeur and Casabianca, 2008, 2005).

The aim of the tube film is to represent the world famous John Berger quote:

“A peasant becomes fond of his pig and is glad to salt away its pork. What is significant, and is so difficult for the urban stranger to understand, is that the two statements are connected by an and; not by a but.” (Berger, 1980).

The film represents the routine of pig farmers in the slaughter season in Corsica. It shows several pig farmers who are at work to produce their delicacies with exceptional artisanal craftsmanship. The film is very short; it is a tube clip: a composition of non-manipulated reality film fragments. The

² Artisanality: the extent to which a production process is performed with human physical, or directed labour (animal, technique); i.e. without the support of synthetically transformed energy sources.

composition follows the consecutive steps of the production chain: farm management, slaughter, transformation of the meat, storage, sales and home consumption. The film is made from the perspective of the Dutch excursion group. The farm management is shown as the supplementary feeding by the farmer on the slope of a mountain. The slaughter is done in a small village slaughter house. Next the carcass is returned to the farm site. In his transformation unit the farmer cuts the meat parts and prepares the cuts for dry curing. Several farmers are shown. Their techniques differ slightly, according to their climatic location, family traditions and personal preferences. Next the storage of the meat is shown and the sales unit. At the end the excursion group is invited to enjoy the products. A background voice give some interesting data. Local scientists have been consulted for the film, but they are not actually seen. The focus is entirely with the activities that are performed on the pigs, within the premises of the operation.

The result is a seven minutes tube film. At close distance it shows how the farmers feed their pigs, have them slaughtered, remove the meat from the carcass, prepare various cuts, sausages and other delicacies, store the products to dry, sell them, and share them proudly with their visitors. The film involves the spectator (*urban stranger*) by inviting him to identify with the dynamic passion of the pig farmers and to appreciate both the craft as it is performed in these conditions, and the product.

Discussion: the relation between the films and science

This article explores the options to validate two farming systems documentaries from a scientific perspective by the following criteria: (i) the contents of the films; what indicators should be used to evaluate the fit with scientific truth? (ii) the way in which the film addresses the audience; to what extent does it invite scientific reflection and dispute? and (iii) the way the film appeals for appreciation; what attitude is used (expert, promotion, etc.)

The two examples of films that are presented in this article challenge science at the level of content. In both cases the contents of the film is supported by scientific information, which can be verified for its liability. The way that science is put forward is however different. In *"Meat the Truth"* the science and scientists are presented up front to support the film theorem. The focus of the film is on the theorem, which remains undisputed. In *"Purcelli è Tumbera"* scientific information is given in the background to support the insight of what is shown. The focus of the film is on the story about the pigs and their farmers: what happens to the pigs during the slaughter season and how do their farmers make that happen. It is through the interviews with the farmers that we learn how much they feel supported in their activities by traditions and science, whereas the science itself is just a background voice.

According to the website of the producers *"Meat the Truth"* contains the best scientific information on climate change and livestock farming, which is presently available and to translate this for a broader audience: "...[it] is based on the most recent scientific research on climate change and livestock production. For the making this film, many influential research reports, statistical data and other scientific sources were meticulously studied by researchers of the Nicolaas G. Pierson Foundation and the VU University Amsterdam. In this way, a film was produced that could stand the test of scientific criticism with flying colours" (www.ngpf.nl; see: Everaert and Zwanikken, 2007).

In a reference article, Wageningen UR has evaluated the scientific liability of twelve major statements in the film, by verifying the supporting information and its interpretation (Šebek *et al.*, 2008). The statements deal with the emissions of livestock production, the land and water use for its feed production. Next the statements extend to the reduction of emissions, water use and environmental pollution in case of reduction of the production due to reduced consumption. The consumption reduction is proposed from the perception that if consumers in western countries choose to reduce their consumption, the demand for production will reduce simultaneously.

The scientists of Wageningen UR confirm that the world's animal production activity can lead to substantial emissions of greenhouse gasses. The facts on which the film is based are largely

confirmed. However, there are substantial deviations from the world wide average in various regions and under various conditions (like in the Netherlands). These variations are not discussed in the film. This also accounts for other differentiations of the message: the facts are presented as straight forward, without any indications of the scientific debate about the complexity of the matter. However, the film did provoked scientific discussions, which lead to the identification of various gaps in the present state of scientific knowledge.

The presentation of the film was scientific-like: in the propaganda style documentary somebody (i.e. Marianne Thieme) has the role of convener. The spectator is put in the position of a class room, where well established facts are transmitted to instruct an audience of listening pupil. The setting is as if in an old fashioned school: the know-it-all teacher is explaining and there is no direct interaction with the silently listening audience, who should listen, learn and understand, and not discuss or disagree.

“Purcelli è Tumbera” also claims to be based on science. However, the film is not about listing facts and data to convince the spectator. The spectator is invited to make up their own mind about the farming system. The film is neither trying to provoke political points of view, based on facts and figures. It tells a story of the life cycle of pigs through the hands of their owners. The key moment of the story is the slaughter. Before the slaughter, the spectator can identify with the farmers passion for keeping pigs. After the slaughter, the identification is with the elaborate labour to transform the meat into delicacies. Only the slaughter itself is not done by the farmer and takes place off-farm at the slaughterhouse. This switch of location adds to the emphasis on the transition through death. The happy ending is the appreciation of the meat products in a social setting of the farmers and their guests.

“Purcelli è Tumbera” fits somewhat with the tradition of instructive extension films. However, in this case the film describes what was encountered by the film makers. It was not assigned by any government, nor was it meant to instruct farmers about the improvement of their production methods. On the contrary, it was made for the ‘urban stranger’ to get informed and gain understanding. The film shows how the farmers share their passion and knowledge of their profession with their guests. The concept is somewhat comparable to the spin-off that “*Farmer wants a wife*” induced, in terms of raising sympathy for the agricultural sector. The filmmaker constructed the film with respect and sympathy for these men (women also appear in the film, but they remain few). The film suggests that the farmers are satisfied with their traditions as craftsmen, who live with the pace of mountain life with climatic hardships, natural beauty and small village cosiness. The fact that the camera seems to jump in and out of the intimacy of their premises, suggests an open contact with the outside world.

A critical spectator may however wonder how ‘true’ the life of these farmers is represented. There is nothing faked about the setting. However, since the life of the pig is presented as full of welfare as well as subjected to the benefit of the farmer, the image of welfare and benefit is reflected on the farmer. The camera moving in and out of the scenes indicates that the farmers allow outside visitors to share their lives and enjoyment. It does not indicate however, to what extent they are able to be part of the lives of others. Similarly, the fact that the film shows vivid farmers’ activity should not be taken as an indication for the economic sustainability of their business. In this film however, critical questions are not actively suppressed, e.g. by a convenor, who is instructing the audience about how to understand the message (like in “*Meat the Truth*”).

The third scientific criterion we discuss here is the extend to which the films manage to abstract and conceptualize ideas. In “*Meat the Truth*” the conceptualization is at the level of global farming systems. It presents the synthetic and result-driven, large scale, intensified production methods as the shared concept of all western farmers. The film passes by the discussion of the global context in which the farmers produce, and it focuses on the global context in which the animals are produced, and how the earth is affected by that. Animals and earth are both victims of a system created by mankind, as far as mankind is engaged in production. The film ignores them and addresses the audience as consumers, who are assumed to be ignorant. The film provides them with information

and instructions. The conclusion challenges the audience of consumers to identify themselves as obedient subjects and bring a sacrifice for the higher goals. It is therefore a clear example of a propaganda movie.

In *“Purcelli è Tumbera”* the directors of the film take a different viewpoint on their degree of involvement with their subjects as in *“Meat the Truth”*. The filmmakers take advantage of advances in technology allowing the use of portable compact camera and synchronized sound equipment to film events on location as they unfold, and allow an intimate relationship between filmmaker and subject. *“Purcelli è Tumbera”* is therefore a clear example of *cinema vérité*, with a blurred line between documentary and narrative and a personal point of view (Wikipedia, 2010). The filmmaker sympathizes with the subjects (both the pigs and the pig farmers), and transmits that sympathy to the audience, without using specific promotion techniques.

The film is neither propaganda nor a commercial; there is no aspect of selling anything. The film is not made for the farmers to instigate a change in production methods. The spectators of the film are the citizens. But it is not made as propaganda, because the audience is not asked to subject to an idea. It advertises basic no products, but indirectly it advertises values like honesty, natural beauty, artisanality and human values. Thus it calls for moral support and sympathy for the sake of preservation of the farming system. The advertisement combines the image of crude strength and vulnerability of the farmers in such way, that it raises associations with romantic scenics. Implicitly the farmers with their traditional ways are presented like endangered species in vulnerable habitats. The film invites the audience to take a moral stand for preservation, similar to the protection of habitats and endangered species. However, there is no specific instruction included in the film about how to intervene.

Conclusion

The production of filmed material is accumulating rapidly in modern society worldwide. It also challenges farming systems scientists, to evaluate the film medium for its scientific value, when used in science. In this article two films are discussed: *“Meat the Truth”* and *“Purcelli è Tumbera”*. The documentary *“An Inconvenient Truth”*, and the television series *“Farmer wants a wife”* were introduced to discuss some aspects. Film fragments are described above to illustrate the analysis. The films can also be found on the internet (Commandeur and Levie, 2010; Everaert and Zwanikken, 2007; Guggenheim, 2006; Longly, 2001, 2009). The two films are related to different farming systems, both persisting in modern times and both integrated in the global economy. *“Meat the Truth”* refers to the production result driven, intensive farming systems, in which the production intensity is dictated by the course of the global economy, and where the products are firmly integrated in the global markets. *“Purcelli è Tumbera”* refers to the artisanality driven production, where the production process is dictated by the course of the environmental conditions, and where producers are firmly integrated in personal producer-consumer relations for the sales of the products that carry their identity.

The two examples are evaluated for their public appreciation and their scientific liability. Three criteria were developed for the scientific evaluation: (i) the contents of the films; what indicators should be used to evaluate the fit with scientific truth? (ii) the way in which the film addresses the audience; to what extend does it invite scientific reflection and dispute? and (iii) the way the film appeals for appreciation; what attitude is used (expert-teacher, promotion, etc.)

The discussion about the scientific value of films about farming systems is open and challenging. And although there was interesting literature in the field of agricultural film history and typology? The research explained above rose up criteria to review film in research contents to be further discussed.

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