Seattle's Magic Carpet:

Thirty-Nine Years of Fare-Free Service

by

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Abstract

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Seattle's Magic Carpet program, which began in 1973, provided fare-free bus service within downtown for thirty-nine years. This study investigates why the program came about, why it lasted for so long, and why it ended in 2012. First, the story of what happened with the Magic Carpet program throughout those thirty-nine years is presented. Then, The Great Man, idealist, and materialist theories of history are applied to the story. The resulting explanations are evaluated in light of the available data. The study finds that the most accurate explanation is a synthesis of all three theories, with ideological conditions influencing what type of changes are proposed, the intervention of key individuals initiating the changes, and material conditions determining whether the changes are implemented.

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Introduction

What Was Magic Carpet?

Imagine boarding a bus. You do not pay with cash or by tapping a card; you just get on. You can use either door, whichever is more convenient. When you reach your destination, you get off the bus, again without paying. Sound absurd? For thirty-nine years, this was the reality in downtown Seattle. In 1973, the city started a fare-free transit program. Any bus trip within an area called the Magic Carpet Zone (MCZ), roughly lining up with the edges of downtown, was free. Over the following four decades, various changes were made to the program, but it continued shuttling residents, workers, shoppers, and visitors around downtown. In 2011, the King County Council decided to end the program, and this decision was carried out the following year.

The City of Seattle, Metro Transit, King County, and the federal Department of Transportation have all studied the effects of this program, but no one has looked into why it occurred, or why it lasted so long. Statements made by elected officials about the program have been taken as the full explanation, and the underlying causes have not been investigated. As will be shown in the next chapter, there have been academic studies of many fare-free transit programs, but neither Seattle's Magic Carpet nor any of the others have been subjected to a historical analysis to determine why their stories played out the way they did.

Why Study the Magic Carpet Program?

Knowledge about why programs like Magic Carpet played out the way they did is important to planners because any planner working for the public sector, either as a direct employee or through a consulting firm, is ultimately responsible to political decision-makers. Understanding the factors that influence actions of political decision-makers will improve the ability of planners to do their jobs, as they will be able to anticipate those actions, and thus respond more quickly and accurately to their supervisors' requests. If planners can anticipate what type of projects they will be working on, then they can become more informed about the most up-to-date knowledge available in the field. Planners working for political organizations, or engaging with such groups in a volunteer capacity, benefit from understanding how and why various programs come about. This knowledge helps organizations that want to either support or oppose such programs determine what strategies are more likely to be effective. Furthermore, the story of this program and other long-term stories that relate to planning have their own intrinsic value in that they are part of the history of the planning field. The field of History provides tools that can be used for piecing together the story and analyzing the factors that influenced its development, but unfortunately, historians have not yet seen fit to apply those tools to this niche problem within the planning field. For this reason, it falls to planners to pick up the tools of history and seek the answers.

Before applying the tools of history to the question of this study, the question and its sub-questions must be clearly defined. First, the overall question is "What root causes explain the creation, longevity, and elimination of Seattle's Magic Carpet Zone?" Before this question can be answered, a chronology must be assembled of events in the life of the MCZ. These events include its creation and elimination, as well as changes made to the geographic scope, hours of operation, and funding source

over the duration of the program. The sub-questions are embedded within the chronology, and each take the form of "Why did this event occur how and when it did?" Once the chronology is developed, additional details can be added to flesh out the simple list of events into a full narrative. These details, and the narrative that they create, will suggest answers to the sub-questions.

History, Narratives and Theories: Some Notes on Methods

However, the narrative on its own will not be enough to answer the questions. Some unifying conception is needed of what the influencing factors were and how they operated. Fortunately, it is not necessary to venture out unescorted into the wilderness searching for explanations. Some historians believe that history should only be about telling stories, but others, and scholars in related fields, have recognized the importance of such explanations, and have analyzed and categorized the types of explanations that are used. Anthropologist Robert Carneiro has reviewed the works of many historians and identifies five main categories of explanations in his book, *The Muse of History and the Science of Culture*. Of these five categories, two have fallen out of favor, and three are still in use.

The two types of explanations no longer in use are divine and racial. Prior to the Enlightenment, it was common for historians to include in their stories allusions to divine intervention, claiming that a battle or a war went a certain way because it was the will of God. As reason came into greater prominence for explaining natural and social phenomena, it displaced supernatural explanations (Carneiro 2000, 93-107). Racial explanations for historical events served as history's counterpart to the racial pseudo-science that prevailed during much of the nineteenth century. Throughout the end of the nineteenth century and the beginning of the twentieth, as racial pseudo-

science fell out of favor in biology and anthropology, so too did racial explanations lose their appeal to historians (Carneiro, 86-93).

While those two types of explanations are no longer in use, three others remain. The Great Man Theory explains historical events as the result of choices and actions of important people. Robert Caro's *The Power Broker* is an example of this theory being applied in planning history (Caro 1974). Use of the Great Man Theory has declined, but it has not completely fallen out of favor (Carneiro, 112). It has been displaced by historical idealism and historical materialism, competing explanations for how social forces provide the driving force behind historical change. Idealists see the development of history as the development of ideas. As ideas change, their effects on the world change, leading to reforms, revolutions, and other major events. Materialists, on the other hand, see all root causes of historical events in material circumstances, such as the environment, technology, the economy, warfare, and the need for subsistence (Carneiro, 191). In this study, I will analyze the Magic Carpet program through each of these three historical lenses, compare the explanations that result, and find the explanation that most accurately matches the available data. This final explanation may be one of the three developed from the three theories of historical causality, or it may be a synthesis of two or more of them.

Introduction to This Thesis

Now that I have reviewed the types of explanations used by historians, I can return to the matter at hand, how to explain the creation, longevity, and demise of Seattle's MCZ. The fleshed-out narrative will suggest answers to the various sub-questions, but knowing these three types of

explanations allows those answers to be refined and helps determine the extent to which they conform to the current ideas in the field of history.

In the next chapter, I will review past scholarship about fare-free transit programs, and show how research has not yet investigated why such programs are created and eliminated. The third chapter will go more in-depth on the specific methods used in this study of the Magic Carpet program. Next, chapter four will present the narrative of the Magic Carpet program. These findings will be analyzed and discussed in chapter five, including candidate explanations for why the narrative played out as it did and discussion of the strengths and weaknesses of each explanation, finishing with describing the optimal explanation. Finally, the sixth chapter will present my conclusions and possibilities for future research in this area.

Researcher Bias

It should be the objective of any academic to minimize bias in their work. However, while a complete lack of bias is the ideal, it is an unattainable ideal, and in the social sciences, the amount by which a researcher falls short of this ideal can impact their findings to a noticeable degree. For this reason, it is important that a researcher disclose any of their biases that may be relevant to the study.

The most important of my biases is that I believe that effective public transit service is important for any city. This bias should not have impacted my findings, but it surely played a role in my decision to research this topic. Secondly, I began this project firmly supportive of the idea of fare-free transit. While there are still many situations in which I would support fare-free transit, my view of the concept has become more nuanced as I learned more about the Magic Carpet program. My overall

positive view of fare-free transit meant that I needed to be vigilant about normative and proscriptive statements making their way into my writing.

Other important biases relate to the various theories of historical causality. Because I believe that the Great Man Theory is flawed, I have had to be careful throughout this study to judge its suggestions on their own merits rather than on their association with a theory that I disagree with. I do not find its flaws significant enough to completely exclude it from the study, as it still has some value. Similarly, while I find both historical materialism and historical idealism to be useful, I tend to prefer materialism. For this reason, I have had to take care not to be too uncritical of explanations suggested by historical materialism.

A Note on Terminology and Style

In March of 1978, the Magic Carpet program was re-branded to Free Ride (Seattle Times 1978d). For the sake of consistency, I refer to the program as Magic Carpet throughout, unless I am directly quoting a source, in which case the program may be called Free Ride, Ride Free, or fare-free transit. The geographical area covered by the program was called the Magic Carpet Zone initially and the Ride Free Area after the name change. Like with the program itself, I use the original term, abbreviating it as MCZ.

Whenever Seattle is referred to as 'the City', with a capital 'c', I am referring to the institution of City government. When I mention 'the city' with a lower-case 'c', I mean the social entity consisting of all the people and social activity that occurs within the city limits.

The neighborhood just north of downtown proper was called the Denny Regrade, or just the Regrade, during the 1970s when Magic Carpet began. By the time the program was eliminated, it was generally called Belltown. Both words refer to the same neighborhood.

Original MCZ and Expansions

Map produced by author in ESRI ArcGIS.

Literature Review

The concept of fare-free transit has been studied for over half a century. However, most studies focus on the effects of such programs, whether conducted *ex ante* or after implementation. For this reason, the transportation community is well-informed about how fare-free programs impact transit ridership and transit agencies' finances, but we know significantly less about the factors that determine whether a fare-free program will begin or end. At best, possible factors are alluded to in studies about fare-free transit, but this does not provide information sufficient to reach conclusions about which factors are dominant. Some fare-free programs were initiated specifically as experiments to determine what would happen (Train 1981) (Studenmund and Connor 1982), and were intended from the start to be temporary, but others came about through normal policy-formation mechanisms. Such mechanisms are studied by researchers in history and political science, but they have not dealt with fare-free transit programs as a separate topic.

In the following sections, I will first discuss the older studies, which provide information about the effects of fare-free transit on ridership, agency finances, and automobile travel. Next I will move to studies of free fare models at universities, which are good because they are able to examine impacts on a specific group of people, but problematic because the policy-formation mechanisms at universities are completely different than those of cities. Finally, I will address recent literature on free fare zones in cities.

Early fare-free transit studies

The earliest study I could find that considers fare-free transit was from 1963. "Value of Time, Choice of Mode and Subsidy Issue in Urban Transportation" (Moses and Williamson 1963) actually focuses more broadly on the impact on mode choice of changes in price of various modes, but it is comprehensive enough that it includes the possibility of fare-free transit. The first part of the article summarizes economic theory about the tradeoff between time and money that is involved in mode choice. Part two applies this theory to survey data from interviews with commuters in the Chicago area. The authors suggest that if transit were made fare-free, 13% of motorists whose second-choice mode is bus-streetcar would switch, along with 18% of those whose second choice is El-Subway and 32% of those whose second choice is Railway.

Like Moses and Williamson, Kemp (1973) investigates the relationship between transit price and demand, but deals with the traditional elasticity metric rather than calculating diversion rates at different price changes. While elasticity is more of a blunt tool than the specific diversion rates calculated by Moses and Williamson, this lack of specificity allows for comparison across different contexts, where the types of transit available, the current costs of transit, and the current costs of driving may vary. This was the earliest of many studies I found referencing the "Simpson and Curtin formula," that price elasticity of demand for public transit can be estimated at -0.33. This formula means that for every one percent increase in price, ridership can be expected to decline by one-third of a percent. This figure was developed through work that began in the late 1940s analyzing "evidence of ridership loss associated with fare increases from transit systems throughout the United States" (Kemp 1973, 31). While this research was rather robust, with a standard deviation of 0.09 across 77

data points, Kemp cautions that local factors can cause significant deviation from the formula-predicted -0.33, and that a range of -0.1 to -0.7 covers most observed fare elasticities.

Baum (1973) uses meta-analysis to investigate the feasibility of fare-free transit in Germany. This study was initiated in response to increasing political demand for fare-free transit, from, "social-progressive groups: for instance, by the social-democratic administration in Frankfurt/Main and Munich, by trades unions, and by the junior generation in the Social Democratic Party" (Baum 1973, 3) The article also mentions protests and fights in reaction to fare increases, and that the center-left government at the time doubted the efficiency of fare-free transit. After discussing the arguments that had been brought up in favor of fare-free transit, the article investigates its likely efficacy at achieving those stated goals. The two main arguments considered are that fare-free transit would reduce traffic congestion in towns and that it would improve "social conditions for the less-well-to-do and handicapped" (Baum 1973, 3). The first of these objectives requires that travelers be diverted from automobiles to transit; the second that fare-free transit be an efficient means of redistributing income. The author concluded that -0.3 (close to the Simpson/Curtin formula) seems to be a reasonable estimate for transit demand elasticity, but that in studies undertaken to predict the effects of fare-free programs, multiple methods should be used because of the inherent uncertainty involved. Two different estimates are given for the annual cost of fare-free transit in West Germany in the late 1960s. The cost of fare-free transit for the entire country is estimated at 3.5 to 5 billion marks, while the cost of eliminating fares just "in the inner zones of German towns" (a term that goes undefined in the article) is given as 1.76 billion marks (Baum 1973, 13-14). For the sake of comparison to aid in understanding figures in an unfamiliar currency, the total debts of all German municipalities at the time were 32 billion marks and the GDP of West Germany was 527 billion marks (Baum 1973, 14).

Another study included in the meta-analysis found that the annual gross benefit of fare-free transit in the inner zones of towns would have been 3.8 billion marks, for an annual net benefit of 2 billion marks. However, this figure relies on a 40% diversion rate, which Baum considers unrealistic.

Olsson and Kemp (1976) touch on the topic of fare-free transit without simply evaluating its effects. Their study rests on the supposition that positions taken by editorial boards have a not insignificant impact on public opinion. They looked at all 264 editorials on urban transportation published by the 155 newspapers indexed by *Update*, the microfiche file that they used, between January of 1973 and July of 1974. Neither the editorials nor the newspapers were selected by random sampling, but the authors believed them to be broadly representative. After identifying the editorials, they then coded each one by the issue it covered and whether it was for or against the issue. While the authors acknowledged that most questions consist of more than two sides, each editorial could be described as either for or against. Although most of the editorials were about other topics, there were a few discussing fare-free and reduced fare programs. Every editorial on reduced fare programs or partial fare-free programs was supportive of the programs, while every editorial on full fare-free programs opposed them. Unfortunately, they did not draw any conclusions about why editorials would be so strongly skewed in favor of certain positions.

Two articles were published about three 1981 experiments in fare-free transit (Train 1981) (Studenmund and Connor 1982). The experiments in Trenton, New Jersey and Denver, Colorado lasted for a year, while the program in Salt Lake City, Utah was only a month long. All three programs eliminated fares in the off-peak period while leaving them in place during the peak. Studenmund and Connor's study of Trenton and Denver was of a pretest-posttest form, using data from surveys and interviews, along with data collected from the agencies themselves. However, numerous difficulties

with the Denver experiment, including no pretest data, service changes in the middle of the experiment, and uncertainty as to its length, led the authors to base their conclusions entirely off of the Trenton experiment (Studenmund and Connor 1982, 263). What they found in that case was a 15% increase in total ridership, involving a 45% increase in off-peak ridership. While there were other factors affecting ridership at the same time, the authors were confident that an increase of 25-30% in off-peak ridership was due to the free-fare, or about 800,000 additional boardings. A majority (69%) of these additional boardings represent trips that would have been made by a different travel mode had the fare-free service not been in effect. While the authors did not provide sufficient data to determine an exact figure, the available data show that at least one third of the existing trips diverted to transit were previously made by car (Studenmund and Connor 1982, 263).

Train's Salt Lake City experiment also used ridership data, although it was collected only one day per week during the month of the experiment, October 1979, and one day per month before and after. This ridership data was used for a regression on five variables. One variable measured any long-term trend in the data, incrementing by one each month. There were also dummy variables used for the fare-free month; the months following the fare-free month; months following the fare increase that occurred at the beginning of February 1989; and the months of December to March, which had a different service pattern to serve skiers. In addition to the direct ridership data, riders were surveyed during the fare-free service in order to estimate the impact of fare-free service on ridership. While a follow-up re-contact survey by phone was attempted, the contact rate was too low for it to provide useful data (1981).

The regression analysis found that the ridership increase due to the fare-free program was in the range of 4-12%. Other analyses that were run on the survey data also provided results within the

4-12% range. The model suggested a long-term positive impact that persisted after the fare-free trial ended, but this finding was not statistically significant. The observed impacts in this case were less than in Denver or Trenton, which the author speculated could be because fares were higher in the other cities or because the experiments lasted longer.

A study that took place in Portland is novel in that it investigated impacts on the human scale rather than system-wide (Katzev and Bachman 1982). This experiment involved 235 households in a test of the impacts of different fare structures and ways of paying on ridership and driving behavior. An ABA (baseline, during-treatment, post-treatment) design was used, with three weeks to establish a baseline, four weeks of treatment, and two weeks post-treatment. Households were randomly assigned to one of five treatment groups. The control group continued paying normally. The credit-only group was given credit slips with which they could board the bus; they paid their total fares later. The credit plus inverted fare group boarded with credit slips, but paid less per trip if they rode the bus more. The credit plus differential fare group also used credit slips, but were charged a reduced fare if they rode during the off-peak period. Finally, the free group were allowed to board the bus without paying. This experiment found that all three treatments that involved reduced fares saw increased ridership, although the increase was smaller for the differential fare group. None of these increases persisted into the post-treatment period at statistically significant levels, and no group exhibited a statistically significant change to their amount of miles driven.

While the fine-grained nature of this study allowed it to use a true experimental design and focus specifically on the differences caused by the different treatment conditions, it had some drawbacks as well. One of the stated purposes for the study was to determine how much of the observed ridership increase of fare-free transit was due to the change in cost and how much was

because of the increased convenience. Credit slips were introduced into the study for this reason, as it would be more convenient to hand the bus driver a credit slip and pay later than to pay in cash with exact change. However, participants in the credit slip treatment groups still had to remember to bring their credit slips with them when riding the bus, which is not as convenient as fare-free transit. Furthermore, the treatment phase of the experiment only lasted for four weeks, meaning that participants had much less time to get into transit-riding habits than did residents of Trenton or Denver. Thus, it should not be surprising that there was no statistically significant ridership increase between the baseline and post-treatment periods.

Cervero conducted a meta-analysis of past studies "to help establish the state-of-the-field in what we know" about fare-free transit and about fare policy more generally (1990, 118). While discussing the research on travelers' responses to transit fare changes, he points out "the difficulty in statistically isolating the effects of the price change from other factors that likewise change" (Cervero 1990, 121). Although this challenge has sometimes been addressed by using multiple regression analysis, there are often too few data points available. This problem was present in the Salt Lake City experiment, where a multiple regression with five variables was employed on a data set that had only twenty-three points, well below the general statistical rule of thumb that there should be at least ten data points per variable included in the analysis. Despite this difficulty, there has been enough research to show both the overall accuracy of the Simpson-Curtin rule for price elasticity of demand of -0.33 and that elasticities "can vary tremendously in a number of different contexts" (Cervero 1990, 122) Of the three specific variations mentioned by Cervero, the one that is particularly relevant to considerations of fare-free transit is that elasticities tend to be higher at higher fare levels. The article specifically cites a 1977 study's finding that this shift was most noticeable around the one dollar mark,

which would be about two dollars when Cervero was writing in 1990, or about four dollars today in 2017 (Cervero 1990, 122). Cervero also found that service elasticities, changes to demand that result from changes to the level of service, tend to be larger than price elasticities, and that the cross elasticity of transit demand and automobile price is roughly in the same range as transit's own price elasticity.

From this first collection of studies on fare-free transit, it can be seen that scholars have focused primarily on its effects on ridership, agency finances, and automobile travel. While Baum alluded to some of the reasons why fare-free transit was being considered, it was not the focus of the study. We can conclude from these studies that the demand elasticity of price for transit tends to fall around -0.33, but can vary greatly. Temporary fare-free programs may or may not lead to sustained increases in ridership, and the impact on agency finances is uncertain.

Fare-free transit for students

Brown, Hess, and Shoup (2001) inaugurates a string of studies about university fare-free programs. This study includes programs at thirty-five colleges and universities that the authors refer to collectively as unlimited access. Some of these programs are paid for out of the university's general fund, some from parking revenue, and some from student fees specifically intended for the program. Some are universal, while others are opt-in or opt-out. What they all have in common is that they present students with a zero marginal cost for each transit trip. The authors employed a multi-case study design that involved telephone interviews with officials at the relevant universities, administrators of the transit agencies, and representatives of student groups on campus.

The findings were derived primarily from analytical aggregation of the cases. Rather than only investigating the effects of these programs, this study presents those effects in the context of the motivations of universities and transit agencies to implement the programs. The stated reasons why universities support Unlimited Access programs are reduction in parking demand, increases in housing and employment accessibility for students, assistance with student recruitment and retention, reduction in college attendance costs, and improvement to transportation equity (Brown, Hess, and Shoup 2001, 235). Transit agencies' stated motivations for participating included increased ridership, guaranteed revenue, and improved overall service. Each of these motivations is the focus of a section explaining how Unlimited Access programs support that objective.

Another topic covered by Brown, Hess, and Shoup (2001) is how Unlimited Access programs are able to have such low costs. Universities' ability to purchase transit at the pass rate, the average cost per trip paid by pass-holders, significantly reduces their costs, while using a university identification card as a transit pass instead of using cash reduces boarding time, saving money for the transit agency. Because students tend to have different ridership profiles than the general public, they are likely to fill up empty spaces on buses that were running anyway in the off-peak or in rainy weather. Finally, the fact that Unlimited Access programs are often universal avoids the problem known as 'adverse selection', where only people who are most likely to use transit purchase the pass. With a universal program, the average cost per person is reduced, because people who rarely or never take transit are still included.

Having shown that Unlimited Access programs are beneficial to both universities and transit agencies, the authors then turned to the question these findings immediately provoke: why aren't such programs provided at more universities? They provided three possible answers to this question.

First, Unlimited Access was at that time expanding to more universities. While their study included only the thirty-five universities that had "programs in place during the 1997-1998 school year with sufficient data available to conduct our analysis," they found many other universities that began offering Unlimited Access since then, including more than twenty in the Chicago area alone (Brown, Hess, and Shoup 2001, 258). Second, ideas take time to spread, and the idea of Unlimited Access programs had not occurred to many universities and transit agencies. The bulk of transit agencies and universities seemed to not be actively looking for lessons from elsewhere that could be applied to their own situation to improve transit service. Finally, there are high start-up costs involved with Unlimited Access programs. These up-front costs can discourage entities that would otherwise be more interested in starting a program. Interviewees "reported having to overcome formidable barriers when starting an Unlimited Access program" (Brown, Hess, and Shoup 2001, 259).

This investigation into why fare-free transit programs did or did not exist at various universities is similar to what I will be looking at with regard to Magic Carpet. However, there are some key differences. First, the Unlimited Access programs discussed by Brown, Hess, and Shoup (2001) and those included in other studies mentioned below cover only a specific population: students. Magic Carpet, on the other hand, was available to anyone. Second, the decision-making process differs greatly between a city and a university. The university administrators determining whether and how to establish unlimited access programs are responsible only to their supervisors and their university's board. On the other hand, the elected officials who routinely voted on Magic Carpet only maintain their positions if the voters choose to reelect them. This suggests that Brown, Hess, and Shoup's (2001) findings on why Unlimited Access programs did or did not exist at different universities, while

informative in their own right, will not help answer questions about the causes of Magic Carpet. Nevertheless, they provide general suggestions about why fare-free programs would be implemented.

While Brown, Hess, and Shoup (2001) was the earliest study I found on fare-free transit paid for by universities, it was by no means the last. Several studies went in-depth on actual or hypothetical Unlimited Access programs at specific universities. Two studies in 2003 investigated the impacts of the BruinGo partnership between the University of California at Los Angeles (UCLA) and the Santa Monica municipal bus system (Brown, Hess, and Shoup 2003) (Boyd et al. 2003). This program was particularly attractive to scholars because of its limited nature; Santa Monica was one of three transit agencies serving the area around UCLA at the time, and at the time, the program covered only Santa Monica buses, allowing for comparison between students living in the Santa Monica service area and those living in the service areas of the other agencies. Both studies employed a survey-based pretest-posttest, but they analyzed the data from their surveys differently. Brown, Hess, and Shoup (2003) produced three estimates of the impact of the program based on the defined service area of the Santa Monica municipal bus system. Their low estimate involved the difference-in-differences approach: all change outside the Santa Monica service area was considered the baseline and subtracted from the change within the Santa Monica service area. The medium estimate ignored any change outside the Santa Monica area and considered all change within the area to be the result of the program. The high estimate counted all change as the result of the program, whether or not it was within the service area. Boyd et al., on the other hand, used a narrower definition of service area: a student was considered to live within the service area only if the nearest intersection to their home was within a half mile of a bus route and not within walking distance of campus. They analyzed the data both for the entire service area under their definition and for the service area of bus routes that directly served

campus. Despite these differences in methods, both studies found ridership increases of about one third to one half.

Dorsey (2005) discusses Unlimited Access at two Universities in Utah, Weber State University and the University of Utah. U of U had already been using Unlimited Access for ten years when the study was conducted, while Weber began a pilot program before the study was finalized. Since both of these universities are in the Salt Lake City metro area, they formed a comparative case study looking at the differences between a school with Unlimited Access and a school without. As part of this study, three surveys were conducted at Weber. Dorsey also contrasted the schools' mode split data and their approach to transportation planning. Weber avoided long-range transit planning and dealt with parking demand re-actively, while U of U was proactive and negotiated with the Utah Transit Authority to "improve bus routing and scheduling" (Dorsey 2005, 241). However, he did not draw any conclusions about what prompted the differences between their approaches.

While previous studies about university-based fare-free transit tend to focus on one or two schools, De Witte et al. (2006) looks at an entire city. The city of Brussels includes two main language communities: French and Flemish. In 2006, the Flemish community subsidized transit for students of Flemish colleges and universities, but the French community had no such program. Because of the difference, Brussels was ripe for a comparison case study. This study involves a representative survey and in-depth interviews. Quota sampling was used for the survey, and mental maps were used in combination with Kaufmann's concept of 'motility', or the travel potential of an individual (De Witte et al. 2006, 674). These surveys found that, when the fare-free program was implemented, transit use by Flemish students increased significantly, but even after the increase, French students were still more likely to use transit than Flemish students. The significant preexisting difference in transit use between

French and Flemish students may have contributed to the decision by the Flemish community to subsidize their students' transit, but this possibility was not investigated by De Witte, et al.

A 2015 study about the University of Trieste, Italy, provides *ex ante* information on nine hypothetical policies (Rotaris and Danielis). Of those nine policies, one was full subsidization of fares. The authors developed a transportation demand model that they estimated using revealed and stated choice data from 372 face-to-face interviews drawn from a stratified random sample (Rotaris and Danielis 2015, 160-164). They derived the revealed choice data from the characteristics of respondents' current trips, and the stated choice data from their preferences in "10 hypothetical choice scenarios (including the status quo)" (Rotaris and Danielis 2015, 160). One major reason for this study was to address a deficit the authors identified in previous studies: that they only considered the effectiveness of potential policies and not their economic efficiency. They found that fully subsidizing bus fares, the policy referred to previously as Unlimited Access, was not only the most effective at reducing car use but also the most efficient in terms of net social benefit.

In many German cities, university students' elected representatives negotiate a bulk price for tickets with the local transit agency. If the students approve the agreement by referendum, then purchasing the bulk ticket becomes mandatory for all covered students. Voss (2015) used economic modeling and some empirical data to analyze this situation. After demonstrating with a graph that negotiated prices for these collective tickets tend to rise faster than inflation, and in most cases faster even than the increase in regular ticket price, Voss developed a model to provide an explanation for this phenomenon. If this model is accurate, then mandatory flat-rate tickets reduce transaction costs in the purchase of tickets, but lead to an inefficient residential location choice by students, as new students choose where to live based on the assumption that the bulk ticket will continue. This leads to

a new equilibrium that stabilizes a few years after the initial introduction of the ticket and may make the students worse off than they were prior to introduction of the bulk tickets. Whether or not students are made worse off depends on the size of transaction cost savings and on students' bargaining power; greater bargaining power will allow them to capture a greater portion of the transaction cost savings. However, Voss does not recommend banning mandatory tickets, as this would also lead to an inefficient situation. Instead, there should be subsidies for apartments closer to school sufficient that the difference in price to the student of any two location options is equivalent to the difference in price the transit agency would charge to travel between each of those locations and the school.

Zhou (2016) is another study of the travel behavior of students at UCLA The primary method used in this case study is statistical analysis. Zhou used data from a May 2010 student survey with 769 respondents for a multinomial logit model of students' mode choice. The independent variables included were age, commute time, distance to UCLA, distance to a bus stop, living with related persons, male, having a transit pass, and undergraduate. While the model provided results for all major mode choices, transit and the Unlimited Access program are the most applicable to this study. Zhou found that "Access to bus services and a subsidized transit pass can boost the usage of NDA [non-drive alone] modes" (Zhou 2016, 815). Having a transit pass is actually one of the top three factors impacting mode choice, along with the student's gender and whether they are a graduate or undergraduate.

The above studies show greater impact of Unlimited Access programs on transit ridership than was seen in studies of fare-free transit in general. These university-based programs have also had a noticeable impact on driving and parking demand. This may be because students, being younger than

the general population, already have a higher propensity to take transit, and are thus able to be motivated to switch in greater numbers with the same small incentive. Some of these studies have also considered why universities establish Unlimited Access, although this is generally not the focus of the study.

Recent non-university fare-free transit studies

At the same time as this series of studies on university-based fare-free transit, there have also been more studies that considered fare-free transit overall. One of these was Storchmann (2003), which looked at the effects of the fare-free system in Templin, Germany. The first portion of this study lays out the economic theory of second-best pricing. Next, it applies this theory to the situation in Templin. Storchmann employed a pretest-posttest model using survey data and performed an economic analysis of costs and benefits. The study found a small reduction in automobile VMT, but a significantly larger mode shift from walking and biking to transit. Because non-motorized travel tends to be more dangerous, this mode shift increased travel safety. Depending on how different factors are weighted, this could result in a net benefit. However, that benefit would be the result of reduced non-motorized travel, while planners generally see non-motorized travel as a positive. It is important to remember that, while the increased safety is the result of reduced non-motorized travel, the responsibility for the danger lies with automobile travel, not with non-motorized travel. For this reason, Storchmann concludes that reducing automobile-caused externalities is not a good reason for fare-free transit, and that these costs should instead be internalized for drivers.

Parry and Small (2009) examine the impact of various subsidy levels in transit service. Because transit fares have not covered the full cost of providing service in decades, service is supported by

subsidies. In 2009, subsidy levels in the United States' twenty largest transit systems fell between 29% and 89% of the operating cost (Parry and Small 2009, 700). Parry and Small developed an analytical model of urban passenger travel involving multiple factors, including congestion, transit frequency, and fares. Part of the model consists of a formula that determines the impact of a small change in subsidy levels on overall social welfare. They then applied the model to the metropolitan areas of Washington, DC; Los Angeles; and London. This analysis found "that, in almost all cases, extending fare subsidies beyond 50 percent of operating costs - often well beyond - is welfare improving at the margin across modes, periods, and cities" (Parry and Small 2009, 702). While the authors do not take into account the possibility of fare-free transit, seven of the twelve cases they examined found an optimum subsidy level of ">90" percent. This means that the optimal fares in those cases would be either very low or none-existent.

The last two studies considered here each investigate a single fare-free transit program using similar methods. Metaxatos (2013) looked at the Seniors Free Ride program in the Chicago Metro Area and focused on the cost of the program. Shen and Zheng (2015) considered the system-wide fare-free demonstration in Gaoping, particularly the impact on travel mode choice. Both studies use a pretest-posttest model to determine the effects of their respective program, drawing data from surveys and directly from the relevant agency. Metaxatos's surveys were of participants in the program, while Shen and Zheng surveyed residents, taxi drivers, and motorcycle taxi drivers. Using multiple methods to convert the raw data into estimated annual costs of the program, Metaxatos derived figures that generally fell between thirty and forty million dollars, although one method each gave answers that were significantly higher and lower (2013, 140). Shen and Zheng found a 320% increase in ridership as a result of the fare-free program, along with a slight decrease in driving and a minimal impact on taxis

(2015, 3). There was, however, a significant impact on motorcycle taxis, enough that one third of them left the market (2015, 10).

Like the studies presented in the first section, those seen above remain focused on the impacts of fare-free programs on traveler mode choice and agency finances. Sometimes, these impacts are aggregated into consolidated measures of social welfare. Because of differences in assumptions made by scholars and in local characteristics of programs, very little can be concluded from these studies as a whole; mainly that fare-free transit can be expensive and significantly increase ridership, but may have minimal impact on reducing automobile use. The most shocking result comes from Gaoping, where Shen and Zheng's finding of a 320% increase in ridership translates to an elasticity of -3.2, almost ten times higher than the Simpson-Curtin formula, and well outside the range identified by Kemp. However, none of the studies have investigated the reasons behind the creation of the program that they look at. There are often mentions of the specific expected impacts that are cited by proponents as a reason to initiate the program, but no analysis of the factors that caused those proponents to be successful in any particular case.

Summary

Scholars have used both experimental and quasi-experimental methods to study fare-free programs as they exist, and theory backed up by data to predict the effects of hypothetical fare-free programs. Sometimes, these effects have been linked to the reasons why proponents of the programs have supported them. However, missing from the literature is any investigation into why these proponents were successful in getting the programs adopted. Historians and political scientists have developed various theories of policy formation, but these theories have not been tested for

applicability to any case of fare-free transit. The next chapter will discuss the process used to develop the narrative of the Magic Carpet program and to test these theories for applicability to it.

Methods

This study consists primarily of two interrelated parts: constructing the narrative of the Magic Carpet program and explaining its creation, longevity, and end. Constructing the narrative began with reviewing the various sources discussed below to identify major events in the history of the program. I then looked at the immediate causes of these events identified in the sources in order to convert that chronology of events into a narrative. However, these immediate causes and the story built from them would not be enough to explain the creation, longevity, and end of Magic Carpet. For that, more in-depth investigation was required.

In order to determine what factors explain the creation, longevity, and end of Magic Carpet, I examined what was known or believed to be the case about its impacts. This decision was based on the assumption that a person's political activity is primarily motivated by what they perceive their interests to be. Although all people have a unique position in society, the effects of a single policy on people can generally be better understood when people are aggregated into stakeholder groups. For this reason, records of the interests of various people with respect to Magic Carpet can be analyzed through the stakeholder lens.

There are three main types of sources that I used for this data. First, several governmental reports about the Magic Carpet program were produced throughout its lifetime. These reports provide data about the known impacts on stakeholder groups during the program. While this would not help in determining why the program was created, the information was useful for explaining its longevity and eventual end. Furthermore, the reports also provide data about the stated objectives of the program, which naturally include or imply projections of what the effects would be. Because these

objectives and projections formed the entirety of what was already known about why Magic Carpet was created, they were the natural starting point for any attempt to develop a more complete explanation. The second category of sources is news articles about the program. Primarily, this included a systematic search of Seattle Times archives available through the Seattle Public Library. As a major daily newspaper for Seattle during the lifetime of the program, most actions related to the program would have been reported in the Seattle Times. Unfortunately, archives of the Seattle Post-Intelligencer, the other major daily newspaper in Seattle at the time, were not available through the library. I also included stories from other news outlets that reported on Magic Carpet throughout its lifetime, although there was no comprehensive search of archives for these outlets. Finally, I used three types of records available through the Seattle City Archives to provide additional data. Microfiche records of City Council meeting minutes identified which Council and Committee meetings involved discussion of Magic Carpet. Second, recordings of those meetings provided statements by elected officials and members of the public about the program. Third, official correspondence between city officials and other interested parties, as well as other documents relating to the program, provided additional insight on people's preferences.

As I reviewed these sources, I was searching primarily for three types of data. First, in order to build the skeleton of the narrative, I identified specific actions that were taken and the date of the action. These include the creation of the Magic Carpet program, any appropriation of money to the program, any step in the legislative process of these measures, and similar actions. Second, in order to identify factors influencing that narrative, I identified any claims of impacts that the program would have on various stakeholder groups, and entered those claims in a database. This database includes fields for:

1. The source for the claim;
2. The exact quote of the claim;
3. The year, month, and day of the source;
4. The stakeholder group affected by the claimed impact (e.g. bus riders, downtown business-owners, etc.);
5. The type of impact (financial, psychological, etc.);
6. Whether the impact is positive or negative for the stakeholder in question;
7. Whether the speaker is a member of the relevant stakeholder group, and if not, whether they are passing on statements from one or more members of the relevant stakeholder group;
8. Whether the impact is known (the result of a formal study) or perceived (the speaker's belief, may or may not be true); and
9. The type of speaker (elected official, community member, journalist, etc.).

I anticipated that item eight on this list might turn out to not be particularly relevant. If an affected person believes an impact to be real, then that belief confers upon the impact some amount of realness. Despite knowing this, I still collected this data, as it is better to have the data and not need it than to need it and not have it. Third, I created a database of the stated objectives of the program, which stakeholder groups would be helped by each objective, and how well each objective was met.

After assembling these data, I further developed the narrative in light of the richer variety of information included in the various databases. The narrative is structured in chronological order because there was no compelling reason to deviate from this standard narrative form in this case. As part of the narrative, I called out both the unique facts that historians may find interesting in their

own right, and the occurrences that will be useful to future researchers seeking to identify similarities and patterns among various fare-free transit programs.

In addition to the narrative, I examined the various causal chains suggested by the narrative from the perspective of the three modern theories of historical causality that were discussed in the first chapter: the Great Man Theory, historical idealism, and historical materialism. For each of these theories, I developed the most realistic explanation of the story of Magic Carpet that conforms to the theory. The Great Man explanation focuses on individuals who had a significant impact on Magic Carpet, either strengthening or weakening the program. The idealist explanation uses the prevailing ideologies of different time periods to explain the events of the story. The materialist explanation sees the events in terms of material circumstances that prompted them.

While my applications of Great Man and materialist analysis follow directly from the theories, the idealist analysis requires a little more exposition. For the idealist analysis, I approach the story using the political science framework of realignments and party systems. These realignments separate the political history of the United States into eras, known as either alignments or party systems. Each party system has a collection of dominant political beliefs, generally those that are held by the majority party of that alignment (Sundquist 1983, 1-3).

There is general agreement among political scientists that the United States has experienced at least five party systems, the first four of which all lasted about thirty-six years. Although Sundquist (1983) makes clear that realignments are not instantaneous and occur throughout multiple years, for ease of reference, they are named after a single year during the realignment process. As an example, the Whig Party collapsed by November 1856, and the new two-party system of the Republican and Democratic Parties did not stabilize until after the Civil War ended in 1865, but the entire process of

the Whig Party being replaced by the Republican Party is known as the realignment of 1860. Party systems, then are seen as spanning from the benchmark year of one realignment until the benchmark year of the next.

The Fifth Party System of the United States began with the election of Franklin Roosevelt in 1932. The primary distinction between the two parties in this system was over economic issues, where Democrats tended to believe that the government should intervene in the economy to support the interests of working class people, and Republicans tended to believe that it should not. Political scientists who study party systems disagree on whether the Fifth Party System has been replaced by a Sixth Party System, and if so when (Sundquist 1983). Some believe that the election of Richard Nixon in 1968 marked the end of the Fifth Party System, conveniently thirty-six years after it began. Others argue that it did not end until the late 1990s (Copulsky 2013). The model that best fits with the story of Magic Carpet involves the Fifth Party System being replaced by a Sixth Party System in 1980, so this is the model I apply in this study.

Finally, to compare the candidate explanations with each other, I reviewed the collection of changes and potential changes to the program from the perspective of each of the three candidate explanations. This began with distilling each explanation down to its key aspects: individuals for the Great Man explanation, prevailing ideologies for the idealist explanation, and categories of material conditions for the materialist explanation. For each change or potential change, I determined what outcome each explanation would have predicted by considering the individuals involved, the prevailing ideology of the time period, and the relevant material conditions. These predictions were made within a binary framework: the potential change either goes into effect or does not, although in some cases there was insufficient information to make a prediction for either the Great Man or

materialist explanation. Next, I compiled a table showing whether or not each candidate explanation accurately predicted the outcome of each potential change, and the overall accuracy of each explanation. These results indicated which of the three theories is best able to explain the story of Magic Carpet. Because these predictive explanations were developed with foreknowledge of the events they were meant to predict, this approach lacks sufficient scientific rigor for some applications. This would have been a problem if I were testing the ability of a single theory to predict future events. However, because the theories were tested against each other on a level playing field, there is still sufficient rigor for the conclusions to be valid. Finally, I used the results of this analysis to synthesize an explanation that could describe why events played out as they did more accurately than any of the single-theory explanations on their own.

After developing a complete draft of the narrative and explanations chapter, I compiled a list of everyone I mention by name who is still alive. I then made a reasonable effort to contact each of these people and give them the chance to comment on how they are presented in the story. Had they brought any concerns to my attention, I would have addressed those concerns in the final version of this paper. However, none of the people who responded brought up any such concerns.

Story of the Magic Carpet

Before competing explanations for the major events in the story of the Magic Carpet Zone can be developed, the entire story must be told. By this I do not mean that what follows is a comprehensive account of the Magic Carpet; such an account is, by the nature of reality, impossible. Rather, my version of the entire story is relatively comprehensive and includes every relevant piece of information that I was able to find.

Situation just before the program began

By the end of the 1960s, Seattle, like most American cities, had a publicly owned mass transit system. Seattle City Transit was responsible for bus transit service within the city, and had run a shoppers' shuttle, called the Dime Shuttle after its fare, from 10 am to 3 pm on weekdays since 1954 (Metro 1976, 1). Separate private companies provided buses to suburban King County (Metro 1976, 2). In the late 60s, several bond measures for improving the city and the surrounding area were placed on the ballot under the collective name Forward Thrust. One such measure would have provided a rail transit system throughout the county. While seven of the twelve bonds were approved, the transit measure failed twice. One failure was because state law at the time required a 60% vote to approve bonds, but the second time the measure failed to reach even 50% approval (Cohen 2016) (HistoryLink 2002).

A couple years later, there was another attempt to establish a single transit agency for all of King County. The Municipality of Metropolitan Seattle (Metro) had previously been established to

handle the regional problem of waste-water management. The Metro Board consisted of elected officials from Seattle and other cities within the area over which it had jurisdiction (Metro and Seattle 1977, 6). In September of 1972, the ballot measure authorizing Metro to take over bus service in both Seattle and suburban King County was approved by the voters (Metro 1976, 2).

Transit ridership had been declining in the Seattle area for a few years, and Metro, fresh off their success in addressing a regional waste-water problem, was determined to reverse the trend (Metro 1976, 3). Metro quickly implemented a fare cut, making the base fare twenty cents instead of the previous twenty-five (Metro 1976, 2). The staff also began investigating potential changes to service delivery that would increase efficiency. A report produced by Metro's staff about improvements to downtown mobility mentioned complaints from riders about one ramification of the zone-based fare system. All riders paid the twenty cent base fare when they entered the bus, but those riding across a zone boundary then had to pay the ten-cent zone charge when leaving. This meant that riders needed to have exact change twice in a single trip rather than just once (Metro 1973). On its own, this complaint could have led to any number of possible responses, but one such response also addressed a request that had come from the Mayor's office around the same time.

Development of the Magic Carpet Zone

The earliest reference in the archives of the City of Seattle to the program that would come to be know as Magic Carpet occurred on May 3, 1973. This was a statement made by Mayor Wes Uhlman to the Metro Council asking for a study of a downtown free-ride area, and stating eight benefits such a program could have. Some of these benefits would later be mentioned in studies of the Magic Carpet

Zone, while others were let go, either because they were not met or because they were deemed insufficiently important.

The first benefit included in the Mayor's statement was an improvement to air quality in the CBD. At the time, the federal government had recently started requiring cities to address their air pollution problems, and transit use was identified as a key component to efforts to control air pollution. According to the Mayor, 20% of vehicle trips in the CBD were completely internal to the area, and thus could potentially be diverted by a fare-free zone. Eliminating half of these trips would have resulted in a reduction of 13,000 vehicle miles traveled, which Mayor Uhlman said would reduce pollution by 560 kg per eight hours per square mile. Oddly, he did not specify which pollutant the 560 kg figure related to; discussion in a joint meeting of the City Council's Transportation and Finance Committees later that year suggests that the figure referred to a combination of carbon monoxide and nitrogen oxides (Finance Committee 1973).

Encouraging transit usage was the second benefit that the Mayor mentioned. This benefit depends on the understanding that whenever someone travels into downtown, whether for work or for shopping, they make a choice between driving and taking transit. If transit mobility within downtown is greater, then more people will choose to leave their cars at home and ride the bus. The Mayor also mentioned that 35% of the people who shop downtown live outside of the city, drawing a parallel between downtown Seattle's status as a regional shopping center and Metro's status as a regional transit system. If suburban shoppers are encouraged to take the bus by the existence of free transit within the CBD, then fare box receipts from suburban areas would increase. The 35% figure was also used to argue that a downtown fare-free zone would be of regional benefit.

The third benefit was stimulation of retail activity. It was believed that the Dime Shuttle had stimulated retail trade, so a downtown fare-free zone was expected to stimulate it further. A reduction in auto trips within the CBD was mentioned in the section on improving air quality, but also claimed separately as the fourth benefit. Specifically, Mayor Uhlman claimed that, "The elimination of this sort of trip is of obvious benefit to everyone in our city and the Metro region," and a hand-written note on his prepared remarks indicated that this was 'important'.

Next is a potential benefit of a fare-free zone that is not mentioned in the formal reports on the program, that it would tend to make the CBD a more homogeneous area. A survey had shown that shoppers and visitors generally walked less than three blocks from their parking spaces, and that the average was just over two blocks. In part because of this short walking radius, the CBD was divided into three distinct regions: the retail district to the north, the government district and pioneer square historic area to the south, and the financial district in between. It was speculated that a fare-free zone would tie these three areas together.

The sixth benefit listed by the Mayor is that tourist trade would increase. Because tourists often arrive in Seattle without cars, a fare-free zone would improve their mobility. With greater mobility, existing tourists would spend more money in Seattle, and the area would become more attractive to potential tourists. Encouraging peripheral parking was the seventh benefit listed. This is related to a City parking policy in favor of moving parking outward from the CBD. The policy mentions the use of both park-and-rides and peripheral parking. The speculation behind this policy was that some of the people who would not be willing to use park-and-rides would be willing to park peripherally and take a free bus for the rest of their trip. However, this particular benefit did not materialize (Metro 1977, 24).

Finally, the eighth benefit mentioned was that there would be a positive effect on the energy crisis. The reduction in auto trips mentioned as part of the first benefit and claimed in its own right as the fourth benefit would also reduce gasoline use. Because of the inefficiency of the private automobile compared to other modes of transportation, the net effect would be a reduction in energy use. With the ongoing energy crisis, any decrease in automobile dependency would be welcome (Uhlman 1973a). The following day, the Mayor's office put out a press release about his request that Metro consider the program. This press release mentions that the proposed program would exempt both the peak period and night (Uhlman 1973b).

Over the next couple months, movement towards the Magic Carpet was quiet. The next item available in the record is the Metro staff report about downtown mobility, put out on July 5th. Given the time generally required to compile such reports, it is likely that this was already being prepared when the Mayor made his request, although a downtown fare-free zone was the key recommendation of the final report. Importantly, this report makes no mention of any time restrictions on the program. It is presented as a two-part change to the fare structure: the City pays the estimated cost of the fare-free zone, and the "pay-in-the-country" fare collection system replaces "pay-as-you-enter". Pay-in-the-country meant that buses heading towards downtown and buses that never traveled through downtown would be pay-on-entry and buses heading out from downtown would be pay-on-exit. Several advantages of pay-in-the-country were mentioned, including speeding up loading downtown and minimizing "the need for a passenger to have exact change more than once during each trip" (Metro 1973). Because the second of these benefits of pay-in-the-country is no less relevant at peak times than off-peak, and the first is actually more relevant during the peak, there was no longer a good reason to restrict the fare-free zone to off-peak times during the day.

By the end of July, the City Council's Transportation and Finance Committees had begun considering the proposal. At a joint meeting on the 26th, they decided to put off making a decision on the matter for one week so that they would be able to receive information from Metro and various city departments. On July 30, Finance Committee Chair George Cooley sent letters to Mayor Uhlman and to Metro Executive Director Charles Gibbs, requesting that information (Cooley 1973). The type of questions asked by the Committees suggest that many members were not supportive of the proposal at that time, but that they were willing to be convinced. Some questions, such as what the rationale was for setting the geographical boundaries of the area, were the sort that would be asked by any elected official doing due diligence on a new program. Others were not. One such question asked whether the purpose of the program was to improve air quality or promote ridership, and if the purpose was air quality "Why is it not included in the plans to improve air quality?" (Cooley 1973). While the meaning was clear at the time, the second part of this question is ambiguous if one has not reviewed the recordings of the relevant committee meetings. Was the committee asking why improving air quality was not mentioned in the plans for the Magic Carpet? This seems unlikely, as improving air quality was explicitly mentioned as one of the intended benefits of the program. In this case, they must have been asking why the Magic Carpet was not included in the existing air quality improvement plan. However, the Mayor had only first proposed the idea a few months earlier, and it would be unrealistic to expect that the air quality improvement plan could be updated that quickly. Bringing it up seems to imply that only programs mentioned in the relevant plan should be implemented. As Metro's response at the following meeting indicates, Magic Carpet had not been mentioned in the air quality plan precisely because the situation was moving quickly and there had not yet been time to update the plan. However, in the time between when the question was asked

and when Metro answered it, the plan had been updated to include Magic Carpet (Finance Committee 1973). Furthermore, the form of the question, implying that any program can only have one objective, might be of the sort that is generally used by anyone trying to undermine the program they are asking about.

Just two days after these letters were sent, Victor Gray, President of the Downtown Seattle Development Association (DSDA, sometimes known as just DSA), expressed support for the proposed program in a letter to City Council President Liam Eng Tuai. This support is prefaced by a reminder of how important the Central Business District (CBD) and the DSDA's member businesses are to the City. After Gray provides a brief explanation of why the fare-free program would be beneficial, he says he will recommend that the DSDA's Board of Trusties work with Metro and the City "to determine an equitable way to finance this vital program" (Gray 1973). The format of this letter follows the pattern of a reminder of strength, followed by statement of preference, and an offer to cooperate. The demonstration of strength portion of the letter flirts with the possibility of being a threat when Gray reminds Tuai that the portion of City revenue derived from the CBD includes, "$970,000 in parking meter revenues which now go into the City General Fund, but by State statute should be used to regulate and move automobile traffic" (Gray 1973).

The day after this letter was sent, the Finance and Transportation Committees met again to consider the program. At this second meeting, Metro was able to address the concerns of the Council members, and the committees recommended that the full Council approve the program (Finance Committee 1973). Public comment during this meeting included a representative from the DSDA reiterating the organization's support for Magic Carpet (Finance Committee 1973). While there is no clear indication from any Council member that the DSDA's position influenced their decision to

approve the program, it is likely that, given the importance of DSDA member businesses to the city, the organization's opinion would have carried some weight with the Council. Only a few days later, the bill authorizing the program was passed unanimously by the City Council (City Council 1973).

The First Year

The Magic Carpet began on Sunday September 9th, 1973, with a formal kick-off ceremony the following Monday (Lane 1973a). After short speeches at Westlake from Metro Council Chair Aubrey Davis and Mayor Uhlman, dignitaries and the press boarded a bus for a tour of the zone. During the tour, the Mayor routinely provided further comments. Various suggestions from the Mayor's staff for these comments take a triumphalist tone; for instance, referring to the Magic Carpet as a "major victory in [the] struggle to reduce air pollution, traffic congestion, and noise in the central city." Some suggestions identified the conflict between cars and people: "Seattle streets will be reclaimed in part from the automobile and returned to the people." In a notable departure from the tentative manner in which the program was first suggested back in May, the Mayor and his staff firmly believe that the Magic Carpet will be a success: "The transit fare free zone is for the moment an experiment. *When* [emphasis added] it has proven itself successful, it will become a permanent part of Metro Transit's operations in Seattle." The suggested remarks regularly draw upon the benefits mentioned in the Mayor's initial request that the program be considered (Uhlman 1973c). Articles in the Seattle Times, Seattle Sun-Times, and the Washington Post all reflected this same optimistic mood (Heerwald 1973) (Seattle Sun-Times 1973) (Lane 1973a). However, the author of the article in the Seattle Sun-Times was under the impression that the Magic Carpet program did not apply during peak hours. This

misconception was likely the result of out-of-date information, since the original proposal would only have applied off-peak.

Because Magic Carpet was originally authorized as a one-year pilot program, it was important to begin collecting data early. The Magic Carpet Study conducted in 1974 involved both a survey of public opinion and an analysis of the program's impacts on some of the areas in which benefits were predicted. Six distinct stakeholder groups were surveyed on their opinions about Fare Free service: CBD employees, bus riders, new or relocated businesses, established businesses, social service agency managers, and social service agency clients.

As part of the survey, CBD employees specifically were asked about the effect of Fare Free service on six of the areas that the Magic Carpet program was intended to benefit. The greatest rates of perceived benefit were found for "increase in shopping convenience" (80.5% substantial effect) and "making it easier to get around in downtown Seattle" (79.9%). The lowest "substantial effect" score was for "reduction of air pollution" (42.5%), which is not surprising given that the estimated improvement in air quality was small enough that people would be unlikely to notice it without special monitoring equipment. The other three benefits had a slight majority of respondents saying that there was a substantial effect, with 62.7% for "downtown a better place to work", 60.4% for "reduction of traffic congestion", and 54.2% for "making it easier to use buses to get to and from downtown Seattle" (Metro 1974). For complete results to this and other questions in the study, see Appendix A.

The choice of which six criteria to survey people on tells us something about what the survey-developers thought was relevant about Magic Carpet. Air pollution, traffic congestion, shopping convenience, and ease of travel within downtown are all attributes we would have expected to be included in the survey, based on the anticipated benefits in the Mayor's initial request. Making

downtown a better place to work, while not explicitly mentioned in the request, is not surprising, given that, for CBD employees, it is essentially a catch-all for any benefits of the program. Ease of bus travel to and from downtown, however, is different. Magic Carpet was not specifically intended to ease bus travel to and from downtown; at most, it was hoped that the free-sample effect would have induced greater use of buses outside of downtown as well. What was intended to ease bus travel to and from downtown was the pay-in-the-country system. The inclusion of this question indicates that those who designed the survey considered Magic Carpet and pay-in-the-country together as a coherent system. That a majority of survey respondents believed there had been a positive effect in this area suggests that pay-in-the-country was successful in meeting that goal.

The five stakeholder groups other than social service agency managers were asked a series of questions about whether Magic Carpet should be continued. All groups supported the program regardless of how the question was phrased, but there is a noticeable trend in responses across the three questions. On the first question, "Do you think the fare-free service in downtown should be continued?" the stakeholder group with the lowest level of support was bus riders, with 85% in favor and 5% opposed. The second question, asking whether City tax money should be used to support the program, saw both a decline in support and an increase in opposition across all stakeholder groups, but now the least supportive group was CBD employees, with 63% in favor and 14% opposed. Finally, respondents were informed that the one-year experiment cost an average of 12.5 cents per city resident, and asked if that sounded too low, about right, or too high. This change in answer choices makes the shift from the second question to the third somewhat more difficult to track, but we can still make some comparisons. First, overall more people did not respond to the third question than to the previous two. The presentation of the data does not allow us to distinguish between people who

said "I don't know" or something similar and those who did not bother to respond to the question at all. Second, for most stakeholder groups, those who said the cost was either too low or about right were a smaller portion of the sample than those who supported using City tax money to support the service. The exception is new businesses, which had only 77% support for paying for Magic Carpet with City tax money, but had 10% say the cost was too low and 82% say it was about right. On the other hand, most stakeholder groups also had fewer respondents who said the cost was too high than who opposed using City tax money to fund the service. The exceptions were established businesses, which was constant at 10%, and bus riders, who increased from 10% to 11% (Kruger and Beck 1975).

The Expansion Era

Within months of the start of the Magic Carpet program, Mayor Uhlman was floating trial balloons about expanding it into the Denny Regrade area. In January of 1974, the Mayor received a letter from a constituent who was strongly in favor of investing in transit (Winderbaum 1974). In his response, the Mayor said that he would be asking Metro to explore extending service north to the Seattle Center, which would mean incorporating all of the Regrade into the Magic Carpet Zone (Uhlman 1974). A Seattle Times article from April of 1974 quotes the Mayor saying that the Magic Carpet would be extended to the Regrade "in a few weeks" (Lane 1974a). No documents in the City Archives' Magic Carpet folders suggest that there was any work on a Regrade expansion that early. This means that either there was work done, but documentation of it did not reach the Archives; Mayor Uhlman was misinformed about the situation relating to a program that he had championed; or he knew that he was making inaccurate statements but wanted to keep the idea of expansion in the public eye.

While the Mayor was focusing on expanding the area to the north, the first multi-year contract for the Magic Carpet included an extension of the south-eastern boundary, into the International District. Because the one-year pilot program began in September, it was out of alignment with the budget cycles of the City and Metro, which use the calendar year. In August 1974, Mayor Uhlman suggested, and the two Councils approved, a four-month continuation through the end of the calendar year (Seattle Times 1974a) (Lane 1974b). Negotiation between the City and Metro over the cost of the program for the next two years should have had plenty of time to finish before the end of the year, but in a delay that would become a trend, the agreement wasn't reached until January, and was not approved by the two Councils until February. In addition to adjusting the annual cost of the original Magic Carpet area to $100,000, this agreement added a few blocks in the International District for an extra $15,000 a year.

Later in 1975, expanding the Magic Carpet to the north was brought up again. This time, rather than a remark by the Mayor, expanding the area into the Denny Regrade was proposed by a member of the City Council. On October 6th, Councilmember John Miller introduced a resolution to the Council calling for expanding the program from Stewart Street up to Denny Way. A Seattle Times article on the matter quoted Miller as calling the extension "a vital element" in Regrade development, which the Council "has identified as a prime target for development of in-city living units, combined with commercial and retail space" (Sperry 1975). This expansion was rejected by the Council. In November 1976, Mayor Uhlman again recommended expansion of Magic Carpet into the Regrade for $47,000, but expansion was once again rejected by the City Council (Sperry 1976).

But the dream of adding the Denny Regrade to the Magic Carpet area did not die. As one of his last acts as Mayor, Wes Uhlman started the process that within a couple months would result in the

area being expanded north into the Regrade. On December 27th, 1977, he asked the Metro Council to expand the area to Battery Street. The request came after the city reached an agreement with developer Martin Selig to split the estimated $21,675 annual cost for the first five years. According to a Seattle Times article on the request, Selig, who at the time was beginning work on a third office tower in the Regrade, had "been working with the mayor for a number of years to get the free service extended" (Seattle Times 1977a). In addition to the benefit to the Regrade, Uhlman claimed that the expansion would also benefit other neighborhoods because of how it would impact developers' choices about where to develop. Specifically, developers would "be more likely to build in the regrade because of the free service than in Lower Queen Anne and Capitol Hill where citizens have fought to keep out more intense development" (Seattle Times 1977a).

This expansion proposal sailed through the process with only a little delay. On January 5th, the Metro Council approved the agreement the Mayor's requested agreement. At this point, it was expected that the expansion would go into effect around February 1st (Seattle Times 1978a). The City Council approved the agreement on January 16th, but at this point the projected date of the expansion had moved to late February (Seattle Times 1978b). Two Seattle Times articles reported that the expansion went into effect on March 4th, one article in late February and the other the day after the expansion, but neither article mentioned that the expected start date had been delayed (Seattle Times 1978c) (Seattle Times 1978d). The fact that this delay went unremarked upon in a major daily newspaper suggests that such small delays were, if not routine, at least unsurprising.

Holding Steady

After 1978, there was a period of a few years in which the only change to the Magic Carpet program was the size of the payment from the City to Metro. The program had been set in motion, and without any obstructions, continued to function.

This is not to say, however, that everything was smooth sailing. After the first full calendar year of the program, Metro and the City agreed to two-year contracts stipulating the amount the City would pay. From the start of the program until the end of 1982, there were four such contracts. Each time the contract was up for renegotiation, the previous contract expired before the new contract was finalized. As mentioned previously, when the initial one-year pilot program was about to end, a four-month continuation was passed to give time for negotiating a longer continuation and ensure that future agreements would line up with the calendar year (Lane 1974b). This continuation cost the City $21,300, the same rate as the $64,000 initial program (Seattle Times 1974a). Shortly after the continuation passed, Mayor Uhlman presented his budget for 1975 to the Council, including $65,000 for Magic Carpet, a little more than the cost in 1974 (Zahler 1974). However, no agreement had yet been reached with Metro over continuing the program beyond the end of the year. The adopted budget reflects this uncertainty, allocating the Mayor's requested $65,000 to Magic Carpet. After the City Council adopted the budget for 1975, the Metro Council voted on December 19th to continue Magic Carpet for another month, because negotiations over the cost were unlikely to be finished before the end of the year (Seattle Times 1974b). By mid-January, a tentative agreement had been reached, but the $100,000 base price was much more than the Mayor had planned for in his budget proposal. This significant increase "reflects actual operating experience, whereas the first-year cost was an estimate" (Zahler 1975). This two-year agreement was approved by the City Council on

February 11th (Seattle Times 1975a), and by the Metro Council on February 20th (Seattle Times 1975b).

As 1976 came to an end, negotiation between the City and Metro was again incomplete. On December 16th, the Metro Council approved a two-month extension of the previous year's rate while negotiations continued (Seattle Times 1976). Because negotiation was finished by the end of February in 1975, it would have been reasonable to expect that negotiators would only need the same amount of extra time in 1977. However, this was not to be. It was not until March 17th that Metro announced that they had reached a tentative agreement with the City. At this point, the Metro Council delayed action so that the City could pass the agreement first (Lane 1977). The City Council, though, did not seem eager to approve the agreement, as it was passed almost two months later on May 16th. This reluctance may have been due to the increased price tag; up from $115,000 annually to $175,000, although the new price included the City's "share of an expected deficit in the Kingdome shuttle" (Seattle Times 1977b).

By the time the 1977-1978 agreement ended, delay in negotiations was so routine that the Seattle Times made no mention of it until the new two-year agreement passed on August 13th. In an article mostly about other City Council business, one of the last paragraphs mentioned that the agreement, which would cost the City $226,500 per year, passed the Council. There was no mention of the more than seven-month-long gap since the end of the previous agreement (Rinearson 1979a). When this agreement ended, renegotiation moved more quickly, but the new agreement was still not passed until February. In the middle of February 1981, Metro and the City reached an agreement on another two-year continuation. The City would pay $329,089 in 1981 and $352,125 in 1982 (Seattle Times 1981). For a table of when each continuation was approved and the amount of time since the

previous agreement expired, see Appendix B. It is important to note that despite the constant delay, the Magic Carpet program remained in operation throughout the entire time period.

While the Magic Carpet area did not change after March 1978, there was an attempted expansion. In the summer of 1979, Mayor Charles Royer tried to expand the area to include Yesler Terrace. On August 8th, 1979, when the Transportation Committee was considering the agreement to renew the program for 1979 and 1980, the proposed Yesler Terrace expansion was under consideration as well. The Committee approved the renewal of the program, but the expansion, which would have cost about $5,000, was rejected (Rinearson 1979b). Although the cost was minimal, Councilmember Jeanette Williams said that adding a neighborhood outside of downtown to the Magic Carpet area would open the floodgates to other neighborhoods requesting the same benefit. She also sounded irritated that the Mayor's office had negotiated the expansion "arbitrarily", without authorization from the Council to seek such an expansion. These arguments prevailed, and no member of the Committee spoke in favor of the expansion (Transportation Committee 1979).

While there is minimal available information about the proposed Yesler expansion, an undated chart of payments for the program may be from that time. This chart (reproduced in Appendix C) is a perplexing document. Because it assumes the Yesler Terrace expansion of Magic Carpet, it appears to have been produced in 1979, before the August 8th Transportation Committee meeting. However, the totals that it gives for the cost of the program through 1982 agree with those given in another document that was prepared for the Magic Carpet Task Force that met in 1983, discussed in the next section (also reproduced in Appendix C). The particularly odd part of this agreement is that the undated document includes figures for the Yesler expansion, while the Task Force document was produced after the Yesler expansion failed, yet they both reach the same totals. Furthermore, there

was one round of renegotiation (in 1981) that took place after the Yesler expansion failed. For the undated document to have been produced before the Transportation Committee rejected the Yesler expansion, it would have to have predicted the results of that negotiation down to the dollar. It seems more likely that the undated document was produced after the 1981 negotiations were complete, as the only pair of years marked as an estimate is 1983 and 1984. If this is the case, however, it means that the base figures reported in the undated document are inaccurate, because they only reach the accurate total when the cost of the non-existent Yesler expansion is added (Seattle nd) (Seattle 1983).

A Possible Ending

The first threat to the future of the Magic Carpet came about at the end of 1982. A national recession had led to a budget deficit for many local governments, including the City of Seattle. In October, when Mayor Royer put forward his budget proposal for 1983, he had cut all funding for the Magic Carpet. He did not, however, intend for the program to end; the Mayor's office released a statement demonstrating how the rest of the County benefited, and calling on Metro to take on the entire cost. Understandably, the Metro Council was not enthusiastic about this idea. There was also the possibility that downtown businesses should pay for the program, given the benefit that they got from it, although Mayor Royer did not mention this possibility when meeting with the DSDA. The DSDA agreed that the program should be continued, but not that their members should pay for it. The three major stakeholders, the City, Metro, and the business community, all supported the program, but no one wanted to pay for it (Moriwaki 1982a) (Gilmore 1982) (Seattle Business 1982).

Fortunately, City Council President Jeanette Williams had another idea. The City would continue to fund the Magic Carpet at the same rate as the previous year until April 10th, at a cost of

$100,000. This would provide time for a task force made up of representatives from the three stakeholder groups to develop a long-term solution (Moriwaki 1982b). The rest of the Council approved the amendment to the budget adding $100,000 for Magic Carpet, while Metro and the business community agreed to the nine-member task force (Moriwaki 1982c) (Moriwaki 1982d).

There is little information available about the discussions within the task force itself; most of what is preserved in the City's archives on the topic relates to preparation for the task force meetings and implementing the proposal that resulted from the task force meetings. The first indication that there might be some change to the City's level of support for Magic Carpet actually came before the Mayor's budget proposal was released. In late August, Metro received a letter from the City indicating that funding for the program "may not be forthcoming in 1983." This letter prompted a memo on September 1st from Monty Lish, Metro's Manager of Safety and Training, to several other Metro staffers directing them to explore implications of the potential revenue loss and report on alternatives. The memo included a report by Rod Armour, another Metro staffer, from October of 1981 investigating the same issue. This report's favored recommendation was to maintain the existing pay-in-the-country system and two-door CBD operation during peak travel time. The memo requested responses by September 8th. A handwritten note on the memo, that presumably was a staffer's initial reaction, stated "Good analysis, Fight to keep!, Glad for rec. to continue, op. as-is if no funding" (Lish 1982). Together, the report, memo, and hand-written note suggest that Magic Carpet would have continued in some form without Jeanette Williams's intervention, but it may not have continued as it was previously.

On October 14th, after the Mayor's proposed budget was released but before she proposed the task force, Council President Jeanette Williams received a report on the Magic Carpet situation.

The report acknowledged the pressure that the City's general fund faced in the bleak financial context, and made two key points about Magic Carpet. First, that its costs should have been spread beyond the City, since the program benefited more entities than just the City. Second, that there were problems with the methodology that was used at the time to determine cost. Each renegotiation of the cost was based on fare and ridership increases that would have been unlikely to occur in the absence of the Magic Carpet. Furthermore, the City did not get financial credit for the additional paid ridership induced by Magic Carpet or for operational savings that resulted from the program (Seattle 1982a). This analysis likely played a role in the development of Williams' task force proposal.

A few days later, DSDA President Walter Williams sent a letter to Mayor Royer expressing the organization's support for continuing the program. He mentioned the importance of the program to the city and said that it "deserves the full public support of both the City of Seattle and METRO Transit" (Williams 1982a). Attached to the letter was an analysis of the impact of eliminating Magic Carpet, concluding that elimination would cost the City about $280,000 dollars in tax revenue from downtown and cost Metro almost $100,000. The report said that some of the lost revenue would be recaptured by other outlets in the City, but it was "likely that the vast majority of tax revenue would be claimed by the ever growing suburban business centers." While the net revenue impact on Metro would like have been much less than $100,000, the net impact on the City would have been close to $280,000. More important to the DSDA, though, would be the $16 million reduction in downtown retail sales volume; since the DSDA's members were all located downtown, they would not have recovered any of the money (DSDA 1982).

City Council President Williams proposed the task force in a memo to the rest of the Council on November 3rd. This memo included a brief summary of the history of payments and an explanation of

why the City should be able to get a lower price for the program (Williams 1982b). Just nine days later, her proposal was passed by the Council as a budget amendment: the City would fund Magic Carpet through April 10th and form a task force with representatives from Metro and the DSDA to determine how the program would be funded in the future (Seattle 1982b). The amended budget was passed on November 20th, securing continued operation of Magic Carpet for another three months (Moriwaki 1982c).

After the budget passed, work began on the Task Force to ensure that Magic Carpet would continue after April 10th. On December 16th, Jeanette Williams provided formal notice to Walter Williams of DSDA and Gary Zimmerman of Metro that Magic Carpet would be continued until April 10th, and requested that they each appoint three representatives from their respective organizations (Williams 1982c). Once the Task Force roster was assembled, Jeanette Williams informed the other members that the first meeting would be on January 17th, and that she hoped to keep the work to within one month (Williams 1983a). Included in her letter was a paper on the background of Magic Carpet to get Task Force members up to speed on the program. Despite Williams' hopes, there were still hurdles for the Task Force to meet before they could put forward a proposal with unanimous support.

By January 28th, it had become apparent that the business community was unwilling to make any direct payments to support the Magic Carpet program. Instead, discussions had moved on to other means by which businesses could support transit. The main proposal from Metro was for an aggressive effort to enroll more employers in the Employer Subsidy Program, where employers subsidize the cost of a transit pass for their employees. This effort would have a $100,000 target for the total dollar value of passes sold over ten months (Tober 1983). Metro's proposal received a cold

reception from the business representatives on the Task Force. Bruce Nordstrom in particular said that the $100,000 figure for pass sales seemed too ambitious, and it was "unlikely that there will be this kind of support in the business community." He acknowledged that they seemed to be "at some kind of an impasse" (Nordstrom 1983).

The means by which this impasse was resolved are unclear, but by February 17th, Jeanette Williams was able to express hope that the February 23rd meeting of the Task Force would be the final one (Williams 1983b). In a memo to the Mayor on the day of the meeting, William Stafford, Director of the Office of Intergovernmental Relations, was still unsure whether the business community would balk at the $100,000 cost. He recommended that the Mayor seek to keep the City's commitment at $100,000 regardless of whether or not the businesses were willing to pay their $100,000, while acknowledging that Metro would seek a split of the business share of costs between the City and Metro if the DSDA could not commit (Stafford 1983). However it was done, the business community was persuaded to commit to additional subsidized employee passes. This commitment is mentioned in various post-Task Force documents, and the DSDA held a breakfast in September for its members to hear from Metro about the benefits of the Subsidized Pass program (Metro Pass Sales Office 1983).

Holding Steady Again

After the City's share of Magic Carpet's cost was reduced by the task force, surviving records of the program become sparse. There are, however, two instances of potential change that may be of interest. This is because they were mentioned once, and never seem to have any further impact. The first of these was a proposal by Seattle's Department of Land Use and Transportation to move the northern boundary of the Magic Carpet Zone from Battery Street south to Lenora, almost entirely

reversing the Regrade expansion from 1978. This change would have been part of a plan significantly changing what parts of the Regrade are residential and which are commercial/industrial. The only reference to this plan that I found was in a letter to the editor in the Seattle Times in September of 1983, only a few months after the City, Metro, and the business community renegotiated funding for Magic Carpet (Jance 1983). Given that this proposed plan was not mentioned in any of the Magic Carpet-specific folders in the City Archives, and that the northern boundary remained at Battery Street, it seems as though the proposal to contract the area was removed from the plan. It is also possible that the letter writer was mistaken, but in that case, one would think that the Times would have printed a correction within a few days. Regardless, this minor mystery, while intriguing, is not particularly important to the story.

The other intriguing isolated reference occurred in April 1986. This was a letter from Acting Deputy Mayor Gary Zarker to Martin Selig about the possibility of restarting Selig's payments for the portion of Magic Carpet costs relating to the Regrade (Zarker 1986). Three years after primary funding responsibility had been transferred to Metro, renewal was being discussed. At one point during the negotiations, the cost of Magic Carpet in the Regrade was mentioned as a separate cost from the rest of the program. Selig's previous agreement with the City to fund half of the cost for Regrade for five years had expired at the end of 1982, and Zarker wanted to meet with Selig to discuss the possibility of a new funding agreement. The letter promised to set up an appointment in the next few days, but there is no indication in the archives about whether such a meeting ever took place, and if so, what came of it. Not only that, but there is no other reference to renegotiating payments related to the program in 1986. While it does not appear as though a new agreement arose from this meeting, that cannot be said with certainty, as Selig's payments are not listed as a separate line item in the City's

budget. Furthermore, after 2001, Magic Carpet itself ceases to be a separate line item in the budget. For a compilation of Magic Carpet payments as reported in Seattle's budgets, see Appendix C.

The Contraction Era

Despite the routine need for extensions on negotiations and the close call at the end of 1982, the Magic Carpet was in continuous operation for over fourteen years. That ended at 9:00 pm on October 5th, 1987. On that day, the nighttime closure of the Magic Carpet came into effect. Reducing assaults on drivers was the primary motivator for this change to the program. With the pay-in-the-country system, outbound patrons were asked to pay when they have already reached their location, meaning that they could simply leave the bus if they didn't want to pay. Furthermore, if any patrons became violent when asked to pay, the driver was at a disadvantage in the sparsely populated areas outside of downtown. From the beginning of 1987 until July, there were 50 assaults on bus drivers. The same period of 1986 saw only 24 assaults. Although the criteria for considering an incident an assault changed from 1986 to 1987, applying the 1986 criteria to the 1987 data would still show an increase to 33 assaults. With the switch to pay-as-you-enter during the night, police assistance for drivers was readily available in the more heavily patrolled downtown (Lane 1987a).

However, there were negative impacts of this change to Magic Carpet's hours of operation. City officials were "concerned about the effect on regular late-hour bus patrons and downtown residents" (Lane 1987a). Transit drivers had originally requested that the program cutoff at 7 pm, but Metro chose 9 pm after discussing the change with the City and downtown business owners. The extra two hours were intended to maintain the convenience of boarding without paying for evening shoppers and workers (Lane 1987b). Dan Linville, president of Amalgamated Transit Union (ATU) Local 587, said

that the negative effects of the change would be felt by few riders, and that "This will make bus riding safer and more enjoyable for the vast majority of the public" (Lane 1987b). The general consensus of drivers, other staff, and elected officials was that this change would be a net improvement.

In September of 1990, the downtown Seattle bus tunnel first opened for service. While this did not involve any decrease in the scope of Magic Carpet, that was not assured from the start. As part of the planning for the bus tunnel to open, Metro conducted a study about how to integrate the tunnel with Magic Carpet. Three options were considered: including the tunnel within Magic Carpet, charging fares on tunnel buses but leaving the surface buses free within downtown, and ending Magic Carpet. Because the buses in the tunnel would be routes that were previously on the surface, and thus part of Magic Carpet, charging fares in the tunnel would amount to a reduction in Magic Carpet service.

The study found multiple negative impacts of charging fares in the bus tunnel. The most important of these was that "The annual operating costs of collecting fares in the tunnel would equal or exceed the potential revenue gained" (Metro 1989). The report also found that charging fares in the tunnel would cause delays in travel time, and that the increased complexity of the fare structure would be detrimental to both riders and drivers. Charging fares would have no impact on the potential for security problems in the mezzanine, could reduce security problems on coaches and the platform, and could increase fare disputes because of the more complicated structure (Metro 1989). Thus, there would be no net impact on safety concerns.

After acknowledging the benefit provided by Magic Carpet to "Metro, the City of Seattle, transit riders, and the downtown business community and workers," the report makes four recommendations. The first three recommendations were that Magic Carpet should continue; should include the new tunnel, even Convention Place Station, which is just past the eastern edge of the

Magic Carpet Zone; and should include the entirety of the two new downtown circulator routes on First and Third Avenues, even though they each served some stops outside of the Magic Carpet service area at one end of their routes. The fourth recommendation was to recalculate the City's contribution to Magic Carpet, maintaining the formula established in 1983 that based the City's payment on both lost revenue and impacts to Metro's operating costs (Metro 1989). These recommendations were accepted, and two years later, the tunnel opened as part of the Magic Carpet Zone (Lane 1991).

In January of 1994, the nighttime closure of Magic Carpet was extended by two hours on either end, leaving fare-free service available only from 6am to 7pm (Schaefer 1993). According to the Seattle Times, concern for driver safety motivated the change. Metro began considering changes to the program in August, after a survey found that 87 percent of drivers based out of Metro's Central Base had experienced fare evasion incidents in the previous three months. In the first six months of 1993, there were 103 assaults against bus drivers, compared to 79 in the same period the previous year (Lane 1993). During this discussion, Mayoral candidate David Stern advocated ending Magic Carpet "to keep violent people off the buses" (Lilly 1993). Issues of safety, which were negligible when the program began (Metro 1975, B-7-B-8), were becoming increasingly difficult for Magic Carpet to handle.

Until 2009, despite the reduction in the program's hours of operation, when Magic Carpet was in effect, it applied to all local transit service within the defined area. That changed in July, when Link light rail service began. The northern end of the initial light rail line used four of the five stations in the downtown bus tunnel, renamed the downtown transit tunnel. Buses in the tunnel had been free for

trips that stayed downtown since the tunnel opened, and they remained so when Link was added. Link, however, would not be free even for trips within downtown.

The nature of fare payment on Link would have made incorporating light rail into Magic Carpet fairly simple. There are no turnstiles at Link stations; instead, random checks by fare enforcement officers are used to ensure that fares are paid. With such a system, all that would be required for a fare-free zone is that fare enforcement officers not check for proof of payment within the free zone. When Magic Carpet began, many bus drivers made announcements at the last stop within the zone that anyone who did not get off at that stop would have to pay (Lane 1973b). Such a warning could have been included in the light rail vehicles' announcements when approaching the last station within the zone. This means that the exclusion of Link from Magic Carpet was the result of a decision, not necessity.

Set-up for the End

These reductions in the scope of Magic Carpet, on their own, may not have weakened the program enough to end it in 2011. Two votes that took place in the 1990s further set the stage. The first of these votes took place in 1993. At the general election, there was a ballot measure that merged the Municipality of Metropolitan Seattle into the general King County government. This change, implemented at the beginning of 1994, meant that City elected officials no longer had any direct input on decisions about transit service. While the Metro Council had been made up of Seattle City Council members and elected officials from other cities in the area, the King County Council is directly elected (Oldham 2006). While Metro and the City had routinely disagreed in the past, and needed to negotiate to reach agreement on matters relating to Magic Carpet, the presence of Seattle

City Council members on the Metro Council likely made those negotiations run more smoothly than they otherwise would have. Starting in 1994, this advantage no longer existed, and if the Magic Carpet were to again come under threat, the City would have to negotiate with an agency whose governing Council had no overlap with the Seattle City Council.

The second harbinger vote occurred in 1999. Initiative 695, a statewide ballot measure, changed vehicle registration fees from 2.2% of the vehicle's value to a flat thirty dollars (Pew 2000). Before this initiative passed, transit agencies across the state, including King County, relied on a portion of these fees for some of their revenue. According to the voters pamphlet statement against the measure, the car tab reduction cut transit funding by 25% across the state (Brunell and Bender 1999, 5). I-695 passed statewide with 56.16% of the vote, but in King County it received only 46.66% of the vote.[1] The State Supreme Court declared Initiative 695 unconstitutional on October 26, 2000 (Madsen 2000), but the State Legislature in March had already passed a law confirming the $30 vehicle registration fee (Pew 2000). Although I-695 was marketed as "$30 tabs on your car, truck, motorcycle, motor home, and other vehicles" (Krack et al. 1999, 4), Various additional fees and taxes related to car tabs were retained (Madsen 2000). When the State Legislature affirmed the $30 vehicle registration fee, they did not eliminate these other fees and taxes. This distinction between campaign rhetoric and the law was important in the 2011 standoff that ended Magic Carpet.

End of Magic Carpet

In 2008, the largest recession since the Great Depression began. This economic crisis had harmful impacts on many people, but what is most relevant for this story is the harm done to local government budgets. As the economy contracted, many people lost their jobs, leading to a decrease

in aggregate income. Some people who still had jobs were worried that they would soon lose theirs as well, they began saving more, causing aggregate spending to decline even faster than aggregate income. In states like Washington that rely heavily on sales tax to fund state and local governments, this created significant budget deficits. Because vehicle ownership levels respond more slowly to swings in the economy, car tabs could have softened the blow to transit agency budgets, but after Initiative 695, transit in King County was no longer receiving any revenue from that source. King County thus faced a budget deficit in transit.

There were a few possibilities for how to fill that budget hole. The two usual options would be increasing taxes or cutting service. However, in this case, there were two options for how to cut service: reducing service-hours or eliminating the Magic Carpet. The tax increase that was being considered was the vehicle license fee, the same tax that was the subject of I-695 back in 1999. State law allowed local governments to collect up to $100 per vehicle, but for the nine-member King County Council to pass such a tax without a vote of the people would require a supermajority of six Council members. Six Council members were willing to send a $20 increase to the ballot, but only the five Democratic members were willing to pass it with a councilmanic vote (Young 2011a). Those who wanted to prevent service cuts were faced with a choice: send the car tab increase to the ballot, where it might fail, or negotiate for one more vote to pass it directly by the Council. The most likely source of that sixth vote would be either Jane Hague or Kathy Lambert, Republicans from the Eastern part of the County whose districts had started trending more Democratic. Hague, in particular, was in a tough reelection campaign and facing pressure to prevent cuts to transit service. The Democrats chose to negotiate, and Hague and Lambert were receptive. They both ended up voting for the car tab

increase in exchange for a package of reforms that included ending Magic Carpet (Young 2011a). With this vote, the fate of Magic Carpet was sealed.

About a year after the vote, the Magic Carpet program came to an end on September 29th, 2012. Ending Magic Carpet saved Metro $2.2 million per year, while the car-tab fee raised $25 million (Young 2011a). To put these figures in perspective, Metro spent $136 per bus service-hour in 2012 (Metro 2014). This means that ending Magic Carpet allowed Metro to preserve 16,176 service-hours per year, or enough to run about four additional all-day buses each weekday.[2] The savings from ending Magic Carpet would be appreciated by the people riding those four buses if they knew their bus would have been cut without the change, but they were an order or magnitude less than the revenue raised from the car-tab fee.

Post-Magic Carpet

The end of Magic Carpet had a significant detrimental impact on low-income people in Seattle. Many of them had used the free bus service to travel among various social service agencies and government offices. Without the free service, they would have to either pay or walk, making it more difficult for them to make it to appointments, whether for services to help them survive or for job interviews to improve their lives. To partially address this problem, the legislation that ended Magic Carpet and imposed the $20 car tab fee also gave each car owner who paid the fee $24 in bus tickets and the option to donate the value of the tickets to "a pool of human-service agencies that would distribute them to the needy" (Young 2011b). However, these agencies have since been plagued with chronic shortages of tickets, leaving many poor residents unable to get around the city (Wilson 2016).

Another strategy to mitigate the impact of ending Magic Carpet was a free circulator bus. Nonprofit Solid Ground started running the circulator on October 1st, serving the downtown and First Hill area. Although the route served various locations frequented by the poor, such as hospitals and food banks, patronage was light. When *Stranger* writer Charles Mudede rode the circulator for his article, The Death of the Ride Free Area, no one else got on the bus while he was riding, and the driver reported that he had only had ten riders in the previous five hours. The driver believed that the low ridership was due to insufficient information about the availability of the service (Mudede 2012).

During the 2011 budget crisis, many bus riders advocated to prevent cuts to bus service. By 2012, some of those riders had formed Seattle's Transit Riders Union (TRU). As the end of Magic Carpet approached, TRU "gathered thousands of signatures to protest the closure." When that campaign was unsuccessful, the organization transitioned to advocating for a reduced transit fare for low-income people (Transit Riders Union n.d.). ORCA LIFT, the program that resulted from that advocacy, started providing reduced fares to families with income below 200% of the poverty line in March 2015 (Metro n.d.).

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1 In King County 249,621 people voted yes while 285,374 voted no, for a total of 534,995.

2 $2.2 million per year / $136 per service-hour = 16,176 service-hours per year. 16,176 service-hours per year / 250 non-holiday weekdays per year = 64.7 service-hours per day. If each all-day bus is on the road for an average of 16 hours each day, this would be enough for four additional all-day buses.

Analysis and Discussion

Great Man Explanation

Having seen the story of the Magic Carpet program, various possible explanations for the story will now be considered. Each explanation will be presented from the perspective of someone who believes it is correct. In the final section of this chapter, I will review the evidence for the assertions contained within the explanations, and for the explanations themselves. First, I will describe the explanation suggested by the Great Man Theory. This theory assumes that historical change is the result of the choices and actions of individuals.

Mayor Uhlman's Initiative

The Magic Carpet program began because Mayor Wes Uhlman wanted a fare-free zone downtown. He made the initial request that Metro investigate the idea, and he pushed it through the City Council. During the months when the program was being developed, Uhlman and his staff worked with Metro staff to ensure that the City Council would approve the program. By August, an initially hesitant City Council unanimously (with one member absent) passed the bill establishing Magic Carpet.

Once the program was established, the Mayor almost immediately proceeded to push for its expansion. By January, he was talking about expanding the area both to the north and to the south. The first full two-year contract for the program, passed while Uhlman was Mayor, expanded the zone into the International District to the south. Shortly after the end of his time as Mayor, a process which

he had set in motion resulted in the Magic Carpet area being expanded into the Denny Regrade to the north. After Uhlman left office, no one else was able to expand the coverage of Magic Carpet, notwithstanding the attempt by his successor, Charles Royer, to expand the area to the east into Yesler Terrace.

Williams Saves the Program, Transfers Control to Metro

A few years after failing to expand the Magic Carpet zone into Yesler Terrace, Mayor Royer played a dangerous game of chicken with funding for Magic Carpet. The tone of internal documents from his administration indicates that he supported the program but did not believe the City should be paying for it (Seattle 1982a). It is unclear to what extent this was a philosophical objection to City subsidization of a program that benefited the entire county, and how much was just the result of a need to find some way to balance the budget. Nevertheless, the position presented in the Mayor's budget was that the City should completely stop funding the program, and hopefully Metro would pick up the slack.

The Monty Lish memo, Rod Armour report, and discussion within Metro suggest that the result of this game of budgetary chicken would have been Magic Carpet being pulled back to just the peak times. However, there is no indication that Mayor Royer knew this when he proposed cutting the City's funding for the program. It is also possible, though unlikely, that the maneuver would have resulted in 1982 being the last year of the program, an outcome that no one at the time wanted. City Council President Jeanette Williams was unwilling to take that risk. She was responsible for the City's $100,000 funding of Magic Carpet for the first quarter of 1983, a move that indicated to other stakeholders the City's willingness to reach a compromise solution. She also proposed the Task Force, and, as far as can

be discerned from the Task Force's records, led the group of stakeholder representatives to reach an acceptable solution.

While Williams' intervention ensured that Magic Carpet survived, the bulk of the funding for the program from then on came from Metro. Along with the purse came control over the future of the program, which would become more relevant when Metro merged with the King County general government. Magic Carpet would be at the mercy of County elected officials, and should they decide to reduce or eliminate the program, the City would have to increase its funding for the program to prevent the change.

Lambert and Hague End Magic Carpet

The deficit that King County faced in its transit budget from the Great Recession did not necessitate the end of Magic Carpet; ending the program was a political decision. The five County Council members who initially supported raising car tabs by a councilmanic vote could have sent the measure to the ballot instead. However, this would have involved a risk that the voters would reject the proposal. Kathy Lambert and Jane Hague, however, could have made different, fewer, or no demands in exchange for their votes to support the councilmanic tax. They both chose to seek the end of Magic Carpet as a price for preventing cuts to bus service in King County.

Summary of Great Man Explanation

The Great Man Theory-based explanation of Magic Carpet events centers around four key figures. Wes Uhlman and Jeanette Williams were instrumental in establishing, expanding, and maintaining the program. Kathy Lambert and Jane Hague were instrumental in ending it. It should be

noted here that Williams also played a roll in preventing the Yesler Terrace expansion from passing. However, Yesler Terrace was a minor issue that did not involve an existential threat to the program. Williams' contribution during the 1983 budget and Task Force process is much more meaningful to the program.

Idea-based Explanation

I have just described the Great Man Theory's explanation for the story of Magic Carpet; this explanation focuses on the actions taken and decisions made by powerful individuals. Next, I will examine the story from a perspective that sees ideas as the main motivating force of historical change. As I described in the Methods chapter, I will use the political science framework of realignments and party systems. The realignment that occurred during the story of the Magic Carpet Zone was the realignment of 1980.

The realignment of 1980 is different from other realignments of the past. The three major realignments covered by Sundquist (1983) were all rotational, meaning that party conflict after the realignment was centered around a different issue than before the realignment. Nineteen-eighty, on the other hand, was a translational realignment: after the realignment, party conflict still centered around the degree to which the government should intervene in the economy to benefit the working class, but both parties' positions were more opposed to such intervention after the realignment than before. Because the Fifth Party System exhibited broad support for government intervention in the economy to benefit the working class, I will call it the Social Democratic Era. Social democracy refers to the highly-regulated form of capitalism that developed in the United States and Western Europe in the decades following World War II. The Sixth Party System has seen significantly less support for such

intervention, so I will call it the Neoliberal Era. Neoliberalism refers to the less regulated form of capitalism that has gained strength throughout the world during this era. The Social Democratic Era and the Neoliberal Era are the two party alignments that are relevant to the story of the Magic Carpet program.

The Social Democratic Era

The Social Democratic Era began with the election of 1932, in which Franklin Roosevelt defeated President Herbert Hoover. The next few years were marked by aggressive action by the federal government to combat the Great Depression. These efforts, known collectively as the New Deal, consisted of broad-based programs. While many of these programs were not truly universal, often either excluding black people or excluding categories, such as farm-workers, that consisted disproportionately of black people, they were still imbued with a universal approach. Aside from the exceptions carved out to appease racially-motivated Southern Congressmen, these programs covered everyone. The most well-known example of such a program is Social Security, established in 1935. By 1940, every person in the United States employed in a non-agricultural job was covered by this national old-age and disability insurance program. Various Social Security Amendments bills strengthened the program throughout the rest of the Social Democratic Era (Social Security Administration n.d.).

Later in this Era, additional programs were established that were more true to the universal idea that motivated them. In the 1960s, several programs were established that President Lyndon Johnson had proposed under the collective name of Great Society. The primary example of a Great Society program is Medicare. This government-provided health insurance is available to every

American at least sixty-five years of age. While there are other aspects of the Social Democratic Era, the part that is relevant for our discussion is the tendency towards universal programs.[1]

Magic Carpet was a Universal Program

The Magic Carpet program provided free bus rides within downtown to everyone who was there. There was no special criteria needed to qualify for the program, like being low-income or homeless, or working downtown. Any such criteria would have had two major effects contrary to the intentions of those who established the program. First, the program would not have functioned anywhere near as well. The reasons for most of the benefits of Magic Carpet were that buses could move faster through downtown if they didn't have to wait for people to pay, and that the lack of a fare made taking the bus an easier choice. If riders had to demonstrate that they qualified for the program whenever they got on a bus downtown, that would take more time, negating any benefit to travel time. If riders had to sign up for the program before they could get free rides, that would eliminate the potential for impulse transit trips, likely a significant portion of the increased ridership.

The second effect of restrictive criteria is the potential for resentment on the part of those excluded from the program. If the program applied only to certain people, then the rest of the population of the area would be unhappy about their tax dollars being spent on such a program. This resentment could be mobilized by candidates for elected office, weakening support for the program, eventually leading to its end. Such resentment likely contributed to the end of the program regardless, but because it was a universal program, the only resentment that was relevant was that of suburbanites who rarely or never traveled within downtown. Mayor Uhlman and the others who established Magic Carpet would have been aware of these problems, although the awareness may not

have been conscious. There is no evidence in the available records that they even considered restrictive criteria, so it is more likely that the idea did not even occur to them. As a universal program, Magic Carpet fits the pattern of Social Democratic Era government programs.

Neoliberal Era

The Neoliberal Era began in 1980, following directly after the Social Democratic Era. Of the policy patterns prevalent in the Neoliberal Era, those that are relevant to our discussion are erosion of social democratic programs, both universal programs and other types, and establishment of means-tested programs. One of the main underlying ideas of this era is that everything's worth can be reduced to or measured by its financial value. Continuing with an example from above, there have been numerous attempts throughout the Neoliberal Era to weaken Social Security. The 1983 Amendments to Social Security included some expansion of the program, covering federal employees, but also began taxing benefits and started gradually raising the retirement age. In 1996, Congress amended the disability portion of Social Security by denying coverage to any person whose disability is partially caused by drug addiction or alcoholism. This move exemplified the neoliberal return to an earlier idea of distinguishing between the deserving and undeserving poor. In the early 2000s, President Bush sought reforms to Social Security that would at least partially privatize the program (Social Security Administration n.d.). However, widespread public resistance prevented such privatization from passing Congress. The attempt was indicative of another neoliberal trend, moving programs from government operation to the private sector.

The Neoliberal Era has been marked by various acts of resistance to the dominant ideology, including protests in Seattle over the 1999 meeting of the World Trade Organization. However, after

the Great Recession of 2008 such resistance accelerated. Public views began shifting in favor of government intervention in the economy to support the working class. This shift was seen in the Occupy Movement, various campaigns to raise the minimum wage, and increased electoral success for self-described socialists. It should be noted, however, that as of this writing, in 2017, it is too early to say with any degree of certainty what this shift in public opinion will amount to. In the summer of 2017, several national organizations in favor of intervention to support the working class came together to lobby members of Congress for eight bills they collectively referred to as The People's Platform (Summer for Progress n.d.). However, one of these bills still displays the neoliberal tendency towards means-tested programs. HR 1880, the "College for All Act of 2017", would provide free college tuition to any student with family income below $125,000 per year (House of Representatives 2017). The idea of means-testing is so pervasive that it is exhibited even in ambitious bills put forward by people opposed to the dominant ideology of the era.

Erosion of Magic Carpet During Neoliberal Era

In 1987, and again in 1994, the hours of operation for Magic Carpet were reduced. In both cases, the primary reason for the night and evening closures was safety. While there is no reason to believe that proponents of closure were being dishonest when they cited safety concerns, it is instructive to investigate which safety issues they were concerned about and which they were not.

The primary safety concern was assaults on drivers. These assaults increased in the years preceding both changes to Magic Carpet's hours of operation. The causal relationship from increased bus driver assaults to cuts to Magic Carpet is quite clear. What is less clear, is what caused the assaults. While Metro identified the pay-in-the-country fare collection system as one contributing

factor, there were surely others. After all, Magic Carpet and pay-in-the-country had been in place since 1973, and the increase in assaults was a more recent phenomenon. Some of the other contributing factors, like macro-economic changes, were outside of Metro's control. However, the discussion about assaults stemming from fare evasion seems to ignore the fact that any conflict requires two parties. When riders sought to evade fares, drivers had a choice: they could enforce the fare or acquiesce to the fare evasion. While Metro presented their choice as between cutting back Magic Carpet's hours of operation and allowing further assaults on their drivers, there was actually a third option. Metro could have instructed its drivers to prioritize their own safety over preventing fare evasion. It is possible that greater tolerance for fare evasion could have led to a spiraling epidemic of fare evasion. Furthermore, it is not clear that this option was not considered, but if it was, it was downplayed enough to avoid mention in news reports of the change. However, whether Metro failed to consider the option or if it was merely left out of reporting, this is indicative of the money-centric thinking that dominates the Neoliberal Era.

Closing Magic Carpet during the night had a detrimental impact on people experiencing homelessness. One of the articles about the initial closure mentioned "street people" who "like to ride the buses to keep warm and often fall asleep" (Lane 1987b). Keeping such people off of the buses at night was seen as a benefit of charging fares at night, because the presence of homeless people on the bus was assumed to create safety risks for other passengers and for drivers. However, the bus was one of the safer places for a homeless person to be, especially during the winter. Staying on the street all night opens people up to greater risk of assault and of exposure to the elements. Transit agencies are not responsible for providing shelter to the homeless, but there was no mention of programs that could be implemented or expanded by local governments to provide better options to people

experiencing homelessness. The nighttime closures of Magic Carpet can be seen as an attempt to separate a category of people from the benefits of the program, directly contradicting the universal nature of the original program.

Whether or not they were intended as such, these nighttime closures, especially after 1994, when Magic Carpet closed at 7pm, weakened the program's universal nature, and not just with regard to people experiencing homelessness. Although anyone who was taking a trip within downtown while Magic Carpet was in effect could use the program, there were still variations in the degree to which different people benefited. Those who took more trips within downtown had more opportunities to directly benefit from the program, while those who never went downtown did not benefit. Despite this variation, under the original, 24-hour Magic Carpet, direct benefit was spread widely enough among the population that most elected officials had a significant number of constituents who benefited directly from the program and would advocate to continue it. Once Magic Carpet closed for the night at 7 pm, only those who were in downtown during the day would have opportunities to directly benefit from the program. It is likely that many people living in East King County only traveled to downtown Seattle during the evening; Bellevue, Redmond, and other Eastside cities had plenty of jobs and stores by the early 2000s, so Eastside residents who didn't work in Seattle had little reason to cross the lake other than for cultural events, such as sports, concerts, or theater. These events often occur during the evening, so people who were only ever downtown to attend these events would no longer have been able to benefit from Magic Carpet, leading to greater potential for resentment against those who did benefit from the program.

Replacement of Magic Carpet with Means-Tested Programs

After Magic Carpet ended, the ORCA LIFT fare subsidy program was created. Because only families below 200% of the poverty level qualify for LIFT, it is a means-tested program. If we look at the overall change from Magic Carpet to LIFT, there are two main changes. First, the group of people helped directly by the program changes from people traveling within downtown to low-income people. Second, beneficiaries now pay a fare. There are a few notable impacts of these changes. First, low-income people who rarely travel within downtown have lower travel costs under LIFT than under Magic Carpet. Second, people who frequently travel within downtown have higher travel costs under LIFT than under Magic Carpet, even if they qualify for LIFT. Third, beneficiaries must be pre-registered to benefit, while Metro has to devote staff time to determining whether each applicant qualifies. This shift aligns with the general trend that has been observed throughout the Neoliberal Era: policy is set up with the stated intent of being more beneficial to the poor, but operating the programs requires greater staff time to ensure that only the proper beneficiaries benefit.

For people who can afford ORCA LIFT, it provides access to the same quality of transit system as those who pay full price fares or have passes subsidized by their employer, but that is not the case for the other two replacement programs. Solid Ground's free shuttle is not actually a means-tested program; anyone can ride it, but it was designed to be useful to the very low-income people who need it most. With only 30-minute headways and poor signage, this service intended for the poor has a noticeably lower quality than the regular transit system (Mudede 2012). The human services ticket program provides a more typical example than LIFT of how means-tested programs often play out. In 2015, a few years after Magic Carpet ended, more than 1.4 million tickets were given to people in need. In an op-ed on the Seattle Transit Blog, Katie Wilson of the Transit Riders Union mentions two

major problems with human service tickets. First, the program is underfunded. This means that many of the people who need these tickets and who qualify for the program do not receive the tickets. Second, ticket users were treated as second-class citizens with regard to the quality of their transit system. Many trips in Seattle involve a choice between taking Link light rail or spending much more time on a bus, but in 2016, more than three years after Magic Carpet closed and seven years after Link began operating, human services tickets were only accepted on buses, not Link. This meant that travelers dependent on the tickets had to take the longer trip options (Wilson 2016).[2] The human services ticket program, like many other means-tested programs, created a second tier level of public service and has been plagued by underfunding.

Summary of Idealist Explanation

The Magic Carpet program took place during two ideological periods: the social democratic era and the neoliberal era. Ideological change is not instantaneous, so there was some overlap between these two eras, but in order to view concrete events through this idealist lens, we need to set a clear division between the two eras. Drawing the dividing line at the 1980 Presidential election fits with the pattern discussed above in when previous realignments are said to have occurred. Before 1980, when the social democratic ideology prevailed, Magic Carpet was created and expanded. After 1980, when the neoliberal ideology prevailed, Magic Carpet contracted and was eliminated.

Materialist Explanation

This explanation traces the causes of major events in the life of Magic Carpet back to a combination of various material conditions. Some of these conditions are economic, some

environmental, and others logistical, but they all depend in some way on objective reality rather than either the ideas that prevailed in society at that time or the will-power of a great leader. Any subset of these conditions may not have been enough to cause the series of events that occurred, but taken together, they greatly increased the likelihood of the story playing out the way it did.

1973 Oil Shortage

In the early 1970s, various factors in the world oil market led to a shortage of gasoline and other petroleum products in the United States. This shortage meant that cities, states, and the federal government were trying any ideas they could come up with in order to reduce oil use. Anything that would shift travel mode split away from private automobiles was worth trying. Magic Carpet made transit much more attractive, and was estimated to lead to a reduction of 1,425 vehicle miles traveled each day (Metro 1977, 77). Although the apex of the fuel crisis did not occur until October 1973, policy-makers were anticipating difficulties as prices started climbing earlier in the year (Historian n.d.). The fuel crisis was specifically cited in *Seattle's Magic Carpet; The First 2 Years* as one of the forces putting pressure on planners and demanding reduction in automobile use (Metro 1976, 2).

Efficiency Advantage to Pay-in-the-Country

Before Magic Carpet, all bus patrons paid when they entered the bus, and those traveling across a zone boundary paid again when they got off. This double-pay system was inconvenient for riders, who needed exact change twice per trip, and it also slowed down buses. With a base fare of twenty cents and a zone charge of ten cents, the total cost of thirty cents could be paid in multiple ways, the simplest of which would be a quarter and a nickle. However, when paying two separate

times, it would not have been possible to pay with a quarter and a nickle, because exact change was needed for both the twenty cent base fare and the ten cent zone charge separately. Outbound buses during the evening peak would be delayed downtown as riders queued to board at the front door, and once the bus left the first zone, it would be delayed again as riders went back to the front to pay as they left.

The pay-in-the-country system, on the other hand, simplified matters. Each rider only had to pay once per trip, so they didn't need to have exact change for as small of transactions. The evening peak buses that previously had long queues at the front door could now load much faster with all doors, as riders would not pay until they got off. While the pay-on-exit delay now occurred in the first zone in addition to the others, initial studies suggest that, if there was a net increase in delay, it was almost negligible (Metro 1977, 26) (Colman 1979, 18-19). When it was introduced, the Magic Carpet/pay-in-the-country combination improved transit system efficiency.

Air Quality Concerns

Many US cities were facing air quality problems in the early 70s. Seattle, for instance, exceeded the eight hour standard for carbon monoxide eighty-two days in 1974 (Colman 1979, 23). Because the automobile contribution to air quality problems tends to be greater at the beginning of a trip, eliminating more short trips results in a greater improvement to air quality than eliminating fewer long trips. Furthermore, because the problems were greatest in and around downtown, reducing downtown driving would have the greatest impact.

The air quality problem that Seattle faced seemed to be tailor-made for Magic Carpet to address. Because the program was just in effect downtown, its impacts were highly concentrated

downtown. It was estimated that 1,000 vehicle-trips per day within downtown were eliminated as a result of Magic Carpet, leading to a four-day reduction in the number of days per year that Seattle exceeded the eight hour carbon monoxide threshold (Colman 1979, 23).

The Downtown Seattle Development Association

The DSDA, as an organization representing business interests in downtown Seattle, can be expected to carry a great deal of weight. When the City Council Finance and Transportation Committees needed a second meeting to decide whether or not to recommend approval of the initial Magic Carpet experiment to the full Council, the DSDA's opinion became known in between the two meetings. While discussion at the second meeting was focused primarily on Metro's response to the questions the committees had asked at the previous meetings, it seems unlikely that the letter from DSDA President Victor Gray would not have had an impact on Council members' decisions. In addition to expressing the belief that the program would benefit employees, shoppers, and visitors, Gray also said he would recommend that DSDA's Board of Trusties work with Metro and the City "to determine an equitable way to finance this vital program" (Gray 1973). One of the Committees' questions that Metro did not have a complete answer to was where the subsidy was expected to come from in the future (Finance Committee 1973). While Gray's letter is non-committal on the subject, it does suggest that the business community would be open to identifying new funding sources (Gray 1973).

The cooperation of the business community was also essential in securing the 1983 agreement to maintain the Magic Carpet program. When Mayor Royer put forward his budget proposal with no funding for Magic Carpet, DSDA President Walter Williams sent a letter to the Mayor articulating the importance of Magic Carpet and advocating for the program to have "the full public support of both

the City of Seattle and METRO Transit" (Williams 1982a). After the first few task force meetings, Bruce Nordstrom stated that they were at an impasse, because he thought the business community would not be willing to subsidize $100,000 worth of passes for their employees (Nordstrom 1983). However, the Task Force was able to work through the impasse and secured the support of the business community for the eventual proposal. In 2011, on the other hand, there was no comparable reaction from the business community in support of maintaining the program.

Budgetary Differences Between 1982 and 2011

There were two budget crises that had the potential to end Magic Carpet, 1982 and 2011. One major reason why 2011 resulted in the end of the program when 1982 did not was the difference between the specifics of those two situations. In 1982, when the City faced a shortfall that put Magic Carpet funding on the chopping block, Metro still had a surplus despite the recession. However, in 2011, when Metro faced a shortfall that put Magic Carpet funding on the chopping block, the City was also in budgetary difficulty. Both budget problems were the result of recessions, so we can look at what changed in the relationship between recession and local government finances.

The City faced a budget shortfall in both recessions. It is not surprising that the effect on the City's budget did not change, because the City's reliance on sales tax, property tax, and B&O tax did not change either. Revenue from all three of these sources tends to decline significantly during a recession.

As was shown above, I-695 in 1999 cut funding for transit by 25%. In 1982, while the City was facing a serious budget deficit, Metro actually had a surplus (Williams 1983c). After 1999, however,

Metro no longer received funding from the state's car tabs, and it was Metro's budget difficulty that precipitated the risk to Magic Carpet in 2011.

Having identified the vehicle license fee reduction in 1999 as a cause of the difference between budget situations in 1982 and 2011, we next need to consider why that change occurred. I-695's Sponsor was Tim Eyman, who has since become well-known as an anti-tax crusader in Washington State politics (Northwest Progressive Institute n.d.). The voters pamphlet statement in favor of the measure cited high taxes and a state budget surplus as a reason for cutting car tabs (Krack et al. 1999).[3] Anti-tax sentiment was strong enough the next year that State Legislators were "rush[ing] to cut taxes further to head off new initiatives to slash property taxes" (Pew 2000). The next year, another anti-tax measure, Initiative 722, passed with 55.89% of the vote (Washington Secretary of State). Several supporters of I-722 said the initiative was needed because there had been double-digit property tax increases, ranging from 23%-46% (Eyman et al. 2000). This anti-tax sentiment was part of a larger wave that swept throughout the country from the 1970s until the 1990s. A full analysis of what brought this wave to Washington could be a paper all on its own, but the immediate evidence suggests that the strong economy of the late 1990s was a major contributing factor.

ORCA Cards and the Efficiency Swap

Part of the reason why the pay-in-the-county system increased efficiency in 1973 was that most riders paid with cash. This remained true for most of Magic Carpet's lifetime. However, the 1983 agreement began to change the situation. Part of the contribution agreed to by the downtown business community was expanding subsidized bus pass programs for employees. As these programs expanded, more riders used passes instead of paying cash. This accelerated any portion of a transit

trip that involved payment, whether on entry or on exit. However, the decrease in payment time only affected the actual transaction time; riders paying as they exited would spend just as much time getting to the front of the bus before they paid whether they were paying with cash or using a pass.

When the One Regional Card for All (ORCA) program was created in 2009, fare payment by card instead of cash increased again. With the convenience of paying by card now extended to riders who did not have monthly passes, and with a single card that was valid on all transit systems in the area, many more people chose to use a card rather than pay with cash. This meant that riders could board and pay faster than before, since tapping a card is faster than feeding dollar bills into a machine. This increased efficiency had the same impact on the time riders take to pay as they exit in terms of seconds saved, but because of the extra time to move to the front of the bus, the time savings were a smaller portion of the total dwell time. The upshot of this is that pay-on-exit was proportionally much slower than pay-as-you-enter, while collecting fares downtown would not delay buses as much as before.

Air Quality Improves while Climate Change Looms

Downtown Seattle was designated nonattainment for the EPA's carbon monoxide (CO) standard in 1971, two years before Magic Carpet was established. This meant that the concentration of CO exceeded the safe level more than once per year (Ecology n.d.).[4] As was shown above, reducing CO pollution was one of the stated reasons for implementing Magic Carpet. By 2004, downtown Seattle had been redesignated attainment, meaning that CO pollution was below the safe level (Ecology n.d.).

As the air quality situation improved, public awareness of the threat of climate change increased. Because the car trips displaced by Magic Carpet were short, they had a relatively small contribution to greenhouse gas emissions. At the same time, many Magic Carpet users would have either walked or not taken the trip if the bus ride was not free, meaning that their alternative choice would not have contributed to climate change. On the other hand, longer distance commute trips involve significant greenhouse gas emissions when taken by car, so a mode shift for these commuters to transit results in a larger per person decrease in emissions.

Any money spent by Metro on lower fares is money that is not being spent on more service-hours. As we saw above, ending Magic Carpet saved Metro enough money that they were able to run 64 additional service-hours each weekday. While a small amount compared to the size of Metro's total activity, these service-hours, if deployed wisely, would remove a not insignificant amount of cars from the road.

Development Outlook in Seattle, 2011

The outlook for development was a key factor throughout the history of Magic Carpet. In 1973, when the program was created, part of the motivation was to incentivize downtown shopping, supporting both downtown retail businesses and downtown landlords. In 1978, when Magic Carpet was extended into the Denny Regrade, a major motivation was incentivizing real estate investment in the neighborhood; this was such a strong motivation that Martin Selig, a Regrade Developer, was willing to cover half the cost of the expansion. In 1982, when there was the risk that Magic Carpet would end if Metro, the City, and the business community did not reach an agreement on how much

each party would pay, downtown business interests were concerned about potential loss of business to suburban hubs. The situation was different in 2011.

Although the Great Recession had officially ended in 2009, most Americans were still feeling its effects. One of those effects was Metro's budget hole that precipitated the Magic Carpet crisis. Downtown Seattle business and real estate, on the other hand, recovered quickly from the recession. In particular, Amazon was well on its way to becoming the technology behemoth that it is today (Talton 2017). From its location in South Lake Union, outside the Magic Carpet Zone, Amazon could convince both other businesses and policy-makers that Magic Carpet was not necessary for downtown's economy to bounce back from the recession.

Summary of Materialist Explanation

Economic circumstances, environmental concerns, logistical demands, and preferences of the business community all worked together to effect the creation, longevity, and elimination of the Magic Carpet program. A nationwide gas shortage prompts elected officials to consider creative ideas that can help people use less gas, such as providing a free sample of the new bus system. If a popular program is threatened by a budget deficit, another local government that does not face a deficit can save the program, but when the same problem affects both the City and the County, transferring funding responsibility is not an option. When downtown air quality is the major environmental concern, reducing short trips downtown is important, making free downtown bus service beneficial. When global climate change predominates, reducing total emissions is prioritized, so free downtown bus service constitutes misuse of resources that could be spent getting suburban commuters out of their cars. When almost everyone pays by cash, speeding up downtown boarding is a major

advantage, but as transit card use increases, paying on exit becomes too much of a hassle. If a new idea seems unreasonable or an existing program is threatened, support from the business community can improve its chances. Finally, a program that helps support downtown property values is less necessary when downtown is already recovering from a recession much faster than the rest of the country.

Evaluation of Competing Explanations

Two things are needed to evaluate how accurately these three competing explanations predict the events of the story: the list of potential changes to the program, and the key aspects of each explanation. The major potential changes are the creation of the program in 1973, the existential threat posed by the budget deficit in 1982, and the elimination of the program in 2011. The minor potential changes are the four attempts to add some or all of the Denny Regrade to the program, the International District expansion, the attempted Yesler Terrace expansion, the two changes to hours of operation, and the opening of the bus tunnel and Link light rail. The possible removal of some of the Regrade from the Magic Carpet Zone in 1983 is not included, because the only reference to this possibility was in a letter to the editor.

The key aspects of the three candidate explanations are individuals for the Great Man explanation, prevailing ideologies for the idealist explanation, and categories of material conditions for the materialist explanation. The key individuals are Wes Uhlman, Jeanette Williams, Kathy Lambert, and Jane Hague. The prevailing ideologies are social democratic before November 1980 and neoliberal after November 1980. The categories of material conditions are economic circumstances for both government and citizens, environmental concerns, logistical demands, and preferences of the business

community. The key aspects allow outcomes to be predicted for each potential change as viewed by each of the three explanations.

Great Man Predictions

First, I will consider the Great Man explanation. Wes Uhlman was Mayor and Jeanette Williams served on the City Council during the creation of the program, the International District expansion, and all four attempts to expand the program into the Regrade, so this explanation predicts that all of those attempted changes would have occurred. Similarly, because Williams was on the Council during the attempted Yesler Terrace expansion, that change would also be expected to go through. Williams' continued presence on the Council would be expected to protect Magic Carpet during the 1982 existential threat, and prevent the nighttime closure in 1987. None of the four key figures were serving in a relevant elected office when the bus tunnel opened in 1990 or when the nighttime closure expanded at the start of 1994, so the Great Man explanation makes no prediction on those two events. By the time Link light rail opened in 2009, both Kathy Lambert and Jane Hague were both serving on the County Council, so this explanation predicts that Link would be excluded from Magic Carpet. Finally, it predicts that Magic Carpet ends from the 2011 budget showdown because of Lambert and Hague.

Idealist Predictions

The Idealist explanation is the next one to be considered. This explanation predicts that during the Social Democratic Era, any potential change that would expand Magic Carpet would succeed, while any potential change that would contract it would fail. During the Neoliberal Era, the opposite

can be expected. The list of potential changes shows that every expanding change was proposed before 1980, and every contracting change was proposed after 1980, so the idealist explanation predicts that every proposed change occurs.

Predictions of the Great Man explanation just considered which key individuals were in a position to potentially influence the outcome. Predictions of the idealist explanation considered which ideological era the change was proposed in. For the materialist explanation, determining predictions will be a little more complex, because the contributions of each of the four categories of material influences must be taken into account.

Materialist Predictions

I will begin these predictions with the creation of the program. In 1973, the oil crisis caused many people to seek ways to use less gasoline, while the City's financial situation did not preclude the creation of new programs. The major environmental concerns at the time, carbon monoxide and nitrogen oxides in downtown air, would be significantly addressed by reducing short car trips within downtown. Changing the manner of fare collection eased logistical difficulties for Metro, and the DSDA, the main organ for the sentiment of downtown Seattle's business community, favored creating the program. All four categories of material circumstances favored creation of the program, so the explanation predicts change.

The four attempts to expand Magic Carpet into the Denny Regrade were similar, but exhibit slight differences. The economic benefit to citizens of the expansion was minor each time it was proposed. The City's desire for closer-in living did not carry any economic benefit until there was a commitment from a developer to invest in the area as part of the fourth attempt. No significant

environmental concerns would have been either addressed or made worse by any iteration of the Regrade expansion, nor would any logistical demands. During the first three attempts, there was no indication of business community preference one way or another, but on the fourth attempt, Martin Selig's commitment to cover half of the cost showed that at least a segment of the business community wanted the expansion. Taking these factors together, it can safely be predicted that the fourth attempt to expand into the Regrade would succeed. The other three are more difficult. The only identifiable influence from these four factors is the cost expansion would have had to the City, but it would be a stretch to predict that the changes fail from just that one factor, so instead the materialist explanation makes no prediction for those three attempted changes.

Next, I will look at the attempts to expand Magic Carpet in the International District and Yesler Terrace. In neither case were there environmental or logistical factors that would have either supported or inhibited the change. In both cases the cost of the proposed expansion was small enough that the City's budget would have easily been able to absorb it, while both areas were rather heavily populated by people who would benefit economically from the expansion. The difference lies in the actions of the business community. The International District had a well-organized business community that began pushing for the expansion before even the initial program went into effect. Yesler Terrace, on the other hand, had no such business support. The materialist explanation predicts that the International District expansion would be successful, and, like with the first three attempts at a Regrade expansion, one factor is insufficient to make a prediction on the Yesler Terrace expansion.

The existential threat to Magic Carpet in 1982 was brought on by economic circumstances, specifically the City's budget crisis. Because downtown Seattle was still a nonattainment area for carbon monoxide, the environmental concerns remain the same as they were in 1973. Similarly, the

Armour report and the Lish memo indicate that logistical demands on Metro continued to favor Magic Carpet. Finally, the business community was in favor of preserving the program. With three factors supporting continuing the program, it can be concluded that the materialist explanation predicts no change.

The initial nighttime closure in 1987 and its expansion into the evening and morning in 1994 were both contracting changes, because they reduced Magic Carpet's hours of operation. Because they affected times of low travel demand, there was minimal impact on any environmental concerns. One of the cited reasons for both changes was to address the logistical difficulty of collecting fares at night from riders who are exiting the bus without putting drivers at risk. There is no indication that the business community expressed a preference for or against these two changes. Closing Magic Carpet at night and in the evening adversely impacted some Seattle residents experiencing homelessness, but policy-makers saw that as a benefit (Lane 1987b). Considering both logistical needs and economic impacts, the materialist explanation predicts that both of these changes would occur.

The last minor potential changes to consider are excluding Magic Carpet from the bus tunnel and excluding it from Link. Both changes would have increased the logistical complexity of the transit system, causing riders to choose routes within downtown that were free rather than the routes that work most effectively for their trip. In 1990, downtown Seattle was still a nonattainment area for carbon monoxide, so maintaining free service to eliminate short car trips within downtown and moving diesel buses quickly through downtown would be important for environmental concerns. By 2009, when Link opened, downtown Seattle had been redesignated attainment for carbon monoxide, so eliminating short car trips within downtown no longer addressed an overriding environmental concern. The business community expressed no preference in either case. The 1990 change included

the possibility of ending the Magic Carpet program (Metro 1989, 15), which would have had an adverse economic impact on people in downtown Seattle. Maintaining Magic Carpet for the surface but not the tunnel, or maintaining Magic Carpet for buses but not Link, would not have such an impact. Finally, Metro's 1989 report on whether to charge fares in the tunnel concluded that the cost of doing so would exceed the revenue from the fares. Through a combination of economic circumstances, environmental concerns, and logistical demands, the materialist explanation predicts that the bus tunnel would open as part of the Magic Carpet Zone. Only the logistical reason remained when considering Link in 2009, so no prediction can be made in that case.

The final potential change is the decision to end Magic Carpet in 2011. Metro's economic situation in the aftermath of the Great Recession created the budget showdown that allowed Magic Carpet to be killed. Some people's financial situation was adversely impacted by the change, but the budget deal to end Magic Carpet included the first steps to address those impacts. Climate change caused environmental concern to focus more on reducing long-haul car trips than short trips within downtown, so money would be better spent on more bus service than on Magic Carpet. Logistical constraints had shifted so that it became simpler to have everyone pay as they entered the bus rather than the pay-in-the-country system. Finally, business community support that had appeared in 1973 and 1982 did not materialize this time. Through a combination of economic circumstances, environmental concerns, and logistical demands, the materialist explanation predicts that Magic Carpet would end from the 2011 budget showdown. For reference, the chart on the following page shows the predictions of each explanation for each potential change.

Predictions of each explanation for each potential change:

Date range	Potential change	Nature of change		Great Man prediction		Idealist prediction		Materialist prediction	
May-September 1973	Magic Carpet begins	Expanding	Major	Change	Correct	Change	Correct	Change	Correct
April 1974	Expansion to Denny Regrade	Expanding	Minor	Change	Incorrect	Change	Incorrect	No prediction	NA
January-February 1975	Expansion in International District	Expanding	Minor	Change	Correct	Change	Correct	Change	Correct
October 1975	Expansion to Denny Way	Expanding	Minor	Change	Incorrect	Change	Incorrect	No prediction	NA
November 1976	Expansion into Regrade	Expanding	Minor	Change	Incorrect	Change	Incorrect	No prediction	NA
December 1977-March 1978	Expansion to Battery Street	Expanding	Minor	Change	Correct	Change	Correct	Change	Correct
August 1979	Expansion to Yesler Terrace	Expanding	Minor	Change	Incorrect	Change	Incorrect	No prediction	NA
October 1982-March 1983	Existential budget threat	Contracting	Major	No change	Correct	Change	Incorrect	No change	Correct
July-October 1987	Closure from 9 pm—4 am	Contracting	Minor	No change	Incorrect	Change	Correct	Change	Correct
September 1990	Exclusion from new bus tunnel	Contracting	Minor	No prediction	NA	Change	Incorrect	No change	Correct
August-December 1993	Closure from 7 pm—6 am	Contracting	Minor	No prediction	NA	Change	Correct	Change	Correct
July 2009	Exclusion from Link	Contracting	Minor	Change	Correct	Change	Correct	No prediction	NA
August 2011-September 2012	Magic Carpet ends	Contracting	Major	Change	Correct	Change	Correct	Change	Correct
Total accuracy:				6 out of 11: 55%		7 out of 13: 54%		8 out of 8: 100%	

Discussion

A basic quantitative review of each explanation's predictions shows that the Great Man explanation had 55% accuracy, the idealist explanation 54%, and the materialist explanation 100%. However, the materialist explanation makes predictions in the fewest of the potential changes, only eight, while the Great Man explanation makes predictions in eleven of the potential changes, and the idealist explanation predicts in all thirteen. If I use the available information to make a prediction for the materialist explanation in the five remaining cases, it would correctly predict no change for the first three attempts at expanding into the Denny Regrade, incorrectly predict a change for the Yesler Terrace expansion, and incorrectly predict that Magic Carpet would cover Link, for a total accuracy of eleven out of thirteen, or 85%. If only the major potential changes are considered, the beginning of the program, the existential threat in 1982, and the end of the program, then the Great Man and materialist explanations accurately predict all three, while the idealist explanation is accurate in two out of the three. This observation, however, requires the caveat that the Great Man and materialist explanations were both more closely tailored to data about the major potential changes, while the idealist explanation was not.

A better understanding of the strengths and weaknesses of each explanation can be gained by looking at their points of disagreement rather than aggregate accuracy. In the three failed attempts to expand into the Denny Regrade and the one failed attempt to expand into Yesler Terrace, the Great Man and idealist explanations would incorrectly predict a change, while the materialist explanation did not make a prediction. In all four of these potential changes, the idealist explanation's prediction was based on the presence of social democratic ideology, which could be considered part of the

reason the change was proposed. Similarly, two of the three failed attempts to expand into Denny Regrade all involved Mayor Uhlman, and without his involvement, some of the attempts may not have been made at all. However, the Great Man explanation predicts success for the Yesler Terrace expansion because of Jeanette Williams, but she was the most outspoken against the proposal in the Committee meeting that rejected the expansion. This reveals a weakness in my application of the Great Man Theory: the explanation that I used assigns each individual to be either for or against Magic Carpet, but real people are more complex. Williams was a strong supporter of Magic Carpet as a program for mobility within downtown. She did not support providing free transit to other neighborhoods, and her statements during the meeting show that she drew a clear distinction between those two concepts (Transportation Committee 1979).

When the City's budget hole in 1982 threatened the future of Magic Carpet, the Great Man and materialist explanations accurately predicted that the program would survive, while the idealist explanation predicted it would not. However, as with the changes discussed in the previous paragraph, the prevailing ideology of the time, in this case neoliberalism, may have contributed to the situation in which the end of Magic Carpet was a conceivable outcome.

In 1987 and 1994, when Magic Carpet's hours were reduced, the Great Man explanation incorrectly predicted no change in 1987 and made no prediction in 1994, but the other two explanations correctly predicted the closure. The Great Man explanation only predicted that the 1987 reduction would not occur because Jeanette Williams was still on the Council. However, with decisions about Magic Carpet after 1983 being made by the larger Metro Council instead of the Seattle City Council, Williams would have had much less influence on the outcome. Furthermore, it is unclear whether she would have supported or opposed the change even if she had had more influence.

When the bus tunnel opened in 1990, the Great Man explanation makes no prediction, the idealist explanation incorrectly predicts Magic Carpet being excluded from the tunnel, and the materialist explanation accurately predicts the tunnel opening as part of Magic Carpet. Once again, the idealist explanation's inaccurate prediction was based on the ideology that may have been partially responsible for the change even being considered, while the materialist explanation examines the specific circumstances. Finally, when Link opened in 2009, the Great Man and idealist explanations accurately predicted that Link would not be part of Magic Carpet, while the materialist explanation made no prediction. However, the Great Man explanation may have reached the right conclusion for the wrong reason, as there is no indication that Lambert or Hague were involved in the decision to exclude Link from Magic Carpet.

Reviewing each of these disagreements among the competing explanations suggests a synthesis that is a more accurate explanation than any of them: The prevailing ideology influences what type of change is proposed, specific actions of key individuals initiate consideration of changes, and material factors determine whether or not the change occurs. On its own, the idealist explanation is the least accurate, but every change that was proposed during the Social Democratic Era was an expanding change, while every change proposed during the Neoliberal Era was a contracting change. The Great Man explanation is barely more accurate than the idealist, but its "average" is dragged down by repeated attempts to expand the program. Had Wes Uhlman given up after the first attempt at a Regrade expansion failed, it is unlikely that the program would ever have been expanded north. Had Mayor Royer made additional attempts to expand the program into Yesler Terrace, a future attempt may have succeeded. Thus the contribution of Great Men is perhaps not so much a mythical

ability to bring about success against unfavorable odds, but rather persistence in the face of repeated setbacks. The question that prompted this investigation is now ready to be answered.

The original question was, "What root causes explain the creation, longevity, and elimination of Seattle's Magic Carpet Zone?" My answer is as follows. In the late Social Democratic Era, Mayor Uhlman requested that a free-fare program be created in downtown Seattle. Environmental concerns, economic circumstances, logistical demands, and the preferences of the business community all supported the creation of the program. For the next four years, he repeatedly attempted to expand the program, and when material conditions were conducive, those efforts succeeded. Once the Neoliberal Era began, other individuals and some material circumstances created situations in which Magic Carpet could have been reduced. When enough material circumstances were conducive to the change, those reductions took place. In the late Neoliberal Era, when enough long-term conditions were no longer conducive to Magic Carpet's continuation, it became a casualty of budget negotiations.

To state it in a more general form, the dominant ideology of the time period determined what type of change was likely to be proposed, individual action initiated the changes, and material circumstances determined whether the potential change occurred. All three theories of historical causality make a useful contribution to understanding why each event happened, so omitting any one of them would weaken the explanatory power of the conclusion. The implications of this result will be discussed in the next chapter.

[insert notes here]

1 I would be remiss if I did not acknowledge that Medicaid, another Great Society program, is means-tested rather than universal. However, the general trend in the Social Democratic Era was towards universal programs.

2 Since this article was written, Sound Transit and Metro have developed a short-term solution to the light rail access issue. This solution is described in "Update: Connecting between Metro and Link", King County Metro, https://kingcountymetro.blog/2016/03/23/connecting-between-metro-and-link-working-toward-a-single-ticket-program-for-the-homeless-and-very-low-income/, accessed 2017-11-23.

3 Specific quotes include: "Washington is the 6th highest taxed state in the nation," and "If we can't provide tax relief when there's a $1 billion tax surplus and a thriving economy, when can we?"

4 The two standards for CO are 9 ppm (parts per million) over an 8-hour average and 35 ppm over a 1-hour average.

Conclusions and Further Research

The previous chapter demonstrated that, throughout the history of the Magic Carpet program, ideologies influenced the sort of changes proposed and individuals initiated specific changes, but material circumstances determined whether or not any given change would occur. How can these findings be generalized to other situations? Most currently-existing programs that provide people with fare-free transit are at universities. As I said in the literature review, there are some important differences between university-based transit programs and Magic Carpet. The nature of decision-making is one of these differences, but the programs also function differently. While Magic Carpet gave everyone free rides within downtown, university-based programs generally only serve people affiliated with the university. This means they have to be implemented differently than Magic Carpet was, usually by allowing a university ID card to function as a transit pass. This completely changes the logistical considerations involved. However, various university-based transit programs could be analyzed using methods similar to those I applied here.

For practicing planners, the most salient point of this study is that programs live and die based on the interaction of material conditions, ideological factors, and influential people. This means that a planner who wants to initiate, maintain, or end a given program must be aware of all of these factors in order to be successful. The planner will need the support of influential people and should structure their argument to align with the dominant ideology. They will also need to analyze the relevant material conditions to ensure that the conditions support their argument.

Other than applying the same analysis to university programs, what additional research can be done on this topic? There are two major directions in which future research can go from this point.

One possibility is investigating more about the Magic Carpet program. The other involves investigating other programs that have some similarity to Magic Carpet.

While researching Magic Carpet, I found a wealth of information about the first decade of the program, the period when the City provided most of the funding. There is, however, very little documentation about the later decades, when most of the funding came from Metro. Future researchers could flesh out this section of the narrative by looking for other resources that I was unable to find. One possible research question would be "Why did the Magic Carpet program persist almost unchanged from 1983 to 2012?" Researchers investigating this and other questions about the Metro-controlled period of Magic Carpet would want to take advantage of personal interviews with people who were involved in decision-making at Metro and King County during that time.

There were two specific events to which I found only one reference each, the 1983 proposed contraction of the Magic Carpet area to Lenora, and the 1986 attempt to restart the agreement with Selig to fund part of the program. The contraction was mentioned only in a letter to the editor in the Seattle Times (Jance 1983), and the attempt to get additional funding from Selig was only mentioned in a single letter in Seattle's City Archives (Zarker 1986). Future researchers could investigate either of these events to determine why the contraction failed, or why Selig was unwilling to resume funding the program.

Researchers investigating programs similar to Magic Carpet would choose their topic differently depending on which aspect of the explanation they wanted to look at. Under the Great Man Theory, Mayor Wes Uhlman was responsible for creating the Magic Carpet program. Additional information on the relevance of that theory could be derived from analyzing other programs that Uhlman proposed during his time in office.

From the perspective of those who see ideas as the primary historical force, Magic Carpet was implemented successfully because it was a universal program that came about during the social democratic era. This suggestion could be tested further by considering other municipal universal programs that have been either implemented or merely proposed during the social democratic or neoliberal eras. Additional questions could be considered in a meta-analysis of such programs: Were universal programs proposed in the social democratic era more likely to be implemented than those proposed in the neoliberal era? Once these programs were in place, were they more likely to be weakened or ended once the neoliberal era began than they were previously?

Finally, historical materialism suggests multiple mechanisms that influenced the rise and fall of Magic Carpet. Similar analysis of other fare-free or reduced-fare transit programs would produce their own lists of mechanisms. The relevant questions for comparison here are which mechanisms show up in studies of multiple programs, and if there are any mechanisms that appear to act in contradictory ways on different programs.

There are other possibilities for future research that are less directly connected to Magic Carpet. It is likely that the anti-tax movement in 1999 played a role in the end of Magic Carpet twelve years later. Other researchers could investigate what caused that movement to become so strong in Washington at that time.

Whatever direction future researchers decide to take, there is a wealth of scholarship to be done on the Magic Carpet program.

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Appendix A: Survey Results from 1974 Magic Carpet Study

The following tables are from data collected for Metro's 1974 Magic Carpet Study. Some of the tables were reported in the study, some in Kruger and Beck (1975), and some in both. Each table includes an indication of which source it appears in. Unless otherwise indicated, numbered notes are copied from the source and asterisk notes are my additions

Table 1. Trip Purpose for 1974 Fare Free Bus Trips, Based on 12,258 Trips.

Trip Purpose	Percent of Trips
Home	9.0
Work	27.9
School	1.1
Entertainment	10.6
Personal Business	21.6
Shopping	28.7
Social Service Agency	1.1
Total	100.0

(Kruger and Beck 1975)

Table 2. 1974 Fare Free Trip Purpose by Previous Mode.

Trip Purpose	Home	Work	School	Entertain-ment	Personal Business	Shopping	Social Service Agency	Row Total
Previous Mode								
Car	0.9	4.1	0.1	0.9	2.8	2.1	0.1	11.0
Shoppers Shuttle	0.3*	5.9	0.0	2.1	5.6	11.5	0.2	25.6
Other Bus Route	3.5	5.3	0.2	1.5	4.5	4.2	0.2	19.4
Walk	3.4	11.4	0.4	4.1	8.9	12.2	0.7	41.1
Taxi	0.2	0.7	0.0	0.2*	0.5	0.1	0.1	1.8
Other Column	0.2	0.2	0.0	0.3	0.1	0.3	0.0	1.1
Total	8.5		27.6	0.7	9.1	22.4	30.4	100.0

Note 1: Based on 9,153 trips. Note 2: 3,105 other fare-free trips were not made before free bus service. (Kruger and Beck 1975)

*The article reported Shoppers Shuttle-Home as 3.0% and Taxi-Entertainment as 2.5%. However, this led to inaccuracies in the totals too great to be accounted for by rounding error. Assuming that row and column totals were reported accurately, the most likely resolution was that the actual figures were 0.3% and 0.2% respectively.

Table 3. Bus Operations - Central Business District.

	Before Fare-Free Service	After Fare-Free Service	Expected Changes
A.M. Peaks			
Major Passenger Movement	Alighting	Alighting	None
Doors in Use	2	2	
Fare Paid	No	No	
Transfers Issued/Collected	Yes	No	
P.M. Peaks			
Major Passenger Movement	Boarding	Boarding	Faster operation inside CBD in P.M peak due to fare-free service.
Doors in Use	1	2	
Fare Paid	Yes	No	
Transfers Issued/Collected	Yes	No	

(Kruger and Beck 1975)

Tables 4-6. Central Business District Attitude Survey - Significant Factors. (first two parts appear in Kruger and Beck (1975) and in Metro (1974), while the third appears only in Kruger and Beck)

Do you think the fare-free service in downtown should be continued?

	Yes	No
CBD Employees	85%	4%
Bus Riders	85	5
New Businesses	94	0
Established Businesses	86	2
Social Service Agency Clients	92	1

The city of Seattle uses city tax money to provide the fare-free metro bus service in downtown Seattle. Do you think the city of Seattle should use city tax money to support the fare-free service?

	Yes	No
CBD Employees	63%	14%
Bus Riders	67	10
New Businesses	77	8
Established Businesses	70	10
Social Service Agency Clients	69	5

The one-year experiment for fare-free service cost the city of Seattle $64,000 or 12.5¢ per city resident. For the service offered do you think that sounds:

	Too Low	About Right	Too High
CBD Employees	6%	54%	11%
Bus Riders	10	54	11
New Businesses	10	82	0
Established Businesses	7	55	10
Social Service Agency Clients	10	50	4

Table 7. CBD Employee Survey - Trip Making Frequency by Purpose. (appears in Kruger and Beck (1975) as shown here; appears in Metro (1974) without "No Response" column and with slightly different figures)

As a result of fare-free bus service, do you use the downtown Seattle area relatively more, relatively less, or about the same in relation to other areas around Seattle for each of the following:

	More	Less	Same	No Response
Personal Shopping	43.1%	2.8%	45.2%	8.9%
Recreation	11.9%*	4.7%	66.4%	17.0%
Work-Related	34.9%	1.9%	49.9%*	13.3%
Lunch or Dinner	31.8%	4.0%	50.8%	13.4%
Personal Business	32.6%	4.2%	48.9%	14.3%

*The study says that 11.8% of respondents reported using the downtown area more for recreation and that 49.8% reported using the downtown area the same amount for work-related matters.

Table 8. Populations Sampled and Response Rate.

	Surveys Handed Out	Surveys Returned	Percent Return
CBD Employees	1,205	642	53%
Bus Riders	1,792	540	30%
New or Relocated Businesses	76	39	51%
Established Businesses	194	112	58%
Social Service Agencies			
Managers	24	24	100%
Clients	126	126	100%

(Metro 1974)

Table 9. Contributions to the Urban Environment. (This question was asked only of CBD Employees)

In your opinion, what has been the effect of Fare Free service in downtown Seattle on each of the following?

	Substantial Effect*	Little Effect	Negative Effect
Downtown a better place to work	62.7%	16.5%	2.6%
Reduction of air pollution	42.5	26.3	5.3
Reduction of traffic congestion	60.4	19.3	2.6
Increase in shopping convenience	80.5	7.5	1.9
Making it easier to get around in downtown Seattle.	79.9	6.2	1.7
Making it easier to use buses to get to and from downtown Seattle	54.2	20.2	4.2

*"Substantial Effect" includes both responses of "Great Effect" and "Some Effect" [note included in original]
(Metro 1974)

Appendix B: Negotiation Delay on Magic Carpet Agreements

This table shows each agreement between the City of Seattle and Metro for funding the Magic Carpet during the era in which the City paid for all of the estimated cost, and the number of days before each agreement was approved that the program was operating without an agreement in place.

Year	Bill number	First reading	Date passed	Date previous agreement ended	Number of days Magic Carpet operated without an agreement
1973	CB 94245	1973-07-23	1973-08-06	Initial authorization	0
1974	CB 95502	1974-08-26	1974-09-03	1974-09-09	0
1975	CB 96072	1975-02-10	1975-02-18	(three or four months?)	40-71
1977	CB 98355	1977-04-18	1977-05-16	1976-12-31	136
1979	CB 100567	1979-07-23	1979-08-13	1978-12-31	225
1981	Does not appear in City Council minutes, but agreement reached on 1981-02-16			1980-12-31	47
1983	R 26878	No first reading for resolution	1983-02-28	1983-04-10	0

Table compiled by author from information in the Seattle City Archives

Appendix C: Magic Carpet payments

Various sources disagree on how much was paid for Magic Carpet service in different years. These tables show some of that disagreement.

The first two charts below are from the undated document mentioned on page 52. Aside from a formatting change to increase legibility, they are reproduced verbatim.

History of Ride Free Cost Estimates

	Base Amount	Basis	Additions
1974	64,000	Revenue loss - Dime Shuttle	
75/76	112,500 114,500	Revenue loss - Dime Shuttle* - other Intrazone trips Added costs - more loads, more hours Savings from no Dime Shuttle	IDB
77/78	155,000	Same elements as 75/76 updated	Kingdome Shuttle (not included in cost) Denny Regrade
79/80	190,000 208,000	77/78 amount adjusted for • increase in fares, 17% • increase in riders, 9%	Yesler extension
81/82	282,000 302,000	79/80 amount adjusted for • fares, 25% • riders, 7%	
83/84	320,000 352,000	81/82 amount adjusted for: • fares, 10% • riders, -3%	

*based on UMTA funded Technical Study by Seattle-Metro-PSCOG

Total Cost - Ride Free Zone

Year	Base	Regrade	Yesler	RFZ Total	Kingdome Shuttle	Total
1974	$64,000			$64,000		$64,000
1975/76	112,500 114,500			112,500 114,500		112,500 114,500
1977/78	155,000 155,000	 17,496		155,000 172,496	20,000 20,000	175,000 192,496
1979/80	190,635 207,792	26,166 28,521	5,220 5,220	222,021 241,533	10,000 10,000	232,021 251,533
1981/82	282,567 302,347	38,785 41,500	7,737 8,278	329,089 352,125	12,600 12,600	341,689 364,725
1983/84(est)	320,443 352,487	43,984 48,383	8,773 9,650	373,200 410,520	15,000 15,000	388,200 425,520

(Seattle n.d.)

Summary of Payments Provided to Task Force Members

Notes	Period	Total Payment	City	Selig
1	9/1/73 - 8/31/74	$ 64,000	$ 64,000	0
2	9/1/74 - 12/3/74 [12/31/74]	21,000	21,000	0
3	1975	115,000	115,000	0
	1976	115,000	115,000	0
4	1977	175,000	175,000	0
5	1978	192,496	183,750	8,746
6	1979	232,021	218,938	13,083
	1980	251,533	237,554	13,979
7	1981	341,689	322,297	19,392
	1982	364,725	343,975	20,750
8	1/1/83 - 4/10/83	100,000	100,000	0
	9/1/73 - 11/10/83 [4/10/83]	$1,972,464	$1,896,514	$75,950

Notes (included in the original document)

1. The payment equalled [sic] annual farebox revenue for the Dime Shuttle.
2. The service was extended four months at the 1973-74 rate to syncronize [sic] with the fiscal year
3. The evaluation of the first year's operation calculated the cost to Metro at $128,132 per year. A credit for induced ridership of $28,132 was subtracted and $15,000 was added for the extension on Jackson Street from Sixth Avenue to the Freeway (three blocks).

4. The 1977-78 contract renewal was based on the $115,000 per year payment during 1975-76 plus increase in average fares. In addition, the City paid half of the $40,000 annual cost of the Kingdome Shuttle.
5. The extension into the Denny Regrade added $21,275 per year to the payment beginning March 4, 1978. Local developer Martin Selig paid one-half of the cost of this extension through December 31, 1982. The payment for this extension was increased by growth in citywide ridership and average fare increases, the same basis as the original area.
6. The 1979-80 contract renewal was based on the 1977-78 payment plus 17 percent increase in average fares and a projected 9 percent increase in citywide ridership.
7. The 1981-82 contract renewal was based on the 1979-80 payment plus 25 percent for the May 1980 fare increase and projected citywide ridership increases of 9 percent in 1981 and an additional 7 percent in 1982.
8. The service will be extended through the first 100 days of 1983 at the 1982 rate of $1,000 per day

(Seattle 1983)

Payments for Magic Carpet made by the City of Seattle and by Martin Selig

Resolution Number	Date of Adoption	City of Seattle Contributions	Business Community Contributions
1926	July 19, 1973	1974-$64,000	
2261	Feb. 20, 1975	1975-$112,000	
		1976-$114,000	
2474	March 4, 1976	1977-$175,000	
2725	June 16, 1977	1978-$175,000	1978-$8,746
3200	Oct. 18, 1979	1979-$226,801	1979-$13,083
		1980-$246,312	1980-$13,979
3598	Feb. 5, 1981	1981-$341,689	1981-$19,392
		1982-$364,312	1982-$20,750
4101	March 17, 1983	1983-$100,000	
		1984-$150,000	
		1985-$150,000	
4946	Sept. 4, 1986	1986-$150,000	
		1987-$150,000	
5328	March 3, 1988	1988-$150,000	
		1989-$150,000	

In January 1978, Resolution No. 2910 extended the boundaries of the Ride Free Area to Battery Street. From 1978-1982, Martin Selig made contributions for the extension.
(Metro 1989)

City Expenditures on Magic Carpet as Listed in Seattle City Budgets

Year	Proposed	Adopted	Actual	Budget line item
1973	Magic Carpet was not included as a budget line item until 1975			
1974				
1975	$65,000	$65,000[1]		Finance General, 4120, p.255
1976	$115,000	$115,000		Finance General--900, 4120, p.271
1977	$162,250	$114,750[2]	$87,500[3]	Finance General--900, 4120, p.277
1978	$175,000	$175,000	$175,000	Finance General--900, 4120, p.325
1979	$196,275	$186,275[4]	$186,275	Finance General--900, 4618, 54120, 546.33, p.596
1980	$251,533	$251,533	$251,533	Finance General--900, 4614, 54111, 514.32, p.633
1981	$339,089[5]	$339,089	$341,689	Finance General--460, 4618, 54120, 546.33, p.558
1982	$364,725	$364,725	$364,725	Finance General--460, 4618, 55105, 546.33, p.516
1983	$0	$100,000[6]	$100,000	Finance General--460, 4618, 55105, 546.33, p.509
1984	$150,000	$150,000	$176,080	Finance General--460, 4618, 55105, 546.33, p.449
1985	$163,220[7]	$163,220	$163,220	Finance General--460, 4618, 55105, 546.33, p.462
1986	$163,220[8]	$163,220	$161,830	Finance General--460, 4618, 55105, 546.33, p.442
1987	$163,220	$163,220	$163,220	Finance General--460, 4618, 55105, 546.33, p.484
1988	$163,220	$163,220	$163,370	Finance General--460, 4618, 55105, 547.60, p.502
1989	$164,190	$164,190	$164,190	Finance General--460, 4618, 55105, 547.60, p.508
1990	$164,190	$164,190	$165,060	Finance General--460, 4618, 55105, 547.60, p.539
1991	$164,190	$164,190	$162,860	Finance General--Q00100, Q54760, p.669
1992	$263,000	$263,000	$260,000	Finance General--Q00100, Q54760, p.613
1993	$260,000	$260,000	$270,000	Finance General--Q00100, Q54760, p.659
1994	$281,000	$281,000	$272,00	Finance General--Q00100, Q54760, p.529 (proposed)
1995	$275,277	$275,277	$284,000	Finance General--Q00100, Q54760, p.613
1996	$284,636	$284,636	$292,000	Finance General--Q00100, Q54760, p.567
1997	$293,175	$293,175	$293,175	Finance General--Q00100, Q54760, p.555
1998	$301,970	$301,970		Finance General--Q00100, Q54760, p.469
1999	$313,650	$313,650	$372,000	Finance General, Q54760, p.688
2000	$323,060	$323,000	$310,949	(budget not available) Finance General, Q5476000 (2001 budget: p.529) (2002 budget: p.537)
2001		$314,163[9]		Transportation, Traffic & Street Use Management:

				Traffic Control, p. 458
2002	$322,017			No data provided under Transportation
2003				No data provided under Transportation
2004				No data provided under Transportation
2005				No data provided under Transportation
2006				No data provided under Transportation
2007				No data provided under Transportation
2008				No data provided under Transportation
2009				No data provided under Transportation
2010				No data provided under Transportation
2011				No data provided under Transportation

Compiled by the author from data in Seattle City budgets from 1973 to 2012.
Pages 414-416 of the 2012 City Budget discuss cuts that were made to fill the budget hole, but the end of Magic Carpet is not mentioned.

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1. The 1976 budget lists $135,000 for the adopted 1975 figure, while the 1975 budget shows $65,000. The 1975 budget was passed before cost negotiations with Metro were complete.
2. Only $114,750 is included in the line item on the 1977 budget, after the Council deleted $47,500 which was inteded for expansion into the Denny Regrade. $175,000 is stated as the adopted 1977 figure in the 1978 budget.
3. The 1978 budget reports the actual amount spent in 1977 as $87,500, but provides no reason for the discount. This is also the year for which "Actual" figures began appearing in the budget two years later (e.g. the 1979 budget provides the "Actual" amount for 1977)
4. For the 1979 budget, the City Council reduced the amount "by $10,000 and requested King County to fund one-half of the Kingdome Shuttle", which was included in the Magic Carpet line item.
5. This increase was "the estimated result of current negotiations for the continuation of the 1979 through 1980 contract."
6. The Mayor's proposed budget eliminated funding for Magic Carpet, asking Metro either "to go to the business community to support this program, or to absorb the cost internally" (507). The budget note cites "restrictions imposed by the State on the City's sources of tax revenue" (507), as a reason for terminating funding. The Council added $100,000 to fund the program "during the first quarter of 1983" (508).
7. This figure includes $13,220 for the Kingdome Shuttle.
8. This figure was approved before the agreement with Metro was renewed.
9. Magic Carpet is no longer a separate line item; payment figures are reported in the text section.