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Driving Away: A Macro and Micro View of the Prague Car Transit System

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Abstract:

The purpose of the this study is to understand the rise in auto traffic in the city center of Prague since the Velvet Revolution and to use this understanding to make my own recommendations for policies I believe the city should enact to limit traffic in the macro and micro scale. The theoretical framework was created through observations of three specific streets and through interviews with urban planning experts. Although there are many different strategies for calming down traffic in Prague, the most important are to execute long term planning and to focus on limiting the numbers of cars in the city center rather than just focus on reorganizing them.

Acknowledgments:

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Introduction:

Since the Velvet Revolution in 1989, car ownership and use has skyrocketed in Prague. This reality has led to conflicts between cars and pedestrians within the center. To gain a better understanding of why there are so many cars in the city center, I will look at the topic through the macro and through the micro lenses. Through the macro lens, I will look at specific reasons why traffic has increased and citywide solutions to calm down traffic. Through the micro lens, I will look at how these problems manifest themselves on three busy roads throughout the city. And finally I will synthesize these findings into my recommendations for how to limit traffic in the city as a whole and how to calm down these busy streets.

Theoretical Framework:

One academic describes post-Soviet urban development, from 1989 to 2008, as moving to the "far right from the far left" through intense "privatization" and "decentralization." (Stanilov, 2007). The same can be said for the development inside and outside of Prague during this time. For instance, the rise in private development outside the city of Prague dramatically increased car ownership where the amount of cars per person doubled between 1990 and 2005 (*The Yearbook of Transportation Prague 2011*). The city reacted to this rise by maintaining wide roads to better accommodate car travel in and around the city center. Notable examples include Legarova, Smetanovo nábř, and Milady Horákové. These streets are similar in that they have multiple lanes for cars and are often busy, but they differ in that Legarova runs through the center of the city, Smetanovo nábř runs along an embankment, and Milady Horákové runs outside the city center where, where one entrance of the Blanka tunnel will be located. They also differ in that they are all in different parts of Prague with different local governments.

This expansion of streets for cars came at the cost of reduced pedestrian access as more cars and wider roads reduce a pedestrian's ability to cross the street easily, which causes rifts between sections of the city where these wide roads pass through. Even though these streets have existed in this form for years, there is not much literature on how these roadways affect pedestrians and motorists. I will seek to understand why citywide traffic is has grown so large, what policies exist to fix them, how cars and pedestrians interact in these three busy streets, how local experts believe these roads should be changed, and how I believe these roads should be changed.

Methodology:

To better understand car traffic in Prague, I spoke with Dr. Ludek Sykora, Professor at Charles University in Prague, who recommended that I focus my research in a macro and micro picture. The macro picture would consist of the present situation of traffic throughout the city center while the micro picture would focus on three roads he deemed would be good to focus on because they represented different roads in different parts of Prague where there would be conflict between drivers and pedestrians. From there he recommended experts for me to speak with who could describe the macro picture of the citywide traffic situation and who could also describe the micro picture on a street by street basis.

For the macro picture, I interviewed experts as well as read several articles Professor Sykora recommended. The focus of the macro picture was more related to Prague and due to there being a limited amount of scholarly articles in English, I focused on the interviews as being

where I would find data to paint a the macro picture of the present situation and ways to change it.

For the micro picture, I observed the three streets previously mentioned and spent approximately one hour at each location. (Note: due to a misunderstanding, I originally focused my observation on Dvorakovo Nabr, instead of Smetanovo Nabr, but I did focus on the Smetenovo Nabr afterward.) Using what I observed, I then asked my seven interviewees for their thoughts on the current macro picture as well as on a particular road, if they had specific knowledge of the road, such as being in local government.

I then distilled what I learned from my observations and from the interviews into four sections, two of which are entirely macro, one is micro and one is a synthesis of both. The macro sections are the General Problems and Potential policy solutions.

The initial focus of the study was to be on conflicts between pedestrians and car drivers. However, as I interviewed more and experts, it became apparent that the main cause of conflict is the amount of cars in the city. In turn this paper focuses on the macro level on why the city has so many cars and on what solutions could change that. I also focus on the micro picture in regard to the three above mentioned streets where I observed and interviewed experts to gain an understanding on why they are busy, what changes the experts believe will work, and realistically, how these streets will change in the future. The next section is a comparison and an evaluation section where I synthesize the macro and micro problems and use them to make my own recommendations for how to limit cars on these streets.

Ethics/Bias:

Though I made it an issue to be as unbiased as possible, my own values most likely came through in the interview questions and observations. I call myself an environmentalist and I believe that the number of cars should be kept to the absolute minimum in cities. I have also interned at an environmental organization and am on numerous environmental email lists. These beliefs and experiences make it so no matter how objective I am, I will be skewed towards the side of having fewer cars in the city. Although all of my interviewees believe this point also, this bias might have manifested itself in me failing to ask follow questions that would have challenged my interviewees.

In addition, due to the constraints of only having three weeks for research and by primarily relying on interviews for data, there are limits to my suggestions in terms of being able to challenge them. Some interviewees at the end of the interview cycle proposed ideas that were not proposed by other interviewees, which meant that although these ideas were interesting there is no debate around them, not because there is full agreement on those specific ways to limit traffic.

I also have to keep in mind that some of my interviewees are in or were government and that I need to be sensitive to past or current policies and their ability to talk about them.

Analysis:

The following section is organized by dividing the issue of traffic into macro and micro categories with a synthesis where I compare and evaluate these three roads in the macro and micro context. The macro category is composed of general city-wide issues relating to car transport in the Prague and of policies to calm traffic in the city. The micro section is made up of

the three case studies which include Legerova street from the Nuselský most to Muzeum, Smetanovo Nabrezi, and Milady. Horákové from U Sparty to Čechova.

Macro: General Problems Across All Localities-Why there is traffic

The following section is a list with descriptions of the main problems across the city center of Prague with respect to car traffic. These problems include the post communist country mentality relating to drivers and traffic engineers, cars being more comfortable than using mass transit, pressure from auto manufacturers, the problem with lowering a street's capacity for cars making traffic elsewhere, very small biking infrastructure, and no new urban plan since 1999.

Post-Communist Mentality for Drivers and Traffic Engineers. Since the Velvet Revolution, Prague citizens have embraced the use of cars. This thinking manifests itself in terms of the amount drivers and how traffic engineers design roads. Architect and professor, Igor Kovacevic, describes how after the Velvet Revolution, cars became a "very important part of the social status" of Prague residents (Meyers, personal communication, April 29, 2015). This description goes to the heart of a post socialist country wanting the spoils of a capitalist system. Professor Maier also mentions the importance of the mentality of traffic engineers. He describes them as being entirely focused on cars traffic and not on pedestrian traffic (Meyers, personal communication, April 29, 2015).

The Magistral is part of an international highway system that passes through the city center. As Petr Kucera illustrates:

Prague is on one of the most important European highways form Berlin to Vienna. It's one of the most important west east highways in European Union so there is the transport

from this highway. It's not from the suburbs, its from Berlin or Vienna because there is no way around the center (Meyers, personal communication, April 22, 2015).

Since there is no way around it, cars drive through the city center.

Cars are more comfortable for people in the suburbs than taking mass transit or biking. This problem stems from the fact that "highest intensity development [of the suburbs] occurred at places, which have the poorest linkage to Prague" (Meyers, personal communication, May 29, 2015). This problem also stems from the fact there are no fees to enter the city by car and by the fact that there are fewer than 10,000 parking spaces than there is a need for to park a bike or car at a metro or train station (Meyers, personal communication, April 27, 2015). This means that even if people want to use public transportation, they have no easy way to do so.

The large presence of auto manufacturers ties car production to the economy and to the identity of the Czech Republic. The Czech Republic is one of the "biggest producers of cars in the world," producing the 16th most vehicles in 2014 while being the second smallest country in the top 20 (Meyers, personal communication, April 29, 2015, *International Organization of Motor Vehicle Manufacturers*). The presence of the car industry is also quite invasive. One can see this in the Skoda ad on the National Theater. The National Theater is currently undergoing renovations on its exterior, and the Skoda auto manufacturing company donated money for these renovations. For making this large donation to the National Theater, the company is able to put an advertisement that stretches almost the length of the side of the whole building. Any other building and one can see it as just as an ad, but this advertisement is more than that. There are few other buildings as important to the identity of Czech citizens as National Theater. This ad displays not only the power of auto manufacturing companies, but also their

pervasiveness in society and their attempted if not actual association with the Czech national identity.

Lowering street capacity can result in more traffic on neighboring streets. This is the dilemma many planners face when trying to calm streets. The problem is that calming traffic on one street does not mean that those cars will not just drive somewhere else. Architect, Petr Kucera describes traffic as "blood in the veins" where if you stop blood in one area, it will just go a different way (Meyers, personal communication, April 22, 2015). This is an argument that people can use against calming busy streets.

Lack of large bike infrastructure in the city center. Professor Maier describes the current biking strategy as being "ridiculous" because the city "built biking lanes not for everyday movement on bikes, but for recreational movement, so while Prague is covered by network of biking trails, it's really symbolic" because "if you want to take your bike to your office it's a different story" (Meyers, personal communication, April 29, 2015). In addition, architect, Milota Sidorova, argues that due to the cobblestones throughout the center, biking is quite uncomfortable where you need mountain bike to be able to bike in the city (Meyers, personal communication, April 30, 2015). The overall point they raise is that it is not easy to ride one's bike in Prague's city center.

There is no current urban plan with the last plan being approved in 1999. One complaint across almost all interviewees is the fact that there is no new urban plan for the city. The previous one was only meant to lead the city for 15 or 20 years and they argue the city needs a new plan (Sykora, 2011). However, the city cannot agree on a plan that will be approved by the urban planners and by the city council. Petr Kucera argues that this lack of agreement on a plan

stems from the country having five different regimes over the course of 100 years (Meyers, personal communication, April 22, 2015). Milota Sidorova argues along the same line saying,

You cannot avoid this in central Europe. I don't think we are able to create some kind of plan that stays unshaken or independent from political volatility. It's, of course, not ideal, but I am realistic enough that we will always somehow have to go with the political power (Meyers, personal communication, April 30, 2015).

Their overall point is that it is fault with the system due to a history of not being many different regimes in country.

Macro—Policies to Calm City Traffic

City traffic infrastructure is quite complex, which means that there are many different ways to solve the same problem. These problems can be small and large. I will focus on just a few of these policy recommendations and on arguments for why they can be successful and why they cannot be successful. They include creating and carrying out a study to determine the cost of cars in Prague, completing a city ring, with focus on Blanka Tunnel, narrowing roads by reducing lanes, adding more public transport lines, increasing regulations while at the same time constructing parking lots and bike racks at metro and train stations outside the city center, creating a city plan, improving bike infrastructure, and creating more shared spaces.

Create and carry out a study to measure the cost of car travel in the city center. This plan is most highly regarded by Professor Kovacevic. He believes that one reason why public perception is so pro-automotive transportation is because there have been no studies to measure its impacts (Meyers, personal communication, April 29, 2015). He trusts that once people understand what it means to drive a car compared to any other form of transport, in term of health for instance, they will realize how it is unsustainable to have all the current car drivers in

the city center (Meyers, personal communication, April 29, 2015). He sums it up by saying "without figures, we cannot speak" (Meyers, personal communication, April 29, 2015).

Complete the city ring. One popular solution touted by lawmakers is the design of the city ring. They argue that traffic is bad because people, whose final destination is not the city center, have to drive through it on the Magistral (Meyers, personal communication, April 22, 2015). Their solution is to construct inner and outer ring roads around the city of Prague where these drivers can avoid the city. This idea is very divisive where proponents, such as Milota Sidorova, argue that it will reduce traffic enough to alter the Magistral, while opponents, such as Marek Belor, argue that the ring road would bring more cars into the city because there would be a larger car capacity, which would make it easier for people to enter the city by car (Meyers, personal communication, April 20, 2015). The opening of Tunnel Blanka will test the further viability of this concept.

Open Tunnel Blanka. The purpose of Blanka is to add another section to the ring road along from Střešovice where there is an existing tunnel to Troja, which is in the north east of Prague (Fraňková, 2014). The main purpose of this tunnel, or rather three different tunnels, is to relieve traffic in the center of the city by giving drivers an alternative route instead of through the Magistral. However this tunnel does not connect to another part of the ring because there is none in the north east of Prague. Although this is a contentious project, many who were against its construction are looking to see what happens once it opens later in 2015, such as Jakob Hurrle (Meyers, personal communication, April 27, 2015). At this point, the debate is not about whether or not the city should open the tunnel, but how effective it will be in reducing traffic throughout the city and, particularly, on the Magistral. Petr Kucera is one of those who believe that it can be

beneficial for the city, but only if they plan it well (Meyers, personal communication, April 22, 2015).

Others argue that Blanka will add more traffic to the city. Even with Automat finding that 20% of traffic from the Magistral will be redirected to the tunnel, Marek Belor remains skeptical (Meyers, personal communication, April 22, 2015). His reasoning comes from historical experience. He compares Blanka with the Mrazovzka tunnel, part of the southwest ring, where Automat found that traffic doubled on streets around the tunnel, even though it was supposed to calm traffic in the area (Meyers, personal communication, April 20, 2015). Jakob Hurrle, also skeptical about the proposed positive effects, talks about the same thing happing with the Troja bridge where even though it adds "four new lanes of for traffic," it actually makes traffic worse in the area around Prague 7 (Meyers, personal communication, April 27, 2015). In effect, their point is that there is potential that since this tunnel will create a new, easier route, it will attract more cars to the city center because there will be a greater capacity for cars.

Another point of view believes that the tunnel will have no effect due to its location. Professor Perlin believes that Blanka will have no effect on reducing traffic on the Magistral because people using the tunnel are also people who are going into the city center, and they will not take the extra 10 or 15 minutes to go to Prague 7 or Prague 5 when they are trying to go to Prague 1 or Prague 2 (Meyers, personal communication, April 21, 2015).

Make it harder to enter the city center by car, but make it easier for people to come to the city center by mass transit. The experts talk about how these overall strategies need to go hand in hand. In particular, Professor Radim Perlin, describes this system as needing a negative policy or regulation to stop people from driving into the city while at the same time needing a positive "offer" to make it less "painful" for people to switch to public transport

(Meyers, personal communication, April 21, 2015). In regard to the regulations, he recommends adding a tax on drivers to enter the city, reducing parking spaces for nonresidents, and reducing the speed of traffic by narrowing streets and limiting the speed limit (Meyers, personal communication, April 21, 2015). His "offer" recommendations all revolve around having a "very good transport system" where it is not only safer, more comfortable, and faster, but the norm to use it in society (Meyers, personal communication, April 21, 2015). His main focus is on making it "less comfortable" to go into the city by car while at the same time, make it "more comfortable" to use the public transit system (Meyers, personal communication, April 21, 2015). In addition, the main way of making it easier to use the public transit system is to increase parking spaces at metro stations and train stations to serve as hubs (Meyers, personal communication, April 21, 2015). Currently, there are approximately 3000 parking spaces at metro and train stations in the Prague vicinity (Meyers, personal communication, May 6, 2015). However, there is a need for approximately 15000 parking spaces and according to architect and parking expert, Tomas Vich, the need is actually 20000 parking spaces (Meyers, personal communication, May 6, 2015). Either way, the need is greatly underserved.

Improve biking infrastructure inside the city center. The idea of this plan is that if the city makes it easier for people to bike, then more people will bike and fewer people will drive their cars, which is what Milota Sidorova subscribes to and points to cities such as Copenhagen as embracing bicycles (Meyers, personal communication, April 30, 2015). The debate around this topic revolves around the whether or not people would actually bike and on whether it might stress the mass transportation budget. Professor Perlin believes that Prague is cannot be a biking city because its hilliness makes it too "uncomfortable" to bike in the city (Meyers, personal communication, April 22, 2015).

Create a city plan with a strong independent planning institution. There is very little debate on the need to plan, since most of my interviewees are urban planners themselves. The key argument for urban planning is that it allows the city grow in a way that promotes the best interests of the city and not just developers (Meyers, personal communication, April 22, 2015).

The Three Case Studies-Micro, Observations, and Expert Opinions

The following section takes a micro view into how the current system affects three busy roads: Legerova, Smetanovo Nabrezi, and Milady Horakove. It includes my personal observations on how these roads conflict with pedestrians, interviewee opinions of problems or lack thereof, as well as their suggestions for how to improve these roads to make them less in conflict with pedestrians. I define busy roads as roads that are known in urban planning circles as places where pedestrians and cars come into conflict with each other.



Traffic heading north

Legerova. This street, located in Prague 2, is part of the north-south highway called the Magistral that runs from south at the Nuslesky Bridge to north toward the National Muzuem,

through the city center. It is the one way northbound section of that splits from the Nuslesky Bridge. It has sidewalks on both sides with five crosswalks along the entire 1 ½ kilometer of road. Upon observation, I find that the biggest problems are that the road is too wide, there are too few places to cross, and that the time to cross is too short (especially compared to he time waiting for the pedestrian light to change). My interviewees also comment that their major complaint of the road is that it is a highway rather than a city street and that it divides the city.

The biggest problem is the width of the street and the structure of which allows cars to go at speeds they could not go almost anywhere else in the city. This road does not feel like a city road in that it looks and acts as a highway. The idea of a city road is of "a shared space" where the road serves as a place for pedestrians and cars (Meyers, personal communication, April 29, 2015). The problem with Legerova is that it is just for cars. In fact, there are so many cars that the noise, wind, and exhaust make the area an undesirable place to spend time if you are not a driver. It is very telling when you see all of the people leave from the IP Pavlova metro and tram stop to see very few people actually walk down Legerova street. Few people want to do it because it is so unattractive and uncomfortable to do so. Professor Perlin argues that it skews the modern view of how highways where this modern view holds that highways should become smaller roads as they get closer to the city and that these roads should be smallest in the city center (Meyers, personal communication, April 21, 2015). Having a highway in the center of the city is the antithesis of this notion.

Another problem is the lack of crossings and the lack of much time to cross. For instance, there are only five street level crosswalks on all of Legerova, which is over one and a half kilometers long. There are several underpass walkways, but those are ways of further separating the street and as Petr Kucer describes as not as popular for architects and urban planners because

the city has a tough time "regulating" the area underneath (Meyers, personal communication, April 22, 2015). As a pedestrian, one has very few options to cross the street and at times, one cannot even see the next crosswalk from another crosswalk. In addition to there being few crosswalks, the crosswalks that are there have long wait times and very short times to actually cross. For instance, during rush hour, the wait time to cross Legerova from Juogslavska to Namesti IP Pavlova is 90 seconds, while the time to cross is only 9 seconds. This not very much time to cross and multiple times, I observed senior citizens not be able to cross in that amount of time. If one does not start walking when he or she gets the green, then he or she will not cross the road in time. This aspect in itself makes the road unfriendly to pedestrians because it makes people who cannot walk quickly feel like they are in danger because of not being able to cross the street in time.

For my interviewees, one key problem with the road is that it divides the city. Professor Perlin takes this point to an historical context. He reflects that going back to the medieval era, the four main squares are Karlovo Namesti, IP Pavlova, Tylovo Namesti, and Namesti Miru, which exist on "one main axis" (Meyers, personal communication, April 21, 2015). He further calls this these squares as the main axis for connection for "people, for integrity, for the burrow, for quality of life, which is brutally divided by those two streets" (Meyers, personal communication, April 21, 2015). One of those streets is Legerova while the other is Skolska. Milota Sidorova goes so far to refer to the placement of this road as a "crime" because it "goes directly into city center where there is so many pedestrians [and] where there are so many institutions" (Meyers, personal communication, April 30, 2015).

Professor Perlin perfectly sums up the belief from all of the interviewees that he believes that Legerova needs to become a "normal city road with crossings and parking" and not corridor

or a "hippodrome" for cars as Professor Kovacevic states (Meyers, personal communication, April 21, 2015, Meyers, personal communication, April 29, 2015). Professors Kovacevic and Maier both concede the point that the road will never be a "shared space" or "popular for pedestrians," but they both believe that the city can improve the road (Meyers, personal communication, April 29, 2015, Meyers, personal communication, April 29, 2015). The professor advocates changing the current lanes by adding crosswalks and by turning one lane into a bike lane and another into a taxi lane while still keeping even three lanes for cars, but adding a greenbelt to slow them down (Meyers, personal communication, April 29, 2015).

In regard toward the future of the road, the interviewees are mixed as to if things will change. For instance Professor Kovacevic believes that out of the three roads this road has the highest positional of being calmed because of the effect of the Tunnel Blanka, which is a point of view shared by Petr Kucera (Meyers, personal communication, April 29, 2015, Meyers, personal communication, April 22, 2015). However, Professor Perlin thinks the road is unlikely to be calmed due to protests from neighboring streets and because of future development of the area around the street. The first point stems from the potential reality that residents on roads around Legerova believe that if the city calms traffic on this road that the traffic will just move to their roads because drivers go whichever route is the "quickest," causing those streets to suffer the same problems Legerova now faces (Meyers, personal communication, April 21, 2015). The second point stems from the development in Holesovice, Karlin, and in Pankrac where developers will build new houses, new administrative buildings, new activities, new shopping centers, [and] new shopping malls that are accessible from Legerova (Meyers, personal communication, April 21, 2015). The problem is that once these areas are developed, they are going to be powerful in regard towards transport policy and they are going to want people to be

able to reach these areas by car, which means they will want the Magistral to be as car friendly as possible (Meyers, personal communication, April 21, 2015).



The narrow gated sidewalk opposite Karlovy Lazne

Smetanovo Nabrezi. This street, located in Prague 1, acts as a "shortcut" through the city along the east bank of the Vltava River (Meyers, personal communication, April 30, 2015). It stretches from the south at the National Theater to the north at Charles Bridge and has a tramline that runs in the middle of the road. The road has lanes that go northbound and southbound, but the number of lanes change at different points of the road. Going south from Charles Bridge, both lanes are shared with the tramlines. Continuing south, both the lanes eventually have their own dedicated car lane while the southbound side eventually gets another

lane that is shared with the southbound tramline. This street is a draw to tourists because it has a direct view of Prague Castle, which means that there is a lot of foot traffic on the road. Upon observation, I find that the biggest problems are that there are too few crosswalks, too narrow sidewalks when close to the bridge, and a lack of benches.

The largest problem is that the road does not feel like it is large enough for pedestrians, cars, and trams. It feels too crowded with the 3 walkways at Kolovy Lazne being the epitome of the situation. Once a pedestrian gets to Karlovy lazne from the south, he or she only has one of three options to continue north to the Charles Bridge at what Milota Sidorova calls the "bull's throat" (Meyers, personal communication, April 29, 2015). One option is to walk through a covered and crowded inner market next to Karlovy Lazne that is poorly lit with shops that cater to tourists that forces one to be inside. Another option is to walk on a very narrow sidewalk next to Korlovy Lazne outside of the market and risk getting hit by a car or tram since the sidewalk is also crowded with people. The third option is to walk on the opposite side of the street of Karlovy Lazne along another narrow sidewalk with a railing that forces pedestrians to walk one way in both directions. None of these options are appealing, comfortable, or safe either in regard to potentially getting hit by a vehicle or getting pickpocketed due to the close proximity of people on the sidewalk.

The interviewees also mention other reasons relating to the road's location for being busy. Milota Sidorova argues that the main reason why the street is busy is because it "adds this flat fast track for cars" to go through the city (Meyers, personal communication, April 30, 2015). In addition, Igor Kovacevic also argues that the view also is reason why cars use the road because if they are stuck in a traffic jam, drivers still have a great view of the castle (Meyers, personal communication, April 29, 2015).

Another problem is that there are too few places to cross along the entire road. There are four crosswalks along the entire ½ kilometer of road and the wait times are long to cross considering there is constant traffic on the road in addition to trams. While observing, I found that there are often large groups of people waiting near the National Theater and by the Charles Bridge to cross. However, Peter Kucer argues that this is not so much a problem compared to the two other roads because the primary movement is "along the river and not across the street" (Meyers, personal communication, April 22, 2015). He argues that when primary movement follows this pattern there only needs to be crossings at important crossroads (Meyers, personal communication, April 22, 2015).

The most popular solution for the road is to make it a pedestrian only while maintaining the tramlines. Over the course four weekends, the organization, Automat helped the city experiment with closing the road to cars (Meyers, personal communication, April 29, 2015). However, Milota Sidorova does not consider this experiment to be successful due to traffic moving instead to the other side of the river in Mala Strana and because there are not enough places for pedestrians to "hang out" such as benches, shops, cafes, and restaurants (Meyers, personal communication, April 30, 2015). She also mentions the how the Krannerova Krasna park is uninviting because the whole park is fenced in (Meyers, personal communication, April 30, 2015).

In addition, Professor Karel Maier also posits that there needs to be a "soft approach" whereby the traffic is gradually reduced because "at this moment [he does not] believe you can just stop it" (Meyers, personal communication, April 29, 2015). Ms. Sidorova also contends that "unless there is a significant push inside of political sector, nothing is going to change" because

politicians will not want to change the makeup of the road unless there is strong demand from the public (Meyers, personal communication, April 30, 2015).



Traffic heading east toward Letensk Namesti

Milady Horakove. This street, located in Prague 7, is approximately 2 ½ kilometers long while I am specifically focusing on ¼ kilometer section that runs alongside Letna Park. The road runs east to west with two-lane traffic where both lanes expand from two lanes to three lanes at the traffic lights. In addition, there is a tramline that runs on its own dedicated track in the middle of the road. Upon observation, I find that the road is too wide, that is takes too long to cross, that there are too few shops around in the area, that it creates a barrier between the rest of Prague 7 and Letna Park, that the bike lanes are too fragmented. My interviewees also comment that the large capacity for cars may lead to development of malls, which would increase the amount of traffic on the road (Meyers, personal communication, April 27, 2015).

The problem with the road is that it is too wide in terms of giving the feel of being a city road. When around the road, I have the feeling that I am outside the city because car drivers fast and never feel that they have to watch for pedestrians. While observing the road, I see multiple cars drive at what seem to be 90 kilometers per hour. This speed at which the cars can travel makes it so there is constant noise, wind, and exhaust coming from the road.

Another problem with the road is that there are very few crosswalks that pedestrians can use and that one has to wait for a long time to the light to cross. For instance, I counted the wait for the pedestrian light to be 90 seconds while green lasted only 30. The road just does not have the feel for being a place that is inviting for pedestrians to walk on and walk across. It seems like it more serves the purpose of being a street where people can drive.

Another problem for the road is that it separates the apartments in Prague 7 from Letna Park, a place Professor Maier describes as being "deeply in the memory of the country" with "deep symbolic value" (Meyers, personal communication, Arpil 29, 2015). This park, which is an open public space gives me the feeling of a place that is uninviting where if one did not know the park was there, might not believe the space beyond the parking lot is a famous park.

Another part of the road that is problematic is the bike lane situation. The lane to use a word from Jakob Hurrle, is quite "fragmented" (Meyers, personal communication, April 27, 2015). There are points when there is a lane and then there are points when the lane disappears and bicyclists join car traffic. Bicycle riders do not have a fully dedicated lane for themselves for the whole stretch of the road, which is dangerous for them because as I stated above, there are drivers that will drive 90 kilometers per hour and at the very least bicyclists might want their own lane.

My interviewees have similar opinions about the road. Milota Sidorova describes it as being like an "American suburb" where "I just walk, walk and I get tired mentally" (Meyers, personal communication, April 30, 2015). They also offer many different solutions to make the road more inviting for pedestrians with the popular idea being along the same lanes as Jakob Hurrle with being to narrow the road to only two lanes, and in turn at a bike lane and to add more crosswalks (Meyers, personal communication, April 27, 2015). Professor Maier also offers a similar recommendation by advocating narrowing the road at a "critical point" rather than across the whole road (Meyers, personal communication, April 29, 2015). This plan would be cheaper because rather than changing the entire road, the city would only have to alter a maximum of two separate points. My interviewees offered many different ideas for how to calm the road and make it more inviting for pedestrians. For instance, Jakob hurrle offered the idea that the road should be narrowed to have "just two lanes and a large bicycle lane" (Meyers, personal communication, April 27, 2015).

The interviewees also fear potential shopping developments in the area, which although nonexistent right now, are highly desired from developers due to the street's large capacity for traffic and its close proximity to a Blanka Tunnel exit (Meyers, personal communication, April 27, 2015). Professor Kovacevic himself fears that if these shopping centers are built than the city will lose any types of gains they could hope to achieve by narrowing the road because there would be a large desire from motorists to use the road to reach these shopping centers (Meyers, personal communication, April 29, 2015).

Milota Sidorova also describes a plan to make the park more inviting by adding a pedestrian road alongside the Milady Horakove (Meyers, personal communication, April 30, 2015). She compares the idea as being similar to the pedestrian road in Tiergarten in Berlin

where there could be "tree alleys" that enhance the space by still being able to see the main road while having an additional defined space (Meyers, personal communication, April 30, 2015).

In regard to the future of the road, it is not likely to change anytime soon due to the recent redevelopment of the road during construction of the Tunnel Blanka and Jakob Hurrle says that there is not move of a push either from the government of to the government to do so (Meyers, personal communication, April 27, 2015).

Evaluation

Upon observing these roads and interviewing experts about their thoughts on these roads will offer my opinions in relation to the macro and micro picture.

In regard toward the macro picture, there needs to be a comprehensive plan for the city and there needs to be a strong, independent institution to help carry out the individual plans, and there should be a system as Professor's Perlin, Maier, and Kovacevic propose with particular focus on fees to enter the city and constructing more parking lots around major hubs to allow a greater number of people the ability to use the mass transit. In large sense all of the polices mentioned above could be used in tandem in terms of reducing car travel in the city center, which means reducing traffic on the three roads that make up my case studies. I agree with Professor Kovacevic, "The idea is not to redistribute cars, but the idea is to reduce the number of cars" (Meyers, personal communication, April 29, 2015). These plans all can work, there just needs to be an overall strategy that final goal is to limit the number of cars rather than just put them in different parts of the city.

I most strongly agree with the sentiment that both Professor Perlin and Kovacevic share—that the focus needs to be on limiting the amount of cars coming into the city, not just changing their allocation (Meyers, personal communication, April 21, 2015, Meyers, personal

communication, April 29, 2015). It is the logical because it is simple in that when it comes down to it, if you want to decrease cars on any one street, you need to decrease cars across the entire city. In regard toward achieving this goal, I again agree with these men's sentiments in regard toward making it harder to enter the city by car, easier to enter the city through mass transit (Meyers, personal communication, April 21, 2015, Meyers, personal communication, April 29, 2015). In particular, I believe that adding tolls to the roads entering the city and by adding parking spaces to hubs are particularly good because the they are the most direct way of trying to get people to stop one action while start a different one.

In regard to the micro picture, I argue that even though these roads are all connected into the same system, they each need a separate set of policies to ensure fewer pedestrian/car conflicts. All of these streets share the reality that no matter what happens on those roads in terms of steps taken to calm them, they will not solve the problem throughout the city if there has no plan or coordination for calming traffic such as what Petr Kucera argues (April 22, 2015). On the micro level, there needs to be planning and coordination in order to calm a busy street without creating another busy street. Also, this again needs to be in the context of reducing the amount of cars in the entire city not just on several specific streets.

In regard to Blanka I agree with Petr that I think it will take traffic off of the Legerova, but I also agree with him that I believe that if the city does not take the opportunity to calm Legerova, it will only be a matter of time before more people realize that it is less crowded on Legerova, which will imply that it is easier than it was to drive into the city, which will eventually make the street just as crowded, if not more crowded than it is today (April 22, 2015).

Looking at the three streets specifically, they each have their own particular quirks. The general consensus is that Legerova should be a "city street" rather than a "corridor" (Meyers,

personal communication, April 21, 2015), but the ways to solve it are a little trickier—should the city plant trees on the sidewalk? Should it extend the sidewalk? Should it add bike lanes? The answer is more about effect than the actual specific solutions since different combinations will yield different results. Does the city want it to be a part of a spine for bikers or does it want to be a major boulevard for shops and the like? The main goal though should be to narrow the street, to make the cars move slower, and to make it easier for pedestrians to cross the street and the city should accept plans that allow this to happen.

Looking at Smetanovo Nabrezi, the main problems are the sidewalks close to Charles Bridge and because there are few reasons to stay on road beyond look at Prague Castle. These are the two points that need to be addressed and I believe that even though Milota Sidorova described the pedestrians days as being lackluster, I still believe the answer lies in making them solely pedestrian and tram zones. Though it will take some creativity around the "bull's throat" because making them pedestrian zones does not entirely fix the problem of that area. However, one option could be removing one tramline from lane, which would put the trams in one lane and free up space for pedestrians in the other lane. The city should be able to do this because it is how it works right now at Malostranske Namesti, but instead of having cars go in the other entrance, it would be pedestrians. This solution would allow for pedestrians to move easier towards Charles Bridge and might allow for more shops and cafes to open up to get more pedestrians to stay on the road.

Looking at Milady Horakove, like with Legerova, its problems lie mainly with its size.

Currently, it is not a place where you want to walk around. In most circumstances I believe that it should be narrowed, but that seems unrealistic considering the city recently altered the road (Meyers, personal communication, April 27, 2015). In turn, I think the city should use Milota

Sidorova's strategy and emphasize Letna Park more by designing and building a walkway along the road with trees that would provide and direct path into the park enhancing the road and the park by taking advantage of the open space (Meyers, personal communication, 30 May, 2015). It might not necessarily calm the road, but it would allow it to become more of a boulevard that acts as the gateway to a more beautiful park. And maybe if more people get off at Sparta station to go to the park than there would be more people who would want a fewer cars on Milady Horakove and force the city to alter it. I also agree with Professor Kovačevič that the city must prevent any mall from being built near that road because it will turn an already busy road into an even busier road (Meyers, personal communication, April 27, 2015).

Conclusion

In conclusion, I feel that I shed light on some of the traffic problems in the macro and micro senses for English speakers who did not have very many resources to explore urban planning in Prague. I hope that it allows for more English speakers to be able to have at least a starting point should they choose to do similar research that I set out here. I think I have been successful in at least clarifying for myself what the macro and micro issue are and how to possibly change them in Prague. I also feel that with very little background in urban planning, I was able to learn a lot and I also believe that I could relate this knowledge to other cities throughout the world.

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