

# Bio-diverted: Urbanised rural and ruralised urban species

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## Abstract

This essay analyses the current situation of small farmers in Eastern Bavaria around 2020. The referendum ‘Rettet die Bienen!’ in 2019 used the technique of totemisation to become extremely popular and at the same time set the stage for a clash between the food-producing class and urban society. A fictional story draws a possible dynamic path social change could take from now until 2050. Here, rural society gets urbanised and moves into the city whereas urban society wants to live a romantic ruralised life in the countryside.

*Keywords:* Referendum, Biodiversity, Totemisation, Social Change, Fictional Story

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## 1. Introduction

Back in the 10s and early 20s of this century, the population in Germany was very urbanised compared to the middle of the last century and thus food production was remote from most people living in cities. Food comes from the supermarkets. This is how it worked for decades, when urbans were happy about cheap food, primarily meat, whereas the farmers fulfilled their job as long as nobody interferes with their business. With the growth of environmental consciousness and the demand that every single step in production be transparent, the farmers were examined carefully by urbans. Because of their intensive use of pesticides, the farming industry did not come away with clean hands. The stage was set for a clash between urbans and rurals. What followed was a heated political debate between urbans thinking that fact-based knowledge makes them better farmers and farmers worrying about financial income. On top of that a referendum in 2019 with bees in the leading role ignited the highly explosive mixture. What happened next included far more than environmental protectionism, and a dynamic transition between the urban and rural area started to take place. Why two parties fighting for the same goal both lost and how the referendum changed social structures in rural areas of Eastern Bavaria, is evaluated in this essay. First a picture of the year 2020 is drawn, while the second part will examine the transition towards the today’s situation in 2050.

## 2. Social Structures and Referendum

A contemporary picture of the size and type of farms that can be found in Eastern Bavaria should give an insight into the initial situation.

### 2.1. Rural society

Eastern Bavaria with its mountainous landscape and dense forests geologically favours rather small, localised farms with an average size of about 35 ha [1]. In the 2020s, most farms are family-based, with the parents, their children, and sometimes an uncle or aunt lending a helping hand. In the area where I was conducting field work, the farms usually grow crops and corn as well as cultivating pastures for their cattle and pigs. The family I interviewed owns the smallest farm in that particular area, with about 30 ha of land, 32 head of cattle and several hectares of forest in 2020. On the farm, the two elderly parents and their adult son were working full-time on the conventional farm. To sustain the income of the family the son was doing a 35 hour-a-week job in the industry in addition! One can say that small farms especially do not run their businesses for economic reasons but out of passion, traditions, and connection to nature and land maintenance. These farmers represented a high potential for environmental protectionism which has remained unused in recent decades. Indeed, the state of Bavaria tried to incentivise environmental activities in a program called KULAP [2] (Kulturlandschaftsprogramm, *engl. cultural landscape program*) but often the suggested actions were too labour intensive for small farms. Nonetheless the small farms

did not use as many pesticides as large farms. For one thing, fertilisers and pesticides scale in price—favouring farms with plenty of land (acquisition of specialised machines). Additionally, small farms have more sensible notions about the environmental guidelines given by the Federal Ministry of Food and Agriculture. Moreover, the farmer I interviewed claimed to have seriously thought about converting to organic farming. Of course the more intense labour and less output would have paid off in higher prices, but the biggest issue, back in 2020, was the very low demand for organic food. For example, in 2018 only about 2% of milk products sold were organic [3]. This low demand makes the transition hard for small farms in particular, because yearly fluctuations do not ensure a stable future.

## 2.2. Urban stage for the referendum - Totemisation

The reception of environmental protectionism for urbans in the late 2010s was quite one-sided. More transparency within the food production, animal welfare, and big farmer lobbies caught the attention of consumers, especially among those who know farms and farmers only through the media. The time seemed quite right for a political debate and environmentalists, previously treated as misfits, finally found a way to communicate the topic to a broad community: the totemisation of the Bee. Here, an analogy to Arne Kalland studies about the super-whale should be drawn [4].

In the beginning of 2019, a referendum under the name ‘Artenvielfalt und Naturschönheit in Bayern – Rettet die Bienen!’ (engl. ‘Biodiversity and natural beauty in Bavaria - Save the Bees!’), which soon became known simply as ‘Rettet die Bienen!’ (engl. ‘Save the bees!’) was conducted by the minor political party ÖDP (engl. German ecological party). A poster from the referendum can be seen in Figure 1. It entered the history of Bavaria as the most successful referendum ever. How could a movement with such a simple slogan mobilise 1.741.017 people to sign the referendum (18.3% of eligible voters) [5], [6]? Clearly, one of the answers is the instrumentalisation of the Bee as a super-insect. The referendum was actually meant to stop or slow down the extinction of endangered species in the local ecosystem [7], [8]. It talked about frogs, birds, flowers, and insects, including the Bee [9]. But it turned out that the Bee—or even more precisely—the honey bee [10], was particularly well-suited to be a best seller and prime example of a species with decreasing population. The image of the Bee is versatile and thoroughly positive. For example, the Bee is obviously known to pollinate all kind of plants, from little flowers to fruit trees

and therefore plays a crucial role in our food supply. The Bee is diligent in doing its job. The Bee is a highly social and organised insect with female animals in the leadership. The Bee produces honey that can be consumed by humans. The Bee has a powerful weapon and will sacrifice itself for the welfare of its fellows, but still the Bee makes a calm and not at all aggressive impression on the observer. The Bee almost seems fragile: a fragile insect living in a world of pesticides. Humans were pushing this animal almost to extinction instead of showing deep gratefulness for making food supply and therefore life possible. Suddenly and finally, everyone thought themselves to have a universal understanding of the complexity of the ecosystem and felt responsible for all the harm that was done to the Bee in the past decades. And it was so easy to acquit oneself by simple signing the referendum. Urban indulgence.



Figure 1: Poster of the referendum ‘Save the Bees!’ [11]

Indeed, even though exaggerated in the previous paragraph, the totemisation of the Bee was a crucial ingredient of the referendum because denying the importance of bees for the ecosystem automatically makes you a bad human. The most important layer in the totemisation of the Bee might be the “quality that we would like to see in our fellow human beings” [4], from character traits to social, collective behaviour. Hence, the Bee provided a rigid basement for discussions and gave simple, plausible, invulnerable facts. It was easy to mobilise people since the situation seemed to be crystal clear and the villain obvious: the farmer. The stage was set for the tragedy. Good against bad. Urban against rural. Will it turn out to have a happy end? As we shall shortly see, the ecosystem with all its participants and facets, including social structures, was simplified too much. The referendum did not open enough space to conduct an understanding of the social impacts on the small, diverse structures that can be found in Bavaria. The discussions were emotionally loaded and due to the overall unanimity

among the urban population, the pressure on political parties was high.

### 2.3. Consequences for farmers

With the success of the referendum on February 14, 2019, and due to the high expectations of a large fraction of the society and especially urban activists, the reaction of politicians was rather quick. The new regulations became effective on August 1, 2019. The regulations cover many different fields and result in the creation of large, connected biotope areas to compensate for intensive land-use, by planting flowers and, of course, regulating the use of pesticides. All of these regulations by themselves are with any doubt a valuable enrichment of the local ecosystem and definitely a useful and overdue statement about large scale, economic driven food production. But, and this will be the main focus of this essay, the regulations were not implemented together with farmers, like those small family-based farms that already did a great job in protecting their most valuable good, the environment. Here, a case example might make an impression. The family I interviewed for my field study and that I introduced above owns a little garden with some old apple trees that had been part of their farm for generations, only used for personal purposes or to share with neighbours and families. These fruit gardens are in extensive land-use and are a habitat for many different animals, as well as a pollen supply for insects during blossom in the spring. With the referendum 'Save the Bees!' these fruit gardens were to be taken under special protection and marked as biotopes. Unfortunately, this good will comes with bureaucracy and regulations. The government of Bavaria ensured financial compensation for the additional expenses but as described beforehand, small family-driven farms are already working at the limits of their time, and more workload means giving up this particular field, or one might say, their 'hobby.' Finally, the fear of over-bureaucratization led to the extreme scenario of farmers cutting down<sup>1</sup> the fruit trees before the law becomes effective or before their trees become listed as biotope [12]. Another example is the treatment of pastures after the winter season. On typical cattle farms in the area I was analysing, the herds were not out on the pastures grazing because land is very much divided into parcels, and the cattle could only stay on one pasture for a few days, while the next pasture might be many kilometres away. Thus, farms usually made hay from their grass and conserved the hay as silage. To increase the harvest of grass, the ground is

mechanically treated by compressing it after the winter, thereby fixing damage from frost and improving contact between the roots and soil. With the new regulations of 'Save the Bees!,' this treatment was only allowed before the 15th of March in order not to kill insects during the compression. Typically, due to climatic conditions in Eastern Bavaria, at this time of year snow or rainfall are common, making the application of this technique impossible or impractical. The farmers therefore have the option of accepting a smaller harvest in years where weather condition are not favourable or acquiring a new type of machine that more or less fulfils the same job without having such a negative impact on the insects living in the soil.<sup>2</sup> In this example, the consequences for large food producers are manageable, whereas for small farms it can be an existential threat, since agricultural machines cost easily tens of thousands of Euros. The previous examples should give an impression of how and why the implementation of environmental regulation, which seems to be positive a priori, can have negative consequences for very small scale family-based farms. Next, the inevitable decline in the number of small farms in the decades after the referendum and the change of social and economic structures is examined.

### 3. 30 years later

After three decades, the situation in the rural as well as urban areas has changed drastically. Due to bureaucratic regulations from the government and already financially fraught circumstances, the family-lead farms were no longer sustainable. Most of the small farms were given up, because earning money was much easier and less stressful for the younger generation in the urban metropolitan areas, e.g. in factories that were located in the city suburbs or, in other words, between the city and rural district. The working generation during 'Save the Bees!' still had an intrinsic connection to nature and agricultural habits. Giving up the farm as a second income, while increasing the labour hours in the factory for compensation, did not mean completely giving up all of the land and pastures. While most of the owned land was leased out, many families also kept some land, especially the land directly next to the farm. Hence, most families continued to live on their farm and cultivated personal gardens, kept a few chickens or head of cattle,

<sup>1</sup>The farmers I interviewed did not do any harmful action to the environment but retain their fruit trees

<sup>2</sup>The machine is comparable to a huge comb (*german: 'Hackstriegel'*). The farmer I conducted field work with has never used something else than a 'Hackstriegel' because the impact on the environment is less.

and harvested wood from family-owned forests as a hobby. Nevertheless, production covered only private consumption and needs. The gardens and forest were not used in a very intense way, and contained a variety of different fruits and plants. Because large harvests were not pursued, there was no need for fertilisers or pesticides. Thus, this type of farm made a substantial contribution to biodiversity and environmental protection, without need of governmental regulations or financial aid but due only to tradition and the love of working with and shaping nature.

Since machines like tractors and knowledge of agricultural techniques were still present, self-sufficient farms could sustain for quite a while. But over the years machines broke and had to be fixed, which is time-consuming and expensive, and purchasing new machines was typically not an option for the small scale farms. In addition, the old generation, i.e. the parents of the working generation, which used to be a helpful support in sustaining the personal gardens, became older and eventually passed away. With it, the remaining part of the farm and the environmental protection that went with it died out.

### 3.1. Super-food companies

By the reduction of the total number of farms, larger farms automatically started to grow in order to provide enough food for the population. As explained above, in Eastern Bavaria the land is divided into many parcels that were divided again into smaller and smaller pieces over the centuries by heritage. Therefore, in the past it had been hard for farms to expand, because purchasing a large connected piece of land was barely possible. With the giving up of many small farms, which are indeed many of the small parcels, a lot of land suddenly became available for purchase, not only small pieces but often connected, neighbouring parcels that can be used for acreages of large size, for example when not one farmer but also the cousins and distant relatives wanted to sell at the same time. This coincidence was the kick-off for already large farms to expand into food companies. The structure of these super-food companies, as we call them nowadays, still retains an element of traditional farms. The head of the farm is the original family that owned some hectares of land and ran a rather large farm for decades. The labour in the past was provided only by the three generations of the family. But with the super-food companies, the farm expanded so quickly that not only new, more efficient and automatised machine and robots could provide the labour, but several dozen employees needed to be hired. The family focuses on the marketing, sales and management of the company,

while the employees do the agricultural work, like coordinating the ploughing robots, fertiliser drones or caring about the animal-cattle relationship (latest studies show that due to the application of robots in the stables, the mental condition of cattle is worsening and milk production is decreasing).

### 3.2. Large farms - Larger influence

The growth in the farmland of a single company goes hand in hand its the growth in economic power and thus political influence. Both sides, the companies and political institutions, form a symbiotic relationship. The institutions profit from the bureaucratic system which makes it easy to collect data about food production and land use in the country [13]. This data can then be used to guide and shape the political system and regulations in such a way that the state has a commanding position over what kind of food and how much the people consume. For example, regulations about the amount of crops planted per season can influence the people's diet because ultimately supply and demand regulate price. Vice versa, the farming lobby can also work out diet plans together with politicians, for example by changing products in schools' cafeterias [14]. The super-food companies have even more advantages. By practicing intensive lobbyism together with the farming industry, new types of pesticides, fertilisers, and artificially cultured plants can enter the market quite fast and without high barriers or proper studies [15]. While it sounds like farming industry nowadays does not have any obligations to fulfil environmental standards, this is not the big picture. There is still a large community fighting for environmental protection and, as will be explained later, a new counter-movement against super-food companies has formed. Therefore, politicians are obliged to also please the consumers.

### 3.3. Save the Bees..?

Of course, a super-food company has to fulfil all the regulations that came with the 2019 referendum 'Save the Bees!' and since a manager is controlling the company, the regulations are typically implemented well and the financial benefits from the government are exploited completely, making it an expensive way for the government to enforce a certain environmental standard. But on the other hand, the companies managers have lost their connection with nature and are very focused on the economic success of the business. Personal and intrinsic environmental protection that came with the very small-scale farms are not present

anymore. Quite the contrary is happening: for the super-company it is favourable to cultivate monocultures instead of a versatile mixture of plants because every farm is highly specialised. For instance, back in 2020, an area of 50 ha was owned by ten different farmers and families, usually neighbours or distant relatives. While one farm ran cattle, another harvested pig fodder, and a third one traded in sugar beets. Within these 50 ha, the plants additionally changed year by year because of crop rotation. Therefore, a huge ecosystem with many different plants and shelter for many birds and insects was provided. Nowadays, this land is owned by a super-food company that only needs maize as fodder for cattle. Thus, a decrease in biodiversity in favour of monocultures can be observed. Even though the super-food companies have to care about some 'compensational biotopes' the net effect on environmental protection and extinction is negative. Biodiversity is squeezed into small-scale, separated exile, while most of the used land dies out. On top of that, the localised biodiversity becomes very fragile if, for instance, one year there is a lack of precipitation. At this point, it is worth looking at the success of 'Save the Bees!' At first glance, the statistics reveal that the extinction of bees indeed could be stopped and slowed down. At second glance, it is important to note that not every species was lucky. The star of the referendum, the honey bee, was used as an indicator and many people voluntarily planted certain flowers in the domestic gardens or became beekeepers. Only a few species were favoured over others, sometimes ones at even more risk of extinction. Wild bees especially need a diverse habitat to build shelters and find food, but this became very rare after the intensification of monocultures [10].

#### 3.4. *The rural-urban transition*

Because the younger, working generation already had jobs close to the city, moving into the city or suburbs became more attractive than trying to keep running the self-sustained farms. Also, by then, a new generation was growing up and the chance of finding jobs and enjoying higher education was better in the city. Thus, most of the land from the previous small farm owners as well as houses on the farm were gradually sold. From the money, which typically was quite a huge amount, the rurals could start a new life closer to the city while still keeping their job in the factory. The farmland and acres that were able to be purchased were mainly acquired by the super-food companies as explained above. Interestingly, family houses on the farms themselves attracted another social class, namely the urbans. High prices in the city, bad air conditions and the romantic desire to have a fulfilled life out in the nature, far off from the city, was

the motivation for urbans to move. Most importantly, the large availability on the market of farming houses in the rural areas made their dreams come true. This dynamic is very interesting in the sense that rurals and urbans swap places while pursuing the same goal: to have a more comfortable life. Because both groups moved in opposite directions, the real estate market showed a rather relaxed reaction.

#### 3.5. *Towards an insightful society*

Urbanisation and disurbanisation usually happens in cycles. In the case today and the past few years, both processes happened simultaneously. This process comes with exciting changes in the social structure. People from the countryside bring knowledge about gardening, a rather decelerated life, and an appreciation for food producers as well as an open-minded attention to the problems concerning rural areas into the city. People from the city pass on a more modern lifestyle and start cultural activities in the nearby villages. However, old traditions and habits that were still present especially in the rural areas had to be given up. This can be observed most strongly in the decrease of local dialects. An example should help to illustrate this. The ruralised urbans coming from the city with the desire to have their own piece of garden and live a romantic life in nature, are used to enjoying certain standards, and amusement that was previously rare, or better said, different, in the villages. Over the past years, a movement among the new residents of the villages started. This movement is characterised by small communities which produce their own food and a little more. This small surplus can then be consumed in newly founded cafes and bars in the villages. From the inside, the cafes look very metropolitan and hipster, only here and there an element from the ancient tradition like a hunting trophy or pictures from the 2000s can be found. Thus, the emerging movement brought a novel lifestyle into the countryside, making it more attractive to the remaining people living there. The extinction of gastronomy in rural areas that happened over decades [16] finally turned around, and a new, flourishing life, although different than before, started. Therefore, the mixture of cultures naturally led to positive developments. However, societies for traditional costumes or rifle associations had to close because members moved away and this type of 'old' activity was not attractive to the new people. A look at the urbanised rurals, who moved from the countryside into the city, shows a similar pattern of behaviour regarding the mixture of cultures and activities. For example, the former engagement in gardening was not completely given up, hence little shared community

gardens were founded and guided by the professional experience of ex-farmers. The gardening communities produce so much food that a little share can even be sold at local markets. This can be interpreted as a movement against super-food companies. This countermovement can thus be seen in both groups and is manifested in ‘thinking local.’ On the one hand, the ruralised urbans opened little cafes in the villages where local products can be consumed. On the other hand, urbanised rurals provide community grown food at tiny markets, maybe to show ‘real’ urbans the joy of individualism.

#### 4. Conclusion

The referendum ‘Save the Bees!’ back in 2019 used the totemisation of the Bee to become the most successful referendum in the history of Bavaria. What seemed to be very positive regulations turned out to be an existential threat to small farmers. By lucky circumstances large farms finally had the chance to grow to super-food companies. At the same time a mixing of the rural and urban society started to take place. All in all, the dynamics led to a mixture of classes and an adaption, development, and creation of new traditions, from activities to linguistics. The transition happened smoothly without any violent riots or bankruptcies. The former groups with very different opinions are now more or less united and the importance of environmental protection and connection of nature is felt. From this newly formed society a movement against super-food companies, which have large political and economic influence, has just started to emerge. The question of whether this movement will try to start a new referendum, from a new perspective, against the super-food companies, or whether super-food companies are influential enough to beat down the countermovement, is still open.

#### 5. Personal Statement and Acknowledgements

Even though the essay draws a rather negative picture of the referendum ‘Save the Bees!’, I fully acknowledge its efforts, ideas, and engagement in environmental protection. I completely support the movement to increase biodiversity and immediately stop extinctions. What this essay is meant to emphasise is the miscommunication and often very ‘flat’ way of thinking. While the referendum sounds reasonable throughout, it can be a major cut for small farms that already live at existential minimums, but on the other hand do not threaten the environment as much as large scale farms. The essay should encourage more

communication and solidarity with food producers, and should be read as a reaction to the farmer’s strikes happening these days [17], [18].

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