

Internet, Capitalism, and Peripheral Development in the Waldviertel

Christian Fuchs
University of Westminster

ABSTRACT: The Waldviertel (“Forest Quarter”) is a region in northern Austria that is structurally weak. It represents an inner periphery and inner colony of Austrian and European capitalism. This article analyses the political economy of the Internet in the Waldviertel. The Waldviertel is confronted with high rates of exploitation within the context of an imperialist division of labour, with transfer of value, unequal exchange, low wages, the exodus of the textile industry, high unemployment, depopulation of the countryside, a dismantling of public infrastructure, and a declining population. This analysis makes clear that the reality of the Waldviertel as inner periphery of the capitalist centres shapes communication in the region. Access to computers, the Internet and broadband is worse in the Waldviertel than in other regions. Internet and mobile speeds tend to be slower, making the region less attractive to information workers. There are also signs of an alternative economy in the Waldviertel that call imperialism into question. In the area of the information economy there is potential for founding socialist co-operatives for hardware, software, and social media that call the capitalist information society into question and struggle for alternatives.

KEYWORDS: regional development; capitalism; political economy of the Internet; Austria; Waldviertel; inner colonies; periphery; inner periphery; imperialism

Introduction

I grew up in the small Austrian city of Waidhofen an der Thaya, and went to school there. Waidhofen an der Thaya is a county town in the federal state of Lower Austria with a population of about 5,600. The county of Waidhofen an der Thaya, which in 2013 had a population of 26,597, is one of the counties of the Waldviertel, along with Gmünd, Horn, Krems, and Zwettl. The Waldviertel is a region in Lower Austria that abuts the Czech border. In 2013, the Waldviertel had a population of 200,676.¹

When I was 17, following my completion of secondary school, I moved to Vienna to study like all my schoolmates did. My career took me first to Salzburg, then to Uppsala in Sweden, and finally, to London in Great Britain, where I am now Professor for Media and Communication Studies. Only a few

of my schoolmates have returned to Waidhofen or the surrounding area to work. Most of them have jobs outside the region.

This has very little to do with feeling unconnected to our place of origin, and much more to do with the fact that the Waldviertel is among the most structurally weak regions of Austria, with high unemployment, a low rate of natural increase, an ageing population, and a deficient and shrinking public infrastructure. One study estimates that by 2050, in the Waldviertel county of Zwettl, there will be 30 percent fewer children under the age of 14 than in 2009; in Waidhofen an der Thaya it would be a decline of 23 percent.² Between 1869 and 2011, the total population of Austria increased from 4,497,800

1 Data from Zahlen & Fakten in Niederösterreich, <http://www.noe.gv.at/Land-Zukunft/Zahlen-Fakten.html>

2 Dem Viertel gehen die Jugendlichen aus. *Bezirks Blätter Waidhofen an der Thaya*. <http://www.meinbezirk.at/waidhofen-an-der-thaya/chronik/dem-viertel-gehen-die-jungen-aus-d593395.html>

to 8,401,940, but in the Waldviertel, over the same period it declined: in 1869 there were still 258,768 people living in this region of Austria. In 1910 the population reached a peak of 279,024. Since then, the number of people declined steadily, and in 2011 reached 219,541, the lowest number since statistical records began in 1869. The population projection for 2031 is 211,556.³

Right behind my grandmother's house the Thaya Valley Railway ran from Waidhofen an der Thaya to the villages Dobersberg, Waldkirchen and Gilgenberg. As a child I was afraid of the train when it ran by, and I used to cover my ears when it blew its loud whistle. In 1986 the whistle went silent – this section of the Thaya Valley Railway was decommissioned due to unprofitability. This development was a harbinger of the shrivelling up of the infrastructure of the Waldviertel. At the end of 2010, the Thaya Valley Railway and the Zwettl Railway of the Austrian Federal Railways (ÖBB) were shut down. These rail lines had served the counties of Waidhofen and Zwettl between Waidhofen, Schwarzenau, and Zwettl since 1891 (Waidhofen ⇔ Schwarzenau) and 1896 (Schwarzenau ⇔ Zwettl). The number of post offices in Lower Austria was reduced from 613 in the year 2000 to 99 in 2014 (Springer and Simoner 2014). In 2011, in the federal state of Lower Austria, 14.7 percent of the population were aged 0-14, and 18.75 percent were 65 and older. In the Waldviertel counties of Waidhofen/Thaya, Gmünd, Zwettl, Horn, Krems (Stadt), and Krems (Land) the percentage of those aged 0-14 was only 13.0 percent, 12.7 percent, 14.3 percent, 13.4 percent, 12.4 percent, and 14.5 percent respectively. By contrast, those over 65 accounted for 21.8 percent (Waidhofen an der Thaya), 22.9 percent (Gmünd), 10.7 percent (Zwettl), 21.3 percent (Horn), 20.6 percent (Krems Stadt), and 19.0 percent (Krems Land) (Statistik Austria 2011). The Waldviertel, then, is a region with a high proportion of elderly residents, and a low proportion of younger residents.

For young people who have completed their university studies, there is very little work to be found in the Waldviertel, much as is the case for many other young people from other structurally weak

regions. This is the main reason that people of my generation and the following generations leave this part of Austria. The exodus of young people from the Waldviertel has been a stable trend since the last third of the 19th century, caused by peripheralisation, structural deficits, and the low wage structure of the region (Komlosy 1988:107-111).

This article deals with aspects of Internet access in the Waldviertel, and looks at this topic in the context of capitalist developments, regional structures, and regional politics. The next section engages with theoretical foundations. Section 3 presents data about the development of the Waldviertel. Section 4 discusses Internet and mobile access in the Waldviertel, and contextualizes the data given with the help of the theoretical foundations. Section 5 deals with questions about alternatives that can strengthen non-capitalist economic and social development, and improve the communication situation in the Waldviertel.

Theoretical Foundations

Immanuel Wallerstein (2000; 2004), one of the main proponents of world systems theory, conceptualizes the capitalist world system as a relationship between centre, semi-periphery, and periphery. The centres are economically stronger than the periphery, which leads to the flow of value from the periphery to the centres. This arises through uneven trade and/or the exploitation of the work force in the periphery. "A capitalist world-economy was said to be marked by an axial division of labour between core-like production processes and peripheral production processes, which resulted in an unequal exchange favouring those involved in core-like production processes" (Wallerstein 2004:17). The centres of the capitalist world economy would especially use monopoly power, patents, state subsidies, trade policies, and tax advantages to protect their power advantage. The most profitable industries are typically controlled and organized from capitalist centres, and typically have higher levels of productivity, wages, and levels of training than the periphery or semi-periphery. The capitalist world economy sells core-like products to the periphery, and peripheral products to the centres (Wallerstein 2004:97).

³ Population figures from Statistik Austria Online.

On the basis of world systems theory, Samir Amin has identified possible characteristics of peripheral regions and countries:

- **Global Class Structure:** For Amin, the class structure of the capitalist world system consists of: a) the imperialist bourgeoisie; b) the bourgeoisie of the periphery, which is dependent on the c) imperialist bourgeoisie; d) the proletariat of the centres which tends to have higher wages than e) the overexploited proletariat of the periphery; the f) peasantry of the periphery, exploited in the context of capitalist and pre-capitalist class systems; g) and the classes in non-capitalist forms of organization which are exploited by the capitalist world system (Amin 2010:92ff). “The principal contradiction ... is the one that counterposes the peoples of the periphery (the proletariat and the exploited peasantry) to imperialist capital and not, of course, the periphery as a whole to the center as a whole” (Amin 2010:93).
- **Low Wages:** The wages in the periphery tend to be lower than those in the centres (Amin 1976:200). The workforce often has a lower level of training (Komlosy 2011:83). Exploitation is uneven in that the workforces of the periphery are more strongly exploited (Amin 2010:88).
- **Dependent Production:** Production in the peripheral regions is often limited to supplying specific commodities, products and services that are processed or used in the centres and primarily satisfy their needs (Amin 1976:200, 202).
- **International Division of Labour** (Amin 1976:211-213): In the old international division of labour, the peripheries delivered raw materials to the centres that were then processed there. In the new international division of labour, the periphery often provides the raw materials and manufacturing steps, while the knowledge, research and technological innovations are situated in the centres. Complex technologies are expensive and hard to produce. This creates a technological dependence of the periphery on the centres (Amin 1974:15). This dependence of the periphery on the centres is organized by transnational corporations (Amin 1974:15) that can make capital-intensive investments.
- **Unequal Trade:** in reaction to their status in the capitalist world system, peripheral countries and regions often have strongly export-oriented industries (Amin 1976:203, 206; Amin 1974). The trade of the periphery takes place primarily with the centres, while the centres trade largely internally and with each other (Amin 1976:247). The products exported from the periphery contain more hours of labour than the products of the centres, which are produced with higher productivity and therefore with less labour. However, the products are paid for at global prices which are set in the higher productivity environments of the centres, creating a transfer of value from the periphery to the centres in the form of unequal trade (Amin 1974:13). An example: Let us assume that the average production of a car is 20 hours, the average time at Ford in Europe 16 hours, and at JMC in China 100 hours. If Ford pays an average wage of 15€ per hour, then the average wage costs per car are $16 * 15€ = 240€$. If JMC has the same wage level, then its wage costs per car are $100 * 15 = 1500€$. In the chosen example, JMC’s productivity is lower. In order to compete with Ford on the world market, JMC has to reduce the total wage costs per car to 240€ or less. The average hourly wage is thereby reduced to a maximum of $240 / 100 = 2.4€$. This means that in the example labour power is sold to a much lower value in China than in the West. Global capitalist structures impose a low wage structure on peripheral regions.
- **Unequal Economic Structure:** The economies of the peripheral regions often have a high proportion of agriculture and the service sector in their value and employment structures, while the newest economic developments take place in the centres (Amin 1976:239-246). The industries in peripheral regions often have difficulty competing with companies in the centres. The services resulting from this often have low productivity. There has been more industrialisation in the periphery since 1945, but it is nevertheless an unequal industrialisation relative to the centres (Amin 1997:2).

- Differences in Productivity: There are often big differences in productivity, and therefore, in wages, in the various economic sectors of peripheral regions (Amin 1976:215-218). There are quite often great disparities in wages between urban and rural, as well as better and lesser trained labour forces (Amin 1976:221). There are also differences in productivity between the centres and the periphery to the disadvantage of the periphery.
- Global Monopolistic Structures: The law of worldwide value (Amin 2010) by which value is transferred from the periphery to the centres is enabled by five monopolies: the monopoly on technology, of the financial markets, on access to natural resources, of media and communication, and on weapons of mass destruction (Amin 1997:4ff). The average global value of goods and labour are key, because through this arise the disadvantaging of the periphery and the advantaging of the centres (Amin 2010:83-86). The goods from the periphery contain more hours of labour than those of the centres, but are often sold at below the global average value, which is set in the centres that take advantage of their higher productivity.

To summarize, Samir Amin describes the capitalist world system as a relationship between the centres and the periphery that is shaped by elements like a global class structure, low wages and dependent production in the periphery, an international division of labour, unequal trade, unequal economic structures, differences in productivity, and global monopolistic structures.

For Amin, the autonomous and self-reliant development of the peripheral regions is the alternative to the development of underdevelopment, to the international division of labour, and to unequal trade (Amin 1974:16-20). Releasing the periphery from the capitalist world system is the first step to creating world socialism as an alternative form of globalisation (Amin 2011:58).

Economic independence is not necessarily politically progressive. For example, there are the right wing populist parties such as the Conservative Party and the UK Independence Party in Great Britain, the

True Finns, the Front National in France, Golden Dawn in Greece, Jobbik in Hungary, the Five Star Movement in Italy, the Sweden Democrats, the Alternative for Germany, or the Freedom Party of Austria. These are either euro-sceptical or anti-European and combine this attitude with resentment toward immigrants, and often with racist propaganda. Geography, natural, historical, and social factors make it difficult to produce all the goods necessary for the survival of a society in one country or region. It becomes difficult to have socialism in one country and to delink from the capitalist world market and its unequal global trading system. For this reason, a socialist economic order must be multi-polar and international from the start. As long as the capitalist world system exists, competition within the world market may be unavoidable for socialist enterprises, cities, and regions. Nevertheless, regionalisation should be attempted as much as is possible. If unique goods can be produced in co-operatives and self-managed companies, and these can be sold on the world market with a monopoly status at producer prices that make high wages possible, then economic advantages can be achieved for socialist regions. The major left parties in Europe, such as The Left in Germany and Syriza in Greece, are not calling for a departure from the EU, but rather for a restructuring that creates a peaceful, social, ecologically sustainable, socialist, and democratic Europe.

The Social Development of the Waldviertel

The economic historian Andrea Komlosy (1988; 2011) has demonstrated that peripheralisation does not only happen at the level of the capitalist world system, but also at the regional level between peripheral and central regions. On the basis of a term introduced by Hans-Heinrich Nolte, “dependent regions within a state [are] ... denoted as ‘inner peripheries’” (Komlosy 2011:199, translated from German). The unequal relationships between the centres and the periphery tend to reproduce themselves within the centres and the periphery through the creation of inner colonies (Luxemburg 1913; Mies 1998). Komlosy applies this approach to the analysis of the economy of the Waldviertel, which she understands as a periphery of the semi-periphery

country Austria, “robbed of its own ability to develop, dependently integrated into the capitalist world system” (Komlosy 1988:296, translated from German).

The Waldviertel was tied into the capitalist world system in the 17th century. From the Ottoman Empire, the Habsburg Empire imported cotton, which was processed by spinners and weavers in the counties of Gmünd, Waidhofen, and Zwettl. Flax and wool, the traditional raw materials of peasant textile production in the Waldviertel, carried on as a supplementary source of income (Komlosy 1988:13), and were also used. The Schwechater Baumwollmanufaktur, headquartered near Vienna, controlled the profits. This was a monopolistic-capitalist enterprise founded in 1724. It extracted and transferred value from the Waldviertel and the Ottoman Empire. “The unequal division of labour between the Lower Austrian centre and the Waldviertel inserted itself into the international unequal division of labour between Western Europe and the Ottoman Empire” (Komlosy 2011:236, translated from German).

The structural weakness of the agricultural sector arising from the poor soil quality and rough climate meant that the peasants carried out textile production as a sideline industry well into the 20th century (Komlosy 1988, chapters I.1, I.2). In the 18th and 19th centuries, textile mills, spinning mills, band factories, specialty weaving plants, knitting mills, and textile print facilities were established, whose activities were combined with labour intensive work at home. The owners of these factories lived mostly in the federal capital of Vienna and in the capitals of Austria’s federal states. For example, the carpet and upholstery factory Backhausen had its headquarters and sales office in Vienna, but produced in facilities in Hoheneich (Gmünd County), Groß Siegharts (Waidhofen an der Thaya County), and Schwarzenau (Waidhofen an der Thaya County) (Komlosy 1988:79, 81). The Waldviertel was an “extended workbench” in the capitalist textile industry (Komlosy 2011:237). In the 19th century, wages of textile workers in the Waldviertel were approximately a third of the average wages paid to workers and servants in Vienna (calculation based on numbers from Komlosy 1988:79). Construction of the Franz Joseph rail line in 1869–70

made transportation of textiles cheaper, and therefore made access to cheap labour easier for the bourgeoisie, increasing the transfer of value out of the Waldviertel (Komlosy 1988:94).

Ideologically and politically, the peripheral situation of the Waldviertel in the 19th century and at the beginning of the 20th century was not reflected in socialist movements. The class structure of the Waldviertel consisted primarily of small peasant farmers, the petty bourgeoisie of the small and medium-sized traders, and the industrial bourgeoisie. There was a strong presence of German-national ideology. The German National Party of Georg Heinrich Ritter von Schönerer, with its anti-Semitic, anti-Czech, and racist ideology that influenced Hitler’s view of the world, was elected into the State Parliament of Lower Austria multiple times (Komlosy 1988, chapter I.6). The Socialist Party appealed primarily to the industrial workers of the Waldviertel, who, nevertheless, would in part also vote for German-nationalist parties. Through the work carried on in the home, the industrial work force was deeply anchored in the peasantry. Hitler’s grandmother, Maria Anna Schicklgruber (1796–1847), and his father, Alois Schicklgruber/Hitler (1837–1903), were from the village Döllersheim (Gmünd County) in the Waldviertel, and his mother, Klara Hitler (née Pözl, 1860–1907), was from Spital bei Weitra (Gmünd County) (Müllner 1997). The family belonged to the class of peasant smallholders in the Waldviertel. Ernst Bloch (1985) characterises the basis for National Socialism as anachronistic layers that react ideologically to capitalist modernisation and industrialisation with irrationalism – “economic-ideological residual beings from earlier times”⁴ (Bloch 1985:16, translation from German) – taking the form of Führer ideology, anti-Semitism, anti-Communism, and racism.

The farmers and the petty bourgeoisie were not only distracted to Jews, and the competition of the centre was not only palliated by obvious anti-Semitism: there was also space for the not so obvious in the deception: the national community, the ‘national soul,’ the ‘Führer,’ the ‘destiny.’ Thus came the fas-

4 „wirtschaftlich-ideologischen Restseins aus früheren Zeiten“

cist state, the wolf-state that intervenes ‘mediating’ between wolves and sheep, capitalists and their victims. Thus, Social Democracy was replaced by a new sham, social autocracy.⁵ [Bloch 1985:203, translation from German]

It is therefore important, “to mobilise the antagonisms of non-simultaneous social strata under socialist guidance against capitalism”⁶ (Bloch 1985:16, translation from German). However, in Austria, this mobilisation never succeeded, neither during nor after National Socialism. In the Waldviertel, the German Nationalists, in contrast to the Conservatives, called for the modernisation of municipal infrastructure (Komlosy 1988, chapter I.6,) while their social and political ideas were Fascist.

In the 1920s and early 1930s strikes in the glass, wood, stone, and clock industry of the Waldviertel followed in the wake of mechanisation, factory closures, wage decreases, and the global economic crisis, and as a consequence there were workers’ demonstrations (Komlosy 1988, chapter III.2). The social democratic movement became an important factor, especially in the county of Gmünd, supported among others by the workers of the railroad workers and rail maintenance shops. It engaged in bitter fights with the national socialists (Komlosy 1988, chapter III.4). After World War II, the dominance of the conservative Österreichische Volkspartei (ÖVP) was unchallenged.

Between the wars and after the Second World War, the Waldviertel was above all exploited by foreign capital as a “cheap labour market with an educated work force potential” (Komlosy 2011:238, translation from German). Gmünd County was shaped by the textile, stone, glass, and lumber industries; Waidhofen County by the textile, metal fabrication, electronics, and food industries; Zwettl County was organized primarily along agricultural lines (Komlosy 1988:222, 226). Since the mid-

1970’s, the rise of the new international division of labour has led to rural depopulation and the relocation of the textile, garment, lumber, metal, and electronics industries to eastern Europe and into developing countries which have become the new cheap labour markets. In this way the Waldviertel became an excluded and exploited inner periphery of European capitalism (Komlosy 2011:246; Komlosy 1988:217ff, 232-237). The result has been increased depopulation, unemployment, and more deaths and births (Komlosy 1988, chapters IV.1, IV.2, IV.5). The unemployment rate in the counties of the Waldviertel tends to be rather high. For example, in Gmünd County the average unemployment rate in 2012 was 9.3 percent when the Austrian average was 7.0 percent. In 2013, the average rate was 10.3% in Gmünd County and the Austrian average 7.6%. In 2008, the average unemployment in Waidhofen an der Thaya County was 8.4 percent, and 8.5 percent in Gmünd County, when the average for Austria was 5.9 percent. In 2010, 9.2 percent of the workforce in Gmünd County were unemployed, 7.6 percent in Waidhofen County, while Austria wide it was 6.9 percent (AMS Arbeitsmarktdaten).

The critical theorist Franz Schandl, who was born and grew up in Heidenreichstein (Gmünd county), a small town in the Waldviertel, describes the situation in the following words:

Today there is a yawning emptiness, except during the summer. When walking across the main square in the evening of an autumn day, the small town (that currently has 4,500 inhabitants) feels completely extinct, even the pubs have often been closed because there are no guests. Nothing is left of the factories, where my parents have worked in the seventies. Industrial cities such as Heidenreich suffered badly under the onset of the recession. Thousands of jobs dissolved within a decade into nothingness. ... Heidenreichstein lost more than a fifth of the population from 1971 until 2001. [Schandl 2004, translation from German]

Today, the Waldviertel has developed into an excluded and exploited periphery that tries to compensate for the loss of the textile industry with new low wage sectors in agriculture and adventure tour-

5 „Die Bauern und Kleinbürger wurden nicht nur auf Juden abgelenkt, der Konkurrenzkampf der Mitte nicht nur durch durchsichtigsten Antisemitismus gemildert: es hatte auch Undurchsichtigeres im Betrug Platz, die Gemeinschaft, die Seele, der ‚Führer‘, das ‚Schicksal‘. So geriet der fascistische Staat, der Wolfs-Staat (der zwischen Wölfen und Schafen, Kapitalisten und ihren Opfern ‚vermittelnd‘ eingreift); so wurde Sozial-Demokratie ausgewechselt mit einer neuen Attrappe, der Sozial-Autokratie“.

6 „Widersprüche ungleichzeitiger Schichten gegen den Kapitalismus unter sozialistischer Führung zu mobilisieren“

	<i>Austria</i>	<i>Waldviertel</i>
Population	8 451 860	218 676 (2.6%)
Percentage of those 0-19 years of age	20.1%	19.2%
Percentage of those 20-64 years of age	61.8%	59.8%
Percentage of those > 64 years of age	18.0%	21.0%

Table 1: Demographic statistics of the Waldviertel in comparison to all of Austria, 2013 (Source: Statistik Austria)

	<i>1991</i>	<i>2001</i>
0-15, Waidhofen County	17.8%	16.8%
>60, Waidhofen County	24.0%	25.9%
0-15, Gmünd County	16.8%	15.9%
>60, Gmünd County	24.0%	26.4%
0-15, Zwettl County	20.2%	18.4%
>60, Zwettl County	21.1%	23.7%
0-15, Horn County	17.4%	18.4%
>60, Horn County	21.0%	21.6%
0-15, Krems (Stadt) County	14.9%	14.2%
>60, Krems (Stadt) County	23.2%	23.5%
0-15, Krems (Land) County	17.8%	17.0%
>60, Krems (Land) County	20.8%	22.4%

Table 2: The younger and older generations in the Waldviertel, Source: Volkszählungen 1991 und 2001 (Statistik Austria)

ism. The structural weakness and peripheral social situation can be demonstrated with current data.

Tables 1 and 2 show that the relative proportion of elderly people is higher in the Waldviertel than the Austrian average. By contrast, the proportion of young people is considerably lower. The consequences of the peripheral and excluded character of the Waldviertel within Austrian and European capitalism, as well as the shortage of jobs, the low wage environment, the hollowed out public infrastructure, and the rural economic structure that cannot satisfy the need for higher education and jobs requiring higher qualifications make the Waldviertel unattractive for young people.

The population of the Waldviertel declined from 224,387 in 2001, to 219,541 in 2011 (Source: Statistik

Natural Increase 2012	-704
Natural Increase 2011	-602
Natural Increase 2010	-713
Balance of Migration 2012	7
Balance of Migration 2011	482
Balance of Migration 2010	120
Population Growth 2012	-697
Population Growth 2011	-120
Population Growth 2010	-593
Percentage of those employed in the primary sector 2011	11.8%
Percentage of those employed in the primary sector 2001	12.7%
Percentage of those employed in the secondary sector 2011	28.3%
Percentage of those employed in the secondary sector 2001	29.3%
Percentage of those employed in the tertiary sector 2011	59.9%
Percentage of those employed in the tertiary sector 2001	58.0%
Those commuting in 2011	13080
Those commuting out 2011	29698
Balance of commuters 2011	-13618
Those commuting out as a percentage of the resident population	12.2%

Table 3: Statistical information on the Waldviertel (Source: Zahlen & Fakten in Niederösterreich, <http://www.noel.gv.at/Land-Zukunft/Zahlen-Fakten.html>)

Austria, Volkszählung 2001 and Registerzählung 2011). The population of Austria increased from 4,497,880 in 1869, to 8,401,940 in 2011 (Source: Statistik Austria, Volkszählungen 1869-2011 und Registerzählung 2011). The population of the Waldviertel, by contrast, declined from 244,708 to less than 220,00 over the same period (Source: Statistik Austria, Volkszählungen 1869-2011 und Registerzählung 2011). The population projection for 2031 foresees a further decline to 211,556 (Source: Statistik Austria). The population decline can be explained by the combination of more deaths than

births and stagnant or low in-migration (Table 3). The aging of the population and the negative natural increase of the Waldviertel are inherently connected to each other and have to do with the region's peripheral social and economic situation.

Looking at the numbers of those who commute out of or into the Waldviertel, it is clear that there are substantially more people travelling outward for work and for this reason the balance of commuters came to -13,618. The lack of jobs and positions requiring higher qualifications means that many residents of the Waldviertel commute to Vienna or other parts of Austria. The structure of commuting in the Waldviertel shows clearly the economic gap between Vienna and its vicinity as an economic centre on the one hand, and the Waldviertel as economic periphery on the other.

In Austria as a whole, in the year 2011, 5.7 percent of the employed worked in agriculture or forestry (OECD STAN), while in the Waldviertel it was 11.8 percent (Table 3), underscoring the rural nature of the region. This also demonstrates that technologically advanced, innovative, and high productivity industries usually move to the centres of capitalism, while labour intensive, low wage industries with lower productivity are often found in peripheral regions like the Waldviertel.

According to one study, the average income in Austria was 34,031 Euros in the year 2011.⁷ Table 4 shows the five municipalities with the highest figures. Table 5 shows the statistics for the Waldviertel.

The average income in the Waldviertel of €33,037 was less than half that of the Inner City of Vienna, and almost half that of the Mödling County municipalities of Gießhübl and Hinterbrühl. While the average income in the wealthiest county in Austria, Inner City Vienna, was €68,400 in 2011, and in the wealthiest county of Lower Austria, Mödling, was €49,450, in the Waldviertel it was only €33,037. Mödling County has an advantaged position, due to its proximity to Vienna. Many companies have established a presence in Mödling's Industriezentrum Süd (Industrial Park South), which has made the county one of the economically strongest in Austria. This has also led to the county's relatively high tax

Municipality	Average Income
Inner City, Vienna 1 (Vienna)	68399.01
Gießhübl, Mödling (Lower Austria)	64850.89
Hinterbrühl, Mödling (Lower Austria)	61743.2
Gaaden, Mödling (Lower Austria)	57187.52
Bisamberg, Korneuburg (Lower Austria)	55442.13
Inner City, Vienna 1 (Vienna)	68399.01
Mödling County	49448.61

Table 4: Average income in the wealthiest municipalities in the year 2011, in €, Source: WU Studie zur Einkommensungleichheit in Österreich, <http://taxsim.wu.ac.at/atineq/>

County	Average Income
Waidhofen an der Thaya County	30903.61
Gmünd County	31494.53
Horn County	32497.74
Zwettl County	30193.09
Krems (Land)	35565.30
Krems (Stadt)	37570.35
Durchschnittseinkommen im Waldviertel	33037.44

Table 5: Average income in the Waldviertel in the year 2011, in €, Source: WU Studie zur Einkommensungleichheit in Österreich, <http://taxsim.wu.ac.at/atineq/>

revenue and a high gross regional product (Table 6). In comparison to Vienna, the area around Vienna, and the federal state capitals like Sankt Pölten, Linz, Graz, Salzburg, Innsbruck, and Klagenfurt, the per capita gross regional product of the Waldviertel is very meagre (Table 6). This gap is an expression of the centre-periphery structure of Austrian capitalism, in which peripheral regions like the Waldviertel have both low wages and low capital assets. The Waldviertel's gross regional product per capita has in the years 2000 to 2011 increased at a rate of 51.15 percent, which is relatively high in comparison to the Austrian average of 37.31 percent. Nonetheless the Waldviertel's gross regional product per capita was in 2011 30.5 percent lower than the Austrian average and 45.6 percent lower than in Vienna. The Waldviertel's peripheral socio-economic situation has in the first decade of the 21st century hardly changed.

⁷ See <http://taxsim.wu.ac.at/atineq/>; Der Standard (2014).

Region	2000	2002	2004	2006	2008	2011
All of Austria	26,000	27,300	28,700	31,300	34,000	35,700
Sankt Pölten	26,000	27,000	28,300	31,300	34,400	36,900
Waldviertel	16,300	18,200	19,700	20,500	22,900	24,800
Vienna surroundings, southern part	33,200	33,000	35,600	37,900	40,600	41,000
Vienna	35,900	37,900	38,100	41,400	44,000	45,600
Klagenfurt-Villach	26,500	27,100	28,800	31,000	33,600	35,600
Graz	31,900	32,200	35,100	37,300	39,400	40,000
Linz-Wels	33,700	35,600	37,400	40,800	45,000	46,400
Salzburg	32,200	33,600	36,400	39,600	42,900	45,400
Innsbruck	29,200	31,300	32,300	35,300	37,300	38,400

Table 6: Gross regional product per capita 2000-2011, in €, Source: Statistik Austria

Today, the Waldviertel is a peripheral region of Austrian and European capitalism, characterized by capital flight and the economic exclusion that results from this. Other characteristics are: unemployment, high rates of exploitation of low wage earners, unequal competition and the related value transfer through the unequal exchange based on the preponderance of labour intensive, low productivity industries. There is also the dismantling of public infrastructure and the loss of value, knowledge, tax base, and workforce through outward commuting. And, finally, there is the flight from the country, and an ageing and declining population. The Waldviertel is a dying region that is slowly being bled to death and killed by its peripheral geography and situation in capitalism. The pastoral assistant and company counsellor Karl A. Immervoll sums up the situation in the following way: “The Waldviertel is being systematically robbed. ... First the money is gone; second the jobs; third the people” (Müller 2009, translated from German).⁸

Internet and Communication in the Context of the Peripheralisation of the Waldviertel

In 2009 in Lower Austria, there were 11,603 companies in the so-called creative economy, which creates products with high information content (Amt der NÖ Landesregierung 2010). This industry accounts

for 24.0 percent of all companies in Lower Austria, and 12.2 percent of all employment. Table 7 shows that the software industry, measured by the number of employed workers, is the largest sector of the creative economy in Lower Austria, followed by consulting and advertising.

Table 8 shows the results of a poll in which residents of Lower Austria were asked which cities they consider creative centres. Krems, in the southern part of the Waldviertel, is mentioned alongside Sankt Pölten, as an important creative centre. By contrast, the cities in the upper Waldviertel, in the counties of Gmünd, Waidhofen an der Thaya, and Zwettl, play almost no role.

Figure 1 shows the percentage of the workforce active in the creative economy in the municipalities of Lower Austria. “The creative economy plays an important role above all in the municipalities surrounding Vienna, and along the south and west axis” (Amt der NÖ Landesregierung 2010:16, translation from German).⁹ While in the Waldviertel the percentage is between five percent and 15 percent, in the northern, western, and eastern “Speckgürtel” (lit. “fat belt”) around Vienna, in the Lower Austrian counties of Mödling, Wien-Umgebung, and Klosterneuburg, the percentage is usually 20-30 percent. The information economy is distributed extremely unevenly geographically, to the disadvantage of peripheral regions like the Waldviertel.

⁸ „Das Waldviertel wird systematisch beraubt. [...] Als erstes geht das Geld weg, als zweites die Arbeitsplätze und als drittes die Leute“.

⁹ „Vor allem in den Gemeinden im Wiener Umland und entlang der Süd- und Westachse spielt die Kreativwirtschaft eine verhältnismäßig große Rolle“.

Type of Work	2001	2002	2005	2009
Film Production	177	173	214	266
Film and Video Production (Film Rental)	35	37	48	83
Film Studios + Sound Studios	101	11	16	16
Sound Studios	123	120	126	151
Organisation and Facilitation of Public Events	275	364	564	735
Advertising Agencies	535	644	907	1,310
Public Relations Consultancies	287	297	300	309
Market and Opinion Research	62	67	107	105
Ad Writers	16	13	16	21
Corporate Consultants	0	785	1,323	1,909
IT Services	3,221	3,429	3,959	4,313
Interior Design	48	67	79	83
Publishing and Media	919	878	862	1,104
Carpenters	1,081	1,047	1,045	1,221
Dress Makers	182	173	150	197
Photographers	153	157	172	196
Press Photographers	121	117	151	228
Organisation and Implementation of Training and Seminars	201	220	390	657

Table 7: Development of employment numbers in the creative economy of Lower Austria, Source: Amt der NÖ Landesregierung (2010).

Table 9 shows that Lower Austria is the federal state in Austria that has the lowest household access to computers, the Internet, and broadband. As the Waldviertel is a peripheral region within Lower Austria which has a considerably weaker infrastructure than wealthier Lower Austrian counties such as Sankt Pölten or Mödling and Korneuburg in the area around Vienna, we can extrapolate that it is one of the regions of Austria in which households

Creative Centres in Lower Austria	Responses
Sankt Pölten	94
Krems	89
Wiener Neustadt	27
Baden	25
Mödling	22
Amstetten	12
Tulln	10
Mistelbach	8
Melk, Geras, Grafenegg	5
Waidhofen/Ybbs, Horn	4
Kottingbrunn, Perchtoldsdorf, Vienna region, Wiener Neudorf	3
Bruck/Leitha, Korneuburg, Raabs/Thaya, Schiltern, Sankt Valentin	2

Table 8: Results of an opinion poll regarding perceived creative centres in Lower Austria, Source: Amt der NÖ Landesregierung 2010:16.

Federal State	Computer Ownership	Internet Access	Broadband Access
Lower Austria	77%	76%	74%
Vienna	83%	84%	83%
Vorarlberg	85%	84%	83%
Tyrol	84%	84%	83%
Upper Austria	82%	83%	81%
Steiermark	81%	82%	81%
Salzburg	78%	79%	78%
Burgenland	81%	79%	78%
Kärnten	77%	77%	75%

Table 9: Computer, Internet, and broadband access in the federal states of Austria, Source: Statistik Austria, Europäische Erhebung über den IKT-Einsatz in Haushalten 2013.

have the least access to computers, the Internet, and broadband.

The Austrian Regulatory Authority for Broadcasting and Telecommunications (RTR) conducted a network test¹⁰ on the strength of mobile signals in Austria. In these measurements, an 80 percent quantile means that 80 percent of measurements taken are below the stated strength. Figure 2

¹⁰ <https://www.netztest.at/de/Karte>

shows the location of the Waldviertel in the northeast of Austria, in order to help interpret the visual data presented in the following pictures. Figure 3 shows the colour scale to represent the regional connection speeds. Dark green means a very fast connection, dark red means a very slow connection.

Figures 4, 5, and 6 show the results of the RTR network tests for Internet access speeds on mobile telephone networks in Austria. The graphics show the results for all network operators. The figures display the speeds for downloading and uploading data, as well as the so-called ping test by which the connection time to Internet servers is measured. The large, coloured area on the right side of the three images is Vienna. The Waldviertel is all the way in the north, at the upper right end of the images. Dark green or green areas, which signify fast Internet connections over mobile telephone networks, are found especially in the federal capital Vienna, and the federal state capitals like Graz, Linz, Sankt Pölten, Salzburg, Innsbruck and Klagenfurt. The Waldviertel is thinly populated and heavily forested, which explains the many white areas without service. The areas of settlement are largely light green, yellow, and sometimes red, which signifies a significantly slower connection speed than in the Austrian centres.

Figures 7, 8, and 9 show tests for data uploading and downloading and ping connections using web browsers on a regular Internet connection. The images display the area of Lower Austria and Upper Austria. These are combined tests of all accessible Internet providers.

The figures show that the Internet speeds in central urban areas like Vienna, Linz, and Sankt Pölten are relatively fast (dark green areas), while in the Waldviertel there are several areas with slower connection speeds: Drosendorf, Gars am Kamp, Groß Gerungs, Geras, Karlstein, and Rastendorf for downloading; Drosendorf, Eggenburg, Gars am Kamp, Geras, Gföhl, Groß Gerungs, Horn, Langelois, and Litschau for uploading; Gars am Kamp, Gföhl, Groß

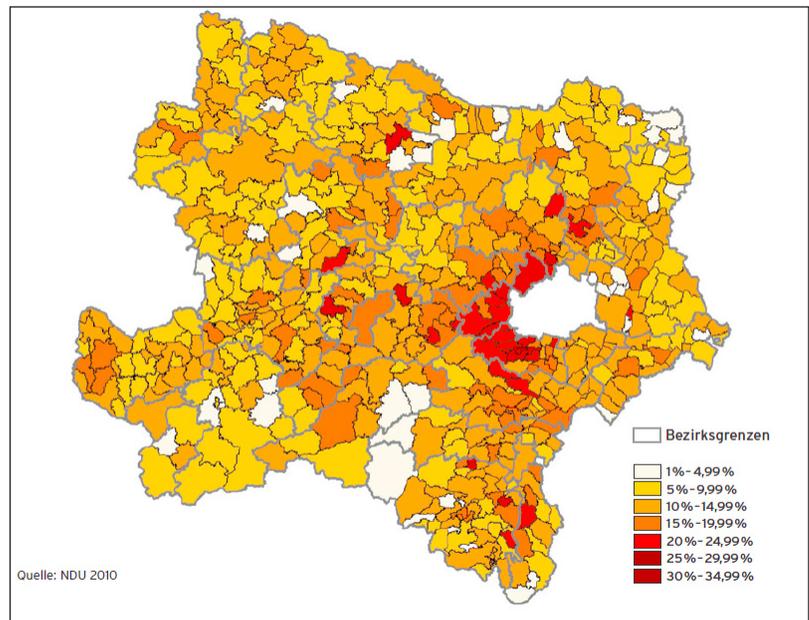


Figure 1: Proportion of the creative economy in percentages of all employment categories in Lower Austria, Source: Amt der NÖ Landesregierung (2010, 17)



Figure 2: The location of the Waldviertel in Austria, Source: Wikimedia Commons, <http://commons.wikimedia.org/wiki/File:Austriastatesenglish.png#file>

Gerungs, Heidenreichstein, Raabs an der Thaya, Rastendorf, and Waidhofen an der Thaya for the ping connection test.

Figures 10 and 11 show the test results for the signal strength of mobile telephone networks in Austria. The test combines all available networks in specific regions.

These images make clear that the signals of the mobile telephone networks are especially strong in the federal capital of Vienna and in the federal state capitals, while they are weaker in many areas of the Waldviertel.

This analysis highlights the tendency for the mobile signal strength and the Internet connection



Figure 3: Colour scale representation of connection speeds in the RTR network test

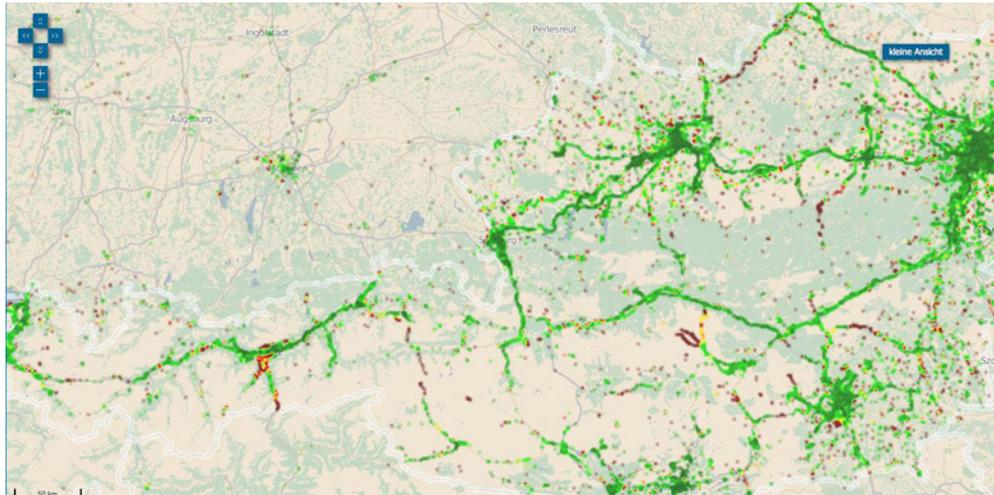


Figure 4: Internet download speeds on mobile telephone networks in Austria, RTR Netztest 2013

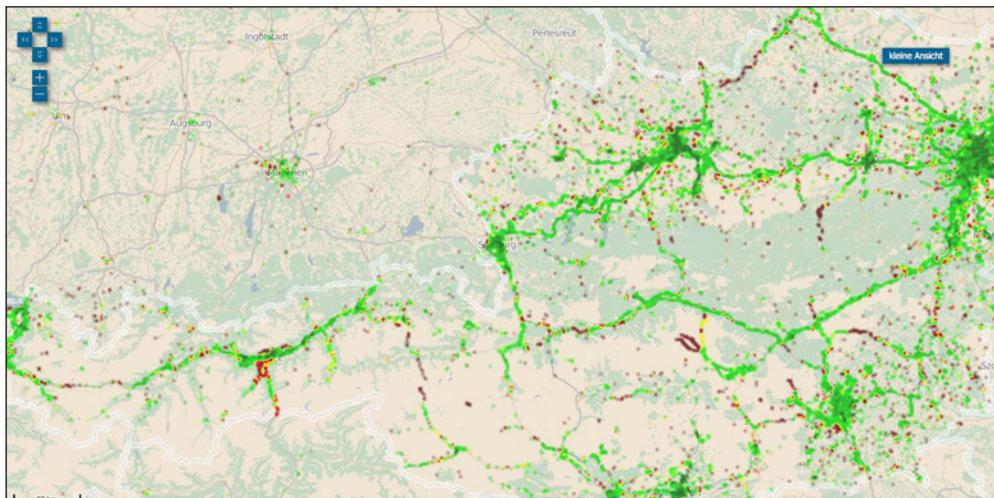


Figure 5: Internet upload speeds on mobile telephone networks in Austria, RTR Netztest 2013

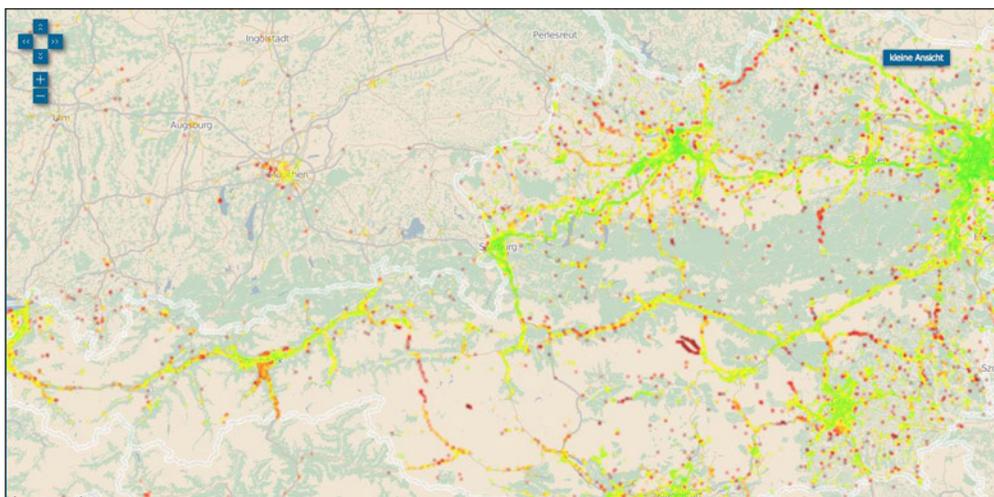


Figure 6: Internet ping connection speed tests on mobile telephone networks in Österreich, RTR Netztest 2013

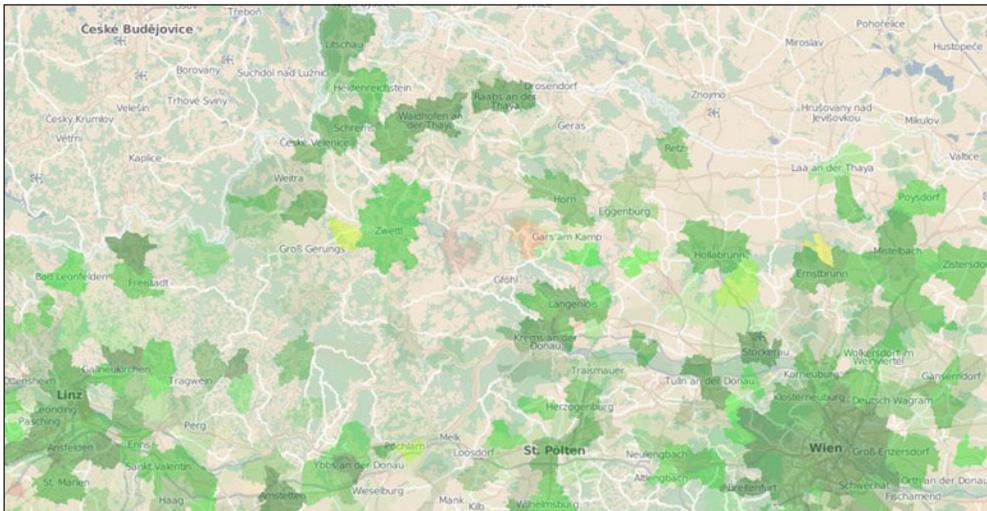


Figure 7: Data download speeds using a web browser on a regular Internet connection, RTR Netztest 2013

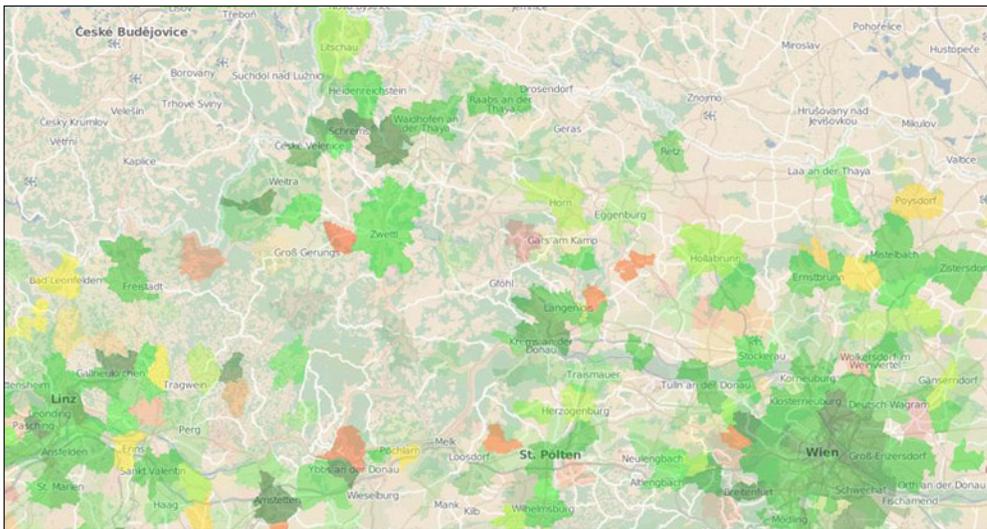


Figure 8: Data upload speeds using a web browser on a regular Internet connection, RTR Netztest 2013

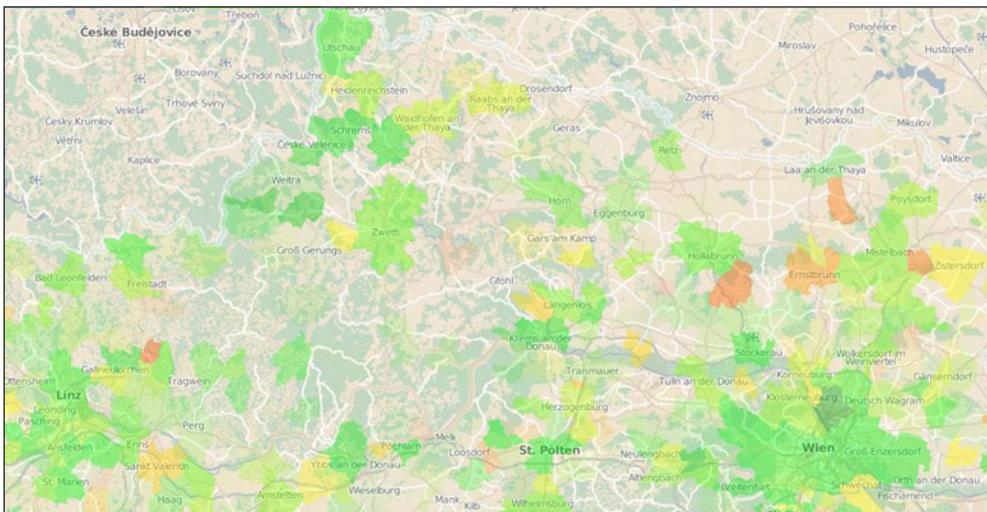


Figure 9: Ping connection speed test using a web browser on a regular Internet connection, RTR Netztest 2013

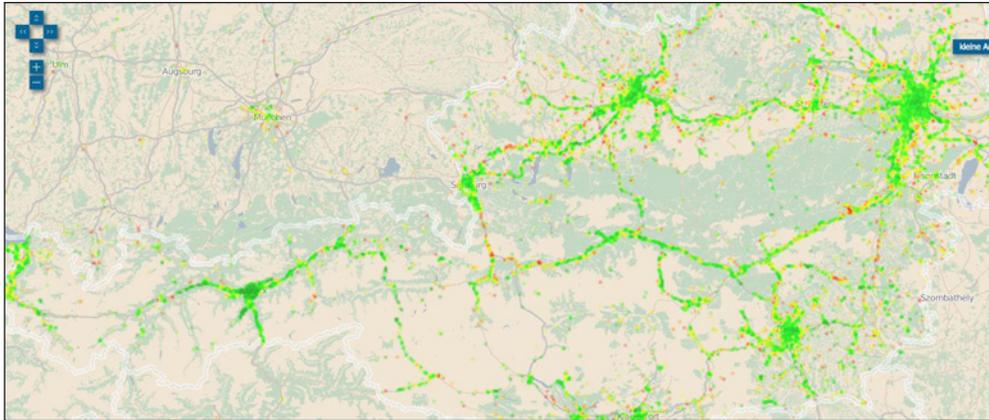


Figure 10: Signal strength of mobile phone networks, RTR Netztest 2013

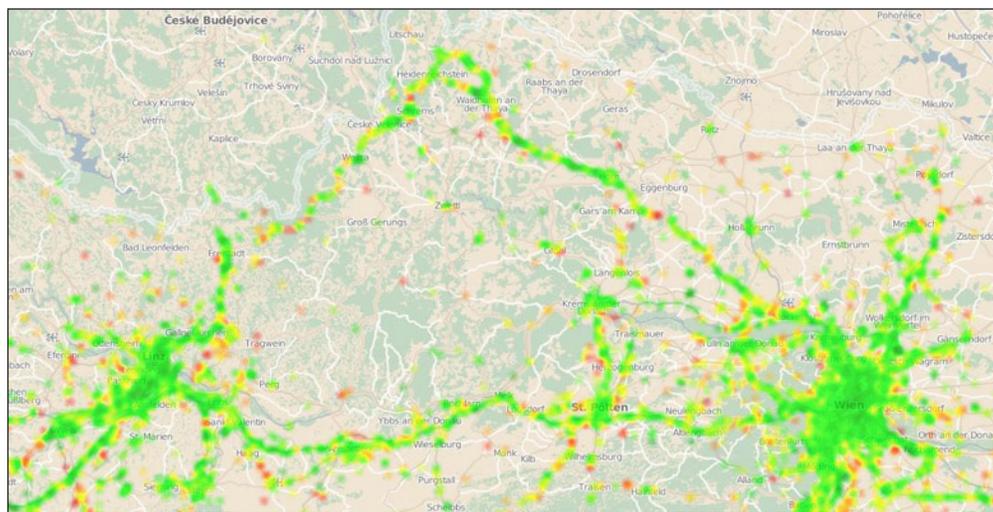


Figure 11: Signal strength of mobile phone networks, RTR Netztest 2013

speeds and mobile Internet speeds to be notably higher in the centres of Austrian capitalism – the federal capital of Vienna and the federal state capitals – than in the Waldviertel. The access to computers, the Internet, and broadband is also less developed in the households of the Waldviertel than in the Austrian centres. The peripheral status of the Waldviertel is reproduced in the access and signal quality of the communications networks. Not only are the centres of Austrian capitalism – like Vienna, Graz, and Linz – characterised by an abundance of capital, profits, residents, jobs, tax revenues, public infrastructure, educational and cultural institutions, but they also have a high speed, well developed communication infrastructure. By contrast, the Waldviertel is not only poor in private and public resources, but is character-

ized by poorer signal strength of communications networks. It is much more likely that you have no mobile phone or Internet signals in parts of the Waldviertel or that such signals are unstable or disconnect than in Vienna or the regional capital cities.

When asked the question, “Why is it that the people in the northern Waldviertel often have poor mobile connections?” Hermann Gabriel, the spokesperson for A1 Telekom Austria AG answered, “One has to say that it is difficult to provide service for the Waldviertel because of, on the one hand, the topographical situation, and, on the other, the low population density” (Zellinger 2013, translation from German).¹¹ What is probably meant by “difficult to

11 „Man muss sagen, dass das Waldviertel einerseits aufgrund der topografischen Situation und der dichten Bewaldung, andererseits durch die dünne Besiedelung sehr schwierig zu versorgen ist“.

provide service for” is that the peripheral circumstances of the Waldviertel promise only low profits on extensive high speed communications networks, and for this reason the service providers restrict themselves to a limited service of poorer quality.

Karl Marx pointed out that means of transport and communication are part of the fixed constant capital: means of production that help to organise the transport of commodities. However, computers and computer networks are not only organisers of the circulation of commodities, but also the means of production for information products and the platforms for internal and external communication for companies. While trains, buses, automobiles, ships, lorries, and airplanes transport people and physical goods, computer networks transport information, information products, and flows of communication. Physical and informational means of transport are similar in that they present a common infrastructure: “Regarded as a means of production, it distinguishes itself from machinery, etc., here in that it is used up by various capitals at the same time, as a common condition for their production and circulation” (Marx 1993:725).

In capitalism, means of transport and communication play an important role in the organisation of the exchange of physical and informational commodities and in the communicative organisation and production and circulation: “The more production comes to rest on exchange value, hence on exchange, the more important do the physical conditions of exchange – the means of communication and transport – become for the costs of circulation” (Marx 1993:524). The means of communication and transport determine “the sphere of those who are in exchange, in contact, but also the speed with which the raw material reaches the producer and the product the consumer” (Marx 1993:187). In capitalism, means of communication and transport have thus the primary role of accelerating exchange and production so that commodities can be produced and sold more quickly, which allows the production of more goods in the same or less time than before. Communication and transport technologies are means of acceleration: “Capital by its nature drives beyond every spatial barrier. Thus the creation of the

physical conditions of exchange – of the means of communication and transport – the annihilation of space by time – becomes an extraordinary necessity for it” (Marx 1993:524).

The impoverishment of public transportation-connections in the Waldviertel makes it difficult for people and goods to be transported into and out of the Waldviertel. Thus, goods produced in the Waldviertel tend to have a higher circulation time, which means that more circulation labour is put into the goods, and their value is higher than in regions with well-developed infrastructures. It is similar with poor, slow, and underdeveloped communication networks in the Waldviertel: the transport of information and communication within, into and out of the Waldviertel is more expensive for producers, more time consuming, slower, and tends to be more prone to failure than in the communication centres of capitalism which have access to well-developed and extremely fast communications networks. Poorer Internet access and poorer transportation connections make the transport of goods, people, and information into and out of the Waldviertel more costly, by which geographical disadvantages arise that raise the constant capital costs. Goods produced in the Waldviertel tend to be more expensive than comparable goods produced in the centres of Austrian and international capitalism. The infrastructural disadvantages of the Waldviertel strengthen the unequal exchange of commodities that the region faces.

Poor transportation and communication infrastructures also tend to strengthen outmigration and are barriers to capital investment and companies moving into the region. Well-developed and fast communications networks are essential for knowledge workers. Again, the Waldviertel is structurally disadvantaged for the establishment of an information economy. It is more likely for knowledge workers to settle in Vienna than in the Waldviertel. The communication peripheralisation of the Waldviertel can also lead many actual or potential knowledge workers to move away from the Waldviertel. It is no surprise that the Waldviertel not only has a weak communication infrastructure, but also has a relatively low percentage of knowledge workers (see Figure 1).

A study conducted in 33 countries showed that doubling the Internet speed can result in the growth of the gross domestic product by 0.3 percent.¹² Conversely, this means that it is likely that there is a causal connection between that slow communication infrastructures contribute to reduced regional economic performance and low regional wages. The analysis of the Waldviertel conducted in this article confirms these presumptions.

I want to show with these examples that the Waldviertel has a disadvantaged economic structure. The solution to this problem cannot and should not be that one tries to compete with capitalist centres in order to overtake and outstrip them and to become even more capitalist than them. The uneven development of the Waldviertel within capitalism cannot be overcome by capitalist development. It is not meaningful to make capitalism in the Waldviertel faster, better, more efficient and more effective. Capitalism is the root evil of uneven development. More of it cannot solve the problems of the Waldviertel and other peripheral regions. Even if one succeeded in making some of the Waldviertel's economic sectors dominant in the capitalist world system, this development would be coupled with unemployment in and structural weakening of other regions in the world. And this economic world leadership could be unstable, prone to crisis and temporally limited. The example of the Waldviertel shows that it is important that we think about a qualitatively different economy, about alternatives to capitalism.

Global capitalism's economic structure has changed because of the development of the productive forces. There is less work in agriculture and classical industry because both realms have been more and more automated. In addition industry has been changed within the international division of labour in such a way that capitalist production is globally flexible. Andrea Komlosy (1988) has shown the de-industrialisation of the Waldviertel that has resulted from this development. A re-industrialisation that results in the comeback of the textile, clothing and metal industries would create unemployment and precarity in other regions of the world. It would

predominantly create strenuous and low-paid work. The manufacturing of mobile phones and clothes in piece-work is meaningless, monotonous and often hazardous labour that nobody should perform and that should rather be automated. But the problem of automation in capitalism is that it is contradictory. As a tendency, it does not result in a re-distribution of the remaining work and thereby to a better life for all, but rather in the development that some work more, whereas others become unemployed or precarious workers, whereby capital hopes to create more profits, but at the same time the crisis-proneness of capitalism increases. Classical labour in agriculture and the manufacturing industry is often not only strenuous toil, but has also become more and more unnecessary because of the technological development. The Waldviertel can and should not primarily be a region of agriculture and classical manufacturing industry. Alternatives to capitalism face the question what role the information economy can and should have.

The British socialist and artist William Morris (1884) opposed the idea that all work is useful and that labour is an important moral value in-itself. He distinguishes between *unnecessary, useless labour* that is a waste of human energy; *harmful labour* that harms nature, the human mind and body and society, and useful labour that advances self-fulfilment and a good society. Piecework on the assembly line is unnecessary and meaningless. It also tends to harm human health. The industrial accidents in Chernobyl and Fukushima have shown that nuclear power plants and the labour performed in them pose huge destructive potentials for humans and nature. Nuclear power should therefore be seen as a harmful industry.

What about information work? It is partly unnecessary, meaningless, and harmful. Labour in advertising, financial services, real estate, public relations, marketing, consultancy, and market research has the only role to construct brand images and commodities' use-value promises, to sell ever more commodities in a more efficient and effective way and to convince people that they need these goods. These industries and the labour performed in them only have a dimension of capitalist valorisation, increase consumption of throw-away commodities that are produced in

¹² <http://www.portal-21.de/ambient-assisted-living/artikel/53517-ericsson-studie-einfluss-von-breitband-datenraten-auf-wirtschaftswachstum-092742033/>, accessed on July 10, 2014.

an ecologically unsustainable manner, and are in an alternative economic order unnecessary. Information work always makes use of the body and the mind at the same time in order to create information. It is however not a moral good in-itself. The technification and scientification of the economy has however made information ever more important. We can no longer think of modern society without information work in the realms of education, media and culture such as the one of university teachers, researchers, software engineers, artists, authors, web designers, translators, film and video producers, photographers, sound engineers, organisers of public events (concerts, exhibitions, discussions etc), journalists, television and radio presenters, DJs, librarian, archivists, operators of galleries, performers, musicians, cabaret artists, satirists, network administrators, administrators of online communities, etc. Such work is also meaningful in a post-capitalist society and can only fully unfold itself in such a society, where it will play a qualitatively different role than today. The work of journalists then is no longer Yellow Journalism that disinforms, but rather presents the complexity of society and stimulates critical reflection. Such journalism already exists today, but not to a sufficient degree and constantly limited by the media's market imperatives. The work of journalists will remain an important part of modern society. An economist in an alternative society is not concerned with how companies can sell more commodities in a better way and how they can increase the exploitation of employees. They can rather focus on the question how the economy can benefit all humans and preserve nature.

Young people, who have higher education, find many of the above-mentioned works attractive. Information work faces a capitalist paradox: Many information workers love their activities and consider it is a possibility for self-fulfilment. At the same time their work experience in actual existing capitalism is often shaped by small income, anxieties not to be able to survive economically, individualised risks, isolation, precarity, times of high workload followed by times without work (see: Fuchs 2014a, Gill 2002, Gill 2006, Hesmondhalgh and Baker 2011). Many knowledge workers are highly qualified, identify themselves with the content of their work, and experience precarious

conditions. An alternative economic order should not be a return to hard physical toil because freedom also means freedom from toil and necessity. Such an order requires an information economy, in which the antagonism between creativity and precarity is sublated, as integral part. A progressive development of the Waldviertel does not mean country romance with toil, but an alternative economic order that features alternative forms and contents of work, alternative products, and alternative relations of production. The Waldviertel requires for example a university. But not institution such as the Danube University Krems that is focused on science and education that serves capitalist interests and charges high tuition fees, but a critical university that is a public space for learning and research, that enables critical engagements with and production of knowledge about the region and the world, and whose goal is not the growth of profits, but the good life of all humans.

For Herbert Marcuse, freedom is threefold – economic, political, and cultural.

1. Freedom from the necessity to make one's life a means to the struggle for existence, i.e. freedom from the necessity of labour, in which the individual cannot unfold its human capacities [negation of economic unfreedom];
2. Freedom from the necessity to merely be an object of politics that are made by career politicians as realm of the societal division of labour [negation of political unfreedom];
3. Freedom from the necessity to be exposed to a public that as an external power also determines the inner sphere of private existence [negation of cultural unfreedom]. [Marcuse 2002:133]

Freedom as society's autonomy therefore means

that the individual does not practice and confirm its freedom in the struggle of economic competition, that it is no longer dependent on uncontrolled market mechanisms, that the individual functions no longer as a voter in, for or against given parties or other self-contained apparatuses and also no longer is a reproducer or consumer of dominant modes of thoughts and feelings. [Marcuse 2002:133-134]

Liberation is a process of sublation that negates the negation of freedom (= freedom from), i.e. unfreedom, and results in a positive determination (= the

freedom to). Freedom in a positive sense means the creation of a co-operative, self-determined, well-rounded activity without toil, the realisation of a maximum of free time (economic freedom), participatory, grass roots structures, in which all affected by certain aspects of life take collective decisions based on communicative deliberation (political freedom), and a sphere of wisdom, reason and critical reflection, in which the humans engage mentally and culturally in an all-embracing manner (cultural freedom).

People in the Waldviertel and other peripheral regions pay the same price for access to the Internet and mobile phones as in other regions. It is however much more likely that they do not receive a signal at all or that they are confronted with connection failures. Most communications networks and Internet platforms are owned by large corporations such as Facebook, Google, Microsoft, Yahoo, Telekom Austria, T-Mobile (Deutsche Telekom), Drei (Hutchinson Whampoa), UPC (Liberty Global), or Tele 2. Mediatized communication takes on various commodity forms and results in a transfer of value to communication corporations. The alternative should not be a global communication corporation that has its headquarters in the Waldviertel, but rather to free communication from the commodity form.

It is neither desirable nor realistic for the Waldviertel that one tries to win the competition with other regions or capitalist cores, to try to attract or create capitalist companies. The Waldviertel's social and economic peripheralisation shows that the logic of ever more profit in ever less time, the commodity form, global competition and the exploitation of labour harm humans, society and nature. We need a qualitative different logic of life and the economy. We need alternatives to capitalism: alternative companies, alternative products, an alternative mode of the economy. Are alternatives possible?

What to Do? Alternatives to Peripheralisation and Information Imperialism

We can summarize the main findings of this article as follows, which will facilitate reflection on alternatives to the current social situation of the Waldviertel.

An analysis of the political economy of the

Waldviertel demonstrates that, in the global capitalist system, there is not only an imperialist relationship between the centres and the periphery, but also that there are inner peripheries within the centres that are impacted negatively by imperialism. Historically, the Waldviertel was a peripheral inner colony of Austrian and European capitalism. In the context of a superregional and international division of labour, the Waldviertel's textile industry (above all), as well as their stone, glass, forestry, metal, electronic, and food industries produced for capital located in Vienna, Germany, and other countries. This production took place for low wages and, therefore, under high rates of exploitation. Low productivity and the emphasis on a few, labour intensive low wage sectors led to unequal exchange with the centres.

Since the middle of the 1970's, the Waldviertel, with its textile industry and other sectors, has been impacted by capital flight, company closures, and the relocation of industries to Eastern Europe and developing countries because of the new international division of labour. In this way, the Waldviertel has become a partially highly exploited, and partially excluded periphery of global capitalism. The consequences have been, among others, high unemployment, outmigration to Vienna, an aging and declining population, the dismantling of public infrastructure; the loss of value, knowledge, tax revenues, and workforce due to outward-commuting; flight from the countryside and an aging and declining population.

The termination of public transportation infrastructure, especially the rail lines of the Thaya Valley Railway and the Zwettl Railway, as well as post offices, and the slow, underdeveloped, and rather poorly accessible Internet and mobile networks make the goods produced in the Waldviertel more expensive. This strengthens the unequal exchange and the outflow of value, tends to increase outmigration and create barriers to capital investment and the movement of companies into the region. This also makes the Waldviertel unattractive to knowledge workers. The peripheral situation of the region as exploited and excluded periphery is reproduced in the information economy and in access to communication networks.

The Waldviertel is not the only structurally weak region in Austria. So for example the Mühlviertel in Upper Austria, Southern Burgenland and the Weinviertel in Lower Austria have a comparable peripheral socio-economic situation. It does therefore not come as a surprise that a glance at the RTR network test shows that they are just like in the Waldviertel zones in these regions that have particular low Internet and mobile phone speeds. A detailed analysis would go beyond the scope of this article, but it could however be an interesting task for further studies conducted by Internet researchers who are critical of imperialism and capitalism. The phenomenon of peripheral Internet access is of course not limited to Austria. An international comparison could possibly show similar trends in other structurally weak regions in Europe. Examples for such regions are all parts of Bulgaria, Romania, or Slovenia; Mecklenburg-Vorpommern, Sachsen-Anhalt, Thüringen, Sachsen and Northeast-Brandenburg in Eastern Germany; Extremadura, Castilla-La Mancha and Andalusia in Spain; Peloponnese, Epirus and Thessaly in Greece; Campania, Calabria, Puglia, Sicily in Italy; North, Centre and Alentejo in Portugal; Wales and Cornwall in the UK, etc.¹³ The peripheral access to communication infrastructures is also not limited to Europe, but a global phenomenon. According to statistics, Africa is, with an Internet penetration rate of 15.6 percent, the continent with the lowest access rates.¹⁴ Data show that in 2013 the Chinese metropolises Beijing and Shanghai had Internet access rates of 75.2 percent and 70.7 percent, whereas in the poor rural provinces Guizhou, Yunnan and Jiangxi the penetration rate was just 32.9 percent, 32.8 percent and 32.6 percent (China Internet Network Information Center 2014). Socio-economic and communicative peripheralisation are dialectically coupled. As long as there is a capitalist world society, there will be information inequality.

The state government of Lower Austria, dominated by the conservative ÖVP, formulated its perspective on the Waldviertel in the

Landesentwicklungskonzept 2004 (“Development Concept for the State 2004”), saying that the Waldviertel should establish itself as a region for second homes, short vacation stays, golf as leisure activity, and health and fitness tourism. It said that it should also foster an image of being a region of nature, forests, lakes and mysticism (Amt der Niederösterreichischen Landesregierung 2004:109). The Regionalmanagement Niederösterreich – Waldviertel (2010) [Regional Management Lower Austria – Waldviertel] has developed the strategy, “Strategie Waldviertel 2015+.” It suggests that the Waldviertel should specialize in renewable energy, health products, spa-, health-, eco-, and youth-tourism, offering opportunities in health, sports, and fitness, as well as organic products from agriculture. “The production of fairy tales has high season. ... The Waldviertel has become a fantasy hell of esoteric speculation. There is no story that one cannot ascribe to it. What once was the business of the church, has now become the business of the tourism industry” (Schandl 2004, translation from German).

Both concepts envision the Waldviertel as a tourism and agriculture region. In 2011, the median gross income in Austria was €24,843. The lowest gross income was achieved in the hotel and gastronomy sector at €9,464. The annual median income of an agricultural operation was €17,871, far below the median gross income (Rechnungshof 2012). The idea of positioning the Waldviertel primarily as a tourism and agriculture region must, therefore, be interpreted as an attempt to cement its status as a low wage region with high rates of exploitation and imperialistic dependence on the centres. The information and communication sector, which includes publishing, software development, media, telecommunications, data processing, webhosting, the production, rental, and sale of film and music, as well as information services, was one of the sectors with the highest annual median incomes: €39,029 (Rechnungshof 2012). The expansion of the information and communication sector is not taken into consideration in either of the regional concepts discussed above. Communication is allegedly seen as a strategy to include the population in the development of the region (Regionalmanagement Niederösterreich –

¹³ These are examples of regions that the EU classified as so-called convergence regions in the years 2007-2013 because their gross regional product was below 75% of the EU average.

¹⁴ <http://www.internetworldstats.com/stats.htm>, accessed on July 10, 2014.

Waldviertel 2010:11), but not as an economic sector for regional development.

The European Union, the Austrian national government, and the federal state government of Lower Austria support the strategy called “Standort Aktiv” in which capitalists are offered industrial real estate at no cost (see <http://www.standort-aktiv.at>). This initiative promotes itself in the following manner: “We offer you free commercial space in a good location with ideal conditions for relocating your business or starting a new business, free commercial real estate, production halls, as well as office and business space” (translated from German).¹⁵ This means that companies from outside the region are offered free land in the Waldviertel, which fuels the transfer of value out of the Waldviertel and the exploitation of low wage sectors within the international capitalist division of labour.

The existing regional development concepts for the Waldviertel are imperialistic and seek to cement the region’s imperialistic exploitation and marginalisation. The alternative is a socialist regional development strategy that strives for the independent and non-capitalist development of the Waldviertel, connecting this to a socialist information and communication strategy. Peripheral regions have the potential to think about and experiment with alternatives, as they usually have little to lose, and have already been pushed to the margins. The beginnings for an alternative economic development already exist in the Waldviertel.

In 1984, at the direction of the Ministry of Social Affairs under the leftist social democratic minister Alfred Dallinger, the Waldvierteler Schuhfabrik (Waldviertel Shoe Factory) was established as a self-managed company in Schrems (Gmünd County). The Shoe Factory evolved into the alternative company GEA, where 160 employees produce high quality shoes, furniture and mattresses. The goal is to work against outmigration, unemployment, the peripheral status of the Waldviertel, and the low wage situation. GEA founder Heini Staudinger says: “The cheaper destroys the cheap, after the cheap has

already destroyed the good. From the shoe industry to agriculture, from the air to the ground... – everywhere we find the same destructive game. To save one’s own dignity, it is imperative not to participate in this undignified game” (translated from German).¹⁶ The goal of GEA is for people to do well and for nature not to be destroyed.¹⁷

Another alternative economic project is the regional currency of the Waldviertel (<http://www.waldviertler-alternativen.at/>, <http://www.waldviertler-regional.at>). Euros can be exchanged at certain banks at a rate of 1:1. Three percent of the value go to social projects in the Waldviertel like the Tagesstätte Zuversicht, the Heidenreichsteiner Arche, and the Betriebsseelsorge Oberes Waldviertel. These offer, among other things, work projects for unemployed people of the region. The “Waldviertler” (as the currency is called) loses 3 percent of its value every year in order to encourage consumption. The currency can be used for purchases in certain, usually smaller, businesses in the Waldviertel. The goal is for the money to stay in the region and thereby not flow out through unequal exchange, thus encouraging production of goods in the Waldviertel. The project describes the social effects as follows:

As a consumer, you have a lot of power, perhaps more than you think possible. When you shop at a Waldviertel business, you give the people of the business work and income. When you buy using the W, you also give more people work and income because the W can only be used in the Waldviertel. This makes you the employer. You have a voice in deciding if people in the Waldviertel have work and income. When you pay with the Waldviertler, your purchasing power stays in the Waldviertel. [translated from German]¹⁸

16 „Das immer noch Billigere zerstört das Billige, nachdem das Billige schon das Gute zerstört hat. Von der Schuhindustrie bis zur Landwirtschaft, von der Luft bis zu den Böden ... – überall finden wir dasselbe destruktive Spiel. Zur Rettung der eigenen Würde ist es eine Notwendigkeit, in diesem unwürdigen Spiel wenigstens selber nicht mitzumachen“. <http://www.w4tler.at/geaneu/gea-home>, looked up on 13. May 2014.

17 <http://www.youtube.com/watch?v=3m8nbJjra2c>, looked up on 13. May 2014.

18 „Als Konsument und Konsumentin haben Sie viel Macht, mehr als Sie vielleicht für möglich halten. Wenn Sie bei einem Waldviertler Unternehmen einkaufen, dann geben Sie den Menschen in diesem Betrieb Arbeit und Einkommen. Wenn Sie mit einem Weinkaufen,

15 „Wir bieten Ihnen: Freie Gewerbeflächen in guter Lage mit optimalen Voraussetzungen für Betriebsansiedelung oder Neugründung, freie Gewerbeimmobilien, Produktionshallen sowie Büro und Geschäftsflächen“.

A regional currency like the Waldviertler is not enough to create a socialist alternative to capitalism because it does not operate in the area of production but in the circulation of commodities and the realisation of value in the form of money. However, in imperialistically dominated regions, a regional currency can help to weaken and push back exploitation and exclusion by the capitalist centres. At the same time, a regional currency offers no guarantee that the people working in the participating businesses will be paid a higher wage. For this, there would need to be a changed production environment and an end to private ownership of the means of production at the enterprise level. A socialist approach that would be interesting for the Waldviertel would be self-managed companies, or so-called co-operatives.

“Worker co-operatives are trading enterprises, owned and run by the people who work in them, who have an equal say in what the business does, and an equitable share in the wealth created from the product and services they provide” (Co-operatives UK 2010). A co-operative is characterized by the following qualities (Co-operatives UK 2012):

- 1) Open Membership: Work in a co-operative is voluntary.
- 2) Economic Democracy: All decisions are made by an assembly of all those working in the co-operative, or are delegated by this assembly.
- 3) Collective Property: The company and its finances belong to the workers together.
- 4) Autonomy and Independence: Co-operatives try to avoid dependence on banks and other external financiers.
- 5) Continuing Education and Information Politics: Co-operatives consider it important for workers to get further education; co-operatives inform the public about the advantages of self-managed companies.
- 6) Cooperation Among Co-operatives: Co-operatives try, as far as it is possible, to work

together to achieve mutual advantages.

- 7) Community Orientation: Co-operatives are interested in the common good of the local communities in which they are embedded. In Argentina, self-managed companies account for approximately 10 percent of GDP (Co-operatives UK 2010). The Mondragon Co-operative is the seventh largest company in Spain (Co-operatives UK 2010), with more than 74,000 workers in 2013 (Mondragon Corporation 2013).

Self-managed co-operatives are a response to the fact that in practice, democracy often confines itself to politics, and in reality, capitalist economies are corporate dictatorships. Co-operatives would not only bring economic democracy to all sectors of the economy in the Waldviertel, but could also strengthen economic independence from the imperialist centres. In regards to the information economy, self-managed software and hardware co-operatives could be established.

The Waldviertel is confronted with relatively poor and slow Internet services. It is not a true alternative if the Waldviertel tries to attract a global communication corporation or to become one itself. It is rather an alternative to build one's own networks that are not owned and operated by capitalist companies. An idea is to establish local and regional free networks offered by non-commercial, self-managed companies or local communities that are oriented on the common good. These technologies are open, free WiFi networks that are connected to so-called mesh-networks by mesh-technology. The idea is not to make a profit from Internet access, but rather to provide free access to as many people as possible in order to bridge the digital gap, promote communication among people and community life through information services. Examples of free wireless networks are Funkfeuer in various parts of Austria, Freifunk in Germany, and Free2Air in East London. In order to expand the coverage areas, the operators of the free networks use so-called WiFi antennas that strengthen the signal. There are, for example, home made WokFi antennas (Wok + Fi, see <http://en.wikipedia.org/wiki/WokFi>) where a wok or other kitchen utensil is repurposed into an antenna. These

dann erreichen Sie aber auch, dass der W weiteren Personen Arbeit und Einkommen gibt, denn er kann wieder nur im Waldviertel ausgegeben werden. Sie sind also Arbeitgeber und Arbeitgeberin, Sie bestimmen mit, ob Menschen im Waldviertel Arbeit und Einkommen haben. Wenn Sie mit dem Waldviertler bezahlen, dann bleibt Ihre Kaufkraft im Waldviertel“. <http://www.waldviertler-regional.at/index.php?cont=2#2>, looked up on 13. May 2014.

WokFi antennas typically can cover an area of three to five kilometres, sometimes up to ten. The construction and distribution of efficient WiFi antennas is a gap that the Waldviertel could fill. Innovative co-operatives could also be formed that manufacture kitchen utensils and WiFi antennas at the same time. For this there would need to be cooperation between the information, communication, and technology sector and the iron and steel industry, especially for making use of recycled iron and steel. Free networks are based on primary connections to the Internet. This is why local Internet providers in the Waldviertel, such as W4NET (<http://www.wvnet.at>), should be converted into non-commercial, worker controlled, socialist non-profit co-operatives.

The creation of an alternative transport and communication infrastructure should not be guided by the aim of making profits, but by dissociating transport and communication from the logic of commodities and profit so that they become common and public goods. Many young people have the desire for self-determination in the knowledge economy and alternative forms of life. The Waldviertel could be an attractive region for many of them. An information economy beyond the commodity, profit, markets and competition in global villages and global regions is a desirable perspective. Global villages that are part of alternative economic structures integrate common goods, alternative forms of energy, renewable resources, common activities, co-working, local co-operation, computer technologies, computer networks, self-determination, creativity, new forms of how technologies, software and hardware are created, sustainable life, collective learning and research, critical and commons-oriented education, and an engaging and engaged culture (Nahrada 2011). Global villages and regions have potentials for a life beyond capitalism and the commodity form. A communalised or self-managed communication infrastructure can be part of commons-based local structures in global villages so that it is attractive for young people, to live and work in regions such as the Waldviertel. Socialist global villages do not necessarily leave the Waldviertel as “one of the last reservations of boredom in Central Europe” (Schandl 2004, translation from German), but rather combine

the need for calmness with the needs for community, activity, creativity, co-operation, communication, culture, education, social encounters and movement. Global villages and regions are neither pure acceleration nor pure deceleration, neither pure shortwhile nor pure longwhile, but rather the possibility for and a field of experimenting with how humans can self-determine their time and overcome capitalism’s temporal, life and economic structures.

Software companies typically focus on creating software for other companies and private users. They sell software in order to make a profit. By contrast, a software co-operative does not pursue the idea of creating software to accumulate capital, but to produce software that promotes the common good. Typically, software cooperatives produce free software (see http://en.wikipedia.org/wiki/Free_software) whose programming code is open and can be re-used and further developed by others. Software companies like Microsoft, Oracle SAP, or Adobe have patents on software and encrypt the source code so that they can secure a monopoly on the programme and can sell it. Software co-operatives are a socialist development opportunity for Waldviertel. The region could produce and make available software for specific local purposes.

Two examples of software co-operatives are Co-operative Web (<http://www.web.coop>) and Software Coop (<http://www.web.coop>). Co-operative Web is a software co-operative in Birmingham: “We are a special type of co-operative called a ‘worker co-operative,’ which means that all the people that work for us own the business, make the decisions and generally run the company. This means you won’t find a more committed bunch of people to help you with your computer problems” (Co-operative Web 2014). Software Coop is a worker controlled software co-operative in Great Britain with four members who create and host websites, and program free software.¹⁹ “In essence, we are doing this to improve the world and the world-wide web by delivering better software while earning a fair living” (Software Co-op 2014).

Free software should also be free in the sense that it supports the well-being of all humans.

¹⁹ See <http://workerco-operatives.blogspot.co.uk/2009/10/case-study-softwarecoop-llp.html> and <http://www.software.coop/info/>.

Software for fighter planes is therefore also not free if its source code is freely available. Based on William Morris (1884) we can say that software can only be free if it does not support destruction and meaningless labour, but only if it supports the common good, the well-being of all, creativity, self-fulfilment and peace.

The Internet has given rise to a new gratis culture. Gratis access does not mean to automatically transcend the commodity form, as capitalist “social” media such as Facebook that turn personal data into a commodity. Does one have to give away free software and culture as a gift? The problem is that humans need income in order to survive as long as money has not been abolished. The dependence on this general commodity can surely be reduced step-by-step, but not tomorrow. In the case of the production of free software, open hardware, open culture and media, information can form examples for local and non-profit organisations and purposes can be offered without payment, whereas one can charge an access fee for other forms of use. The resulting revenues can be collectively owned and used without individual profits. Further ideas that can be considered are donation models, financial support by taxes, foundations, or a percentage share of all money that is exchanged into the local currency.

It is an important goal to operate without money and exchange. This goal may however only be attainable step-by-step. Already Marx stressed that self-managed companies are nuclei of an alternative, post-capitalist economic order, but cannot get immediately rid of necessities posed by capitalism:

The cooperative factories run by workers themselves are, within the old form, the first examples of the emergence of a new form, even though they naturally reproduce in all cases, in their present organization, all the defects of the existing system, and must reproduce them. But the opposition between capital and labour is abolished here, even if at first only in the form that the workers in association become their own capitalist, i.e. they use the means of production to valorize their own labour. These factories show how, at a certain stage of development of the material forces of production, and of the social forms of production corresponding

to them, a new mode of production develops and is formed naturally out of the old. [Marx 1991:456]

Since 2005 the term “social media” has been used a great deal to refer to the use of blogs (for example, Blogspot, Wordpress, Tumblr), wikis (such as Wikipedia), social networks (such as Facebook, LinkedIn, VK), microblogs (for example, Twitter, Weibo) and platforms for the sharing of user generated content (such as YouTube, Vimeo, Instagram, Pinterest) (Fuchs 2014b, 2015). The problem with social media is that they are primarily run by California-based companies that turn the personal information of the users into a commodity, which they use to facilitate targeted advertising on the profiles of the users (Fuchs 2014a, 2015). Social media, such as Facebook and Google, are not social communications companies, but rather are the biggest advertising companies of the world. They are oriented toward making monetary profits by exploiting the users’ digital labour (Fuchs 2014a, 2015). Most of these California based companies use tax loopholes and a complex structure of subsidiaries spread across the globe in order to pay little or no tax in Europe and other parts of the world. Thus, there is a strong outflow of value from the countries and regions where social media are being used. The revelations of Edward Snowden make clear that there is a security-industrial-complex in which state security services work together with private security firms such as Booz Allen Hamilton, and communications companies like AOL, Apple, Facebook, Google, Microsoft, Paltalk, and Yahoo! to monitor the contents and destinations of citizens’ communications.

The question arises, which role the state can play for advancing socialist alternatives to the capitalist Internet. I have suggested in another paper a system, in which the license fee is transformed into a media fee that is a kind of progressive tax paid not just by citizens, but first and foremost by companies. It could be combined with participatory budgeting (Fuchs 2014c, see also the video of my inaugural lecture at the University of Westminster: <http://vimeo.com/97173645>). Such measures could fund a citizen cheque that provides all citizens with an annual amount of money (e.g. £100) that they have

to donate to non-commercial media project. The media fee could provide a finance basis for alternative projects in the realms of hardware, software, Internet platforms, social media, journalism, and Internet infrastructure. Another possibility could be that public institutions such as the Austrian Broadcasting Corporation ORF offers public Internet services. But today on the one hand the ORF Law and EU laws pose limits because one sees public Internet services as competition for capitalist IT companies (Fuchs 2014c). On the other hand such projects should be realised under left-wing governments. Right-wing administrations tend to privatise and commodify public infrastructures. If they introduce gratis media services then it is likely that they come along with new forms of commodification. Edward Snowden's revelations have shown that right-wing governments tend to monitor communication services because they hold the false consciousness that surveillance can prevent terrorism. It is therefore a danger to civil rights if right-wing governments provide Internet services that process personal data. In countries that have left-wing governments that want to protect civil rights, public Internet services could work. The danger of state surveillance is smaller for Internet services that hardly process personal data. It would make sense that the ORF develops and provides a non-commercial YouTube and that civil society organises a non-commercial Facebook and non-commercial Wi-Fi networks and get state support in the form of the participatory media fee.

But Austria is a post-National Socialist society, in which the political left is extremely weak and far-right parties such as the Freedom Party (FPÖ) regularly achieve voting shares above 20 percent at nationwide elections. Austria's Communist Party KPÖ has since 1959 not been represented in Austria's parliament. It has thus far not changed its name that has dissuasive effects on regular citizens and does at nationwide elections since a long time not achieve more than 1 percent of the voting share. Austria is not a good country for left-wingers, but rather a country of Nazis and Catholics. The writer Thomas Bernhard, who lived in Austria, characterised Austrian society and its people in a satirical manner the following way:

The Austrian head thinks always only Nazi-Catholic. ... On Vienna's streets, we in the end only see Nazis and Catholics, who present themselves at one time more as Nazis, and at other times more as Catholics, mostly however as both. ... In Austrian newspapers we read something that is either Catholic or National Socialist. All of this is, we must say, *the typically Austrian*. [Bernhard 1988:292]²⁰

A public left-wing Internet strategy, in which the state plays a progressive role, is not likely to be possible at the moment in Austria and should therefore be an important part of the left's renewal and struggles.

So, there are many reasons why we urgently need alternatives to capitalist Internet platforms. Currently, there are few initiatives. Wikipedia is the only widely used non-commercial civil society-operated Internet platform. The Waldviertel could become a region in which self-managed social media are created and made available. These kinds of media should not aim to make profits, but to really promote communication and community among people. On social media platforms, users create their own social use-values. Thus, they are the workers of social media. Today this work is largely heteronymous and is exploited by capitalist corporations such as Google and Facebook. Self-management of social media by the workers means self-management of platforms by the users. Alternative social networks are privacy-friendly, advert free, and do not turn personal information into a product. They can contribute to community building on the local, regional, and global level. It is conceivable, for example, that a social network can be created through which workers, employees, and independent contractors in the Waldviertel can communicate about their work experiences, and through which contacts, communication, and partnerships can be established with workers in other peripheral regions of global capitalism. In this way people in

20 Author's translation from German: „Der österreichische Kopf denkt immer nur nationalsozialistisch-katholisch. [...] Gehen wir in Wien auf die Straße, sehen wir letzten Endes nur Nationalsozialisten und Katholiken, die sicher einmal mehr als Nationalsozialisten geben, einmal mehr als Katholiken, meisten aber als beides zugleich [...] Lesen wir etwas in den österreichischen Zeitungen, so ist es entweder katholisch oder nationalsozialistisch, das ist dann, müssen wir sagen, *das Österreichische*“.

peripheral regions could help each other by communicating about the possibilities and challenges of creating autonomy from the imperialist centres, and about the similarities and differences of the social situations of the various regions of the capitalist world system.

The goal of socialist co-operatives is a co-operative society with mutual aid, without capital, money, exploitation, or imperialism. The gift, free agreement, and voluntarism replace exchange, coercion, and wage-labour. The problem is that in the current reality, self-managed companies are entangled into the global and trans-regional economy of exchange because it is difficult to produce all necessary products in one region. Thus, for the time being, socialist co-operatives are tied into the economy of exchange and money even though their goal is to overcome these. How can software and hardware co-operatives offer their workers a living if they are not oriented toward profits and so not sell anything, but rather, make software and Internet access available for free? Regional networks that offer free Internet access can be created whose operations are combined with the production and sale of WiFi-antennas and kitchen utensils, sold at a trans-regional level. It is important that these co-operatives do not make an individual profit, but that earnings are socialized in the neighbourhood, the municipality, and the region. For both software and hardware production, one can experiment with new forms of financing: donation models, crowd funding, membership models, financing through a percentage charge which, when converting money into the regional currency, is automatically used as a donation for software and hardware co-operatives, etc. The important difference is that co-operatives do not become profit oriented, but rather, pay fair wages and either have no capital surpluses, or, if they do, make these available to the community.

The communications infrastructure of the Waldviertel is based largely on transnational capitalist businesses like Facebook, Google, Microsoft, Telekom Austria, T-Mobile (Deutsche Telekom), Drei (Hutchinson Whampoa), UPC (Liberty Global), or Tele 2. These corporations accumulate capital by treating personal information, communications networks, and software as commodities. By

using these capitalist communications services, there is a transfer of value out of the Waldviertel and other peripheral regions of global capitalism. Local and regional capitalist communications companies are not a true alternative, as they are also based on the exploitation of the workforce.

A step in the right direction of reducing and alleviating the peripheral status of regions like the Waldviertel, and creating a socialist world system that disables the mechanisms of capitalist and imperialist exploitation through unequal exchange and the outflow of value, is to create socialist co-operatives in all areas of the economy. In this way, regional economic structures are created that are connected to each other globally, are controlled by the workers, and foster the common good. Free wireless networks, software co-operatives, and alternative social media can be the seeds of a socialist information society that challenges and struggles against capitalist control of communications. Excluded and imperialistically exploited regions like the Waldviertel are especially well suited for the attempt to start alternatives that struggle against the capitalist communication society and the capitalist Internet, and replace them with a socialist world information order and a socialist Internet.

The idea to organise communication infrastructures, software and hardware in a non-capitalist manner is not limited to single regions such as the Waldviertel, but can be applied in all cities and regions as a communist strategy of transformation. A well-known European example is Tallinn (Estonia), where the municipality provides gratis Wi-Fi since 2005 with the help of 30 hotspots.²¹ Such a communalisation and de-commodification of public infrastructures was further extended in 2013 when Tallinn became the first European city that offers gratis public transport.²²

Info-communist projects are however likely to face the resistance of the local capitalist class. A good example is New Orleans. After hurricane Katrina

21 <http://www.visitestonia.com/en/things-to-know-about-estonia/facts-about-estonia/wifi-in-estonia>, accessed on July 10, 2014.

22 <http://www.tallinn.ee/eng/tasutauhistransport/Tallinn-Free-Public-Transport>, http://www.tallinn.ee/eng/tasutauhistransport/Tallinn-Free-Public-Transport-Expanded-to-Trains?&filter_otsing_uudis_rubriik_id=160, accessed on July 10, 2014.

the city's population decreased from 437 186 in July 2005 to 158 353 in 2006 (Los Angeles Times 2006). In order to make settlement in New Orleans more popular, the Democratic mayor Ray Nagin suggested at the end of 2005 among other things an info-communist strategy: a communal local Wi-Fi that can be used without payment²³. His idea faced huge resistance by local telecommunications corporations such as Bell South that attempted to boycott the plan. The example shows that info-communist projects must be prepared to face capitalist resistance and to wage class warfare against capitalist companies.

Alternatives to capitalism are possible. In the 21st century, such alternatives have to take into account the potentials for regional development, ecological and social sustainability, new forms of co-operation and community, the information economy, and desires for alternative forms of life.

References

Amin, Samir

- 1974 Accumulation and Development: A Theoretical Model. *Review of African Political Economy* 1(1):9-26.
- 1976 Unequal Development. An Essay on the Social Formations of Peripheral Capitalism. New York: Monthly Review Press.
- 1997 Capitalism in the Age of Globalization. The Management of Contemporary Society. London: Zed Books.
- 2010 The Law of Worldwide Value. New York: Monthly Review Press.
- 2011 Ending the Crisis of capitalism or Ending Capitalism? Oxford: Pambazuka Press.

AMS Arbeitsmarktdaten

<http://iambweb.ams.or.at/ambweb/>.

Amt der NÖ Landesregierung

- 2004 Projekt w.i.N. Strategie Niederösterreich. Landesentwicklungskonzept. Sankt Pölten: Amt der NÖ Landesregierung.
- 2010 Kreativwirtschaft in Niederösterreich. Sankt Pölten: Amt der NÖ Landesregierung.

Arbeitsmarktservice Österreich (AMS)

und Arbeitsmarktdaten. Electronic document, <http://www.ams.at/ueber-ams/medien/arbeitsmarktdaten>.

Bernhard, Thomas

- 1986 Auslöschung. Ein Zerfall. Frankfurt am Main: Suhrkamp.

Bloch, Ernst

- 1985 [1935] Erbschaft dieser Zeit. Werkausgabe Band 4. Frankfurt am Main: Suhrkamp.

China Internet Network Information Center

- 2014 Statistical report on Internet development in China. Beijing: CINIC.

Co-operative Web

- 2014 Ethics. Electronic document, <http://www.web.coop/about/ethics>, accessed 14 May 2014.

Co-operatives UK

- 2010 Worker Co-operative Code of Governance. http://www.uk.coop/sites/storage/public/downloads/worker_co-operative_code_2nd_edition_0.pdf.
- 2012 The Worker Co-operative Code. <http://www.uk.coop/workercode>

Der Standard

- 2014 Einkommen: Ungleichheit in den Ballungszentren steigt. May 1 2014. Electronic document, <http://derstandard.at/1397521871450/Ungleichheit-in-den-Ballungszentren-steigt>.

Fuchs, Christian

- 2014a Digital Labour and Karl Marx. New York: Routledge.
- 2014b Social Media: A Critical Introduction. London: Sage.
- 2014c Social Media and the Public Sphere. *tripleC: Communication, Capitalism & Critique* 12(1): 57-101.
- 2015 Culture and Economy in the Age of Social Media. New York: Routledge.

Gill, Rosalind

- 2002 Cool, Creative and Egalitarian? Exploring Gender in Project-Based New Media Work in Euro. *Information, Communication & Society* 5 (1):70-89.

²³ <http://www.corp-research.org/e-letter/broadband-socialism>, <http://www.macworld.com/article/1051053/neworleans.html>, accessed on 10. Juli 2014.

- 2006 *Technobohemians or the New Cybertariat?*
Amsterdam: Institute of Network Cultures.
- Hesmondhalgh, David and Sarah Baker
2011 *Creative Labour. Media Work in Three Cultural Industries*. London: Routledge.
- Komlosy, Andrea
1988 *An den Rand gedrängt: Wirtschafts- und Sozialgeschichte des Oberen Waldviertels*. Wien: Verlag für Gesellschaftskritik.
- 2011 *Globalgeschichte. Methoden und Theorien*. Wien: Böhlau.
- Los Angeles Times
2006 Storms Also Shifted Demographics, Census Finds. June 7, 2006. <http://articles.latimes.com/2006/jun/07/nation/na-census7>
- Luxemburg, Rosa
1913 *The Accumulation of Capital*. London: Routledge.
- Marcuse, Herbert
2002 *Nachgelassene Schriften: Philosophie und Psychoanalyse*. Lüneburg: zu Klampen.
- Marx, Karl
1991 [1894] *Capital*. Volume III. London: Penguin.
1993 [1857/1858] *Grundrisse*. London: Penguin.
- Mies, Maria
1998 *Patriarchy and Accumulation on a World Scale*. London: Zed Books.
- Mondragon Corporation
2013 *Annual Report*. Electronic document, <http://www.mondragon-corporation.com/wp-content/themes/builder/informe-anual-2013/pdf/en/annual-report-summary-version.pdf>.
- Morris, William
1884 *Useful Work Versus Useless Toil*. In *The Collected Works of William Morris*. Volume 23: *Signs of Changes: Lectures on Socialism*, 98-120. Cambridge, MA: Cambridge University Press.
- Müller, Gabriele
2009 *Krisenregion Waldviertel*. *Arbeit & Wirtschaft* 11/2009, <http://www.arbeit-wirtschaft.at/servlet/ContentServer?pagename=X03/Page/Index&n=X031.a200911.a&cid=1258991399228>.
- Müllner, John
1997 *Döllersheim. Die entweihte Heimat*. Electronic document, http://www.doellersheim.at/doeller-sheim/Das_Buch/Dollersheim/dollersheim.htm, accessed 14 May 2014.
- Nahrada, Franz
2011 *Globale Dörfer: Neue Kraft, Gestalt und Attraktivität durch Kooperation und Vernetzung dörflicher Lebensräume*. http://www.dorfwiki.org/wiki.cgi?InternationaleDorfkonzferenz_2011/ReferatNahrada.
- OECD STAN
OECD Database for Structural Analysis, <http://stats.oecd.org/Index.aspx?DataSetCode=STANI4>.
- Rechnungshof
2012 *Allgemeiner Einkommensbericht 2012*. Wien: Rechnungshof.
- Regionalmanagement Niederösterreich – Waldviertel
2010 *Strategie Waldviertel 2015+. Ideen und Maßnahmen. Zum laufenden Strategieprozess*. <http://static.rm-waldviertel.at/21/download/chbildung/strategiebrochure2010-end.pdf>
- Schandl, Franz
2004 *Von der Industrie zur Fantasy*. *Abseitige Anmerkungen zur Entwicklung einer abseitigen Region: das Waldviertel*. <http://www.streifzuege.org/2004/von-der-industrie-zur-fantasy>.
- Software Co-op
2014 *About Us*. Electronic document, <http://www.software.coop/info/>, accessed 14 May 2014.
- Springer, Gudrun and Michael Simoner
2014 *Polizei, Post, Gerichte: Zugesperrt und zusammengelegt*. *Der Standard Online*. 22. April 2014. <http://derstandard.at/1397521195257/Polizei-Post-Gerichte-Zugesperrt-und-zusammengelegt>
- Statistik Austria
2011 *Census 2011 Niederösterreich*. Wien: Statistik Austria.
- Wallerstein, Immanuel
2000 *The Essential Wallerstein*. New York: The New Press.
2004 *World-Systems Analysis. An Introduction*. Durham: Duke University Press.
- Zellinger, Peter
2013 *Mobilfunk und Internet: Bitte warten*. *Bezirks Blätter, Waidhofen an der Thaya*. Electronic document, <http://www.meinbezirk.at/waidhofen-an-der-thaya/wirtschaft/mobilfunk-und-internet-bitte-warten-d733021.html>.