

## Aspects of social mobility in Graz, 1857-1880

Hubbard, William H.

Veröffentlichungsversion / Published Version

Zeitschriftenartikel / journal article

Zur Verfügung gestellt in Kooperation mit / provided in cooperation with:

GESIS - Leibniz-Institut für Sozialwissenschaften

### Empfohlene Zitierung / Suggested Citation:

Hubbard, W. H. (1980). Aspects of social mobility in Graz, 1857-1880. *Historical Social Research*, 5(2), 3-26. <https://doi.org/10.12759/hsr.5.1980.2.3-26>

### Nutzungsbedingungen:

Dieser Text wird unter einer CC BY Lizenz (Namensnennung) zur Verfügung gestellt. Nähere Auskünfte zu den CC-Lizenzen finden Sie hier:

<https://creativecommons.org/licenses/by/4.0/deed.de>

### Terms of use:

This document is made available under a CC BY Licence (Attribution). For more information see:

<https://creativecommons.org/licenses/by/4.0>

ASPECTS OF SOCIAL MOBILITY

IN GRAZ, 1857-1880

William H. Hubbard<sup>+</sup>

The present essay is part of a study of household structure and social mobility in the Austrian city of Graz during the second half of the nineteenth century. The findings come from a sample of 1,102 households containing 5,139 persons that was extracted systematically from the manuscripts of the Austrian census of October, 1857. These persons and their descendants were traced in subsequent censuses in 1869, 1880, 1890, 1900 and 1910. The linkage was undertaken by hand with the aid of semi-alphabetized indices bequeathed by the Austrian census authorities; name, birthdate, and birthplace were used to establish correctness of the linkage. The data contained in the Austrian census manuscripts differ little from that in the censuses of other countries; there is, however, no direct information on wealth or income; on the other hand, there are reasonably unambiguous data on occupation, position in occupation, and relationship to household head. (1)

This essay examines some dimensions of social mobility in Graz and the relationship between mobility and the urban social structure. (2) The notion of social mobility used here is not limited to occupational career patterns; rather it is meant to encompass any movement--horizontal or vertical--across social space. More concretely I shall concentrate on two aspects of mobility: a) persistence and transiency or geographic mobility; and b) intragenerational shifts in occupational status. Regardless of the scope of its meaning, social mobility must be investigated as a product of social structure. The potentiality, or even necessity, of movement is strongly affected by the economic, demographic, and political context of that movement. Therefore we must first examine this context in Graz before proceeding to the facts of mobility.

---

<sup>+</sup> Address all communications to: William H. Hubbard,  
Department of History, Concordia University,  
Montréal, P.Q. H4B 1R6, Canada

or in Europe: Im Laach 1, D - 5000 Köln 1, West Germany

Throughout the nineteenth century Graz was one of the major urban centers of the Habsburg state. (3) In 1857 its population of 63,000 was the fourth largest in the western half of the monarchy. The city could look back on a long tradition as a center of civil and military administration, of culture, and of industry and commerce in the southeastern corner of German Central Europe. In 1857 the structure of urban life in Austria and Graz was still characterized by traditional elements that inhibited social mobility. Participation in economic life was largely under the authority of the guilds; guild and governmental regulations combined to restrict a person's access to ownership of a workshop or store. Most productive activity was carried out in small units in which masters, journeymen, and apprentices coexisted. Marriage laws required proof of assured livelihood in order to obtain official permission to marry and thus to set up an independent family household.

Of course this situation was not static. Migration to the city had been growing since the 1840s; a trend that was further increased by the elimination of peasant obligations in 1848. By 1857 only 60 percent of the city's residents possessed legal right of permanent domicile (Heimatrecht) in Graz. (4) Moreover, the 1850s and 1860s saw profound legal and economic changes that would work theoretically to increase the potentiality of social mobility in Austrian and Graz society. In terms of occupational mobility the most important change was undoubtedly the abolition of the guilds in 1859 and the establishment of almost total freedom to open a business merely by registering with the communal authorities. Other legal impediments to mobility were also subsequently removed. Prohibitions against the permanent settlement of Jews in the city were dropped in 1863. Official economic qualifications for marriage were abolished in 1869.

In the new context of a free market economy the city began to industrialize. After 1857 Graz was the mid-point of the Suedbahn from Vienna to Trieste; in 1860 a subsidiary railway line to the west provided access to the brown coal of the Koeflach-Voitsberg area; 1873 marked the completion of the line along the Raab into southwestern Hungary. The modernization and expansion of civil administration and education during the 1860s also increased employment both directly and indirectly through increased demands for office space, schools, housing and furnishings. Between 1857 and 1869 the city's population grew at the rapid rate of ca. 1.6 percent per annum to reach 81,900 by the latter date. By the early 1870s Graz's economy had acquired a substantial core of modern industry centered around metallurgy and engineering, food and drink (especially beer), leather and paper. The three largest establishments in metallurgy and engineering, only one of which had existed in 1857, together employed over 2,500 in the boom of the Gruenderjahre; the other areas mentioned had several firms with 100-300 employees each. The expansionist bubble burst in 1873 and Graz's economic development suffered a severe setback; among the numerous business failures the most dramatic was the closing of the steel plant and engineering works in 1879. The overall effect of the slump was reflected in the sharp decline in the growth of Graz's population; it grew at an annual rate of less than one percent to reach 92,881 in 1880. (5)

It has long been known that nineteenth-century urbanization was in large part the result of migration. (6) However, historians are only beginning to investigate internal migration as an aspect of social

mobility and as a two-way phenomenon with persons moving out of as well as into the city. Numerous recent investigations of North American cities in the nineteenth century have revealed that transiency was one of the fundamental characteristics of their populations. In Hamilton, Ontario only one-third of the population present in 1851 was still there a decade later; similarly high rates of transiency were found in Boston, Newburyport, Warren, Poughkeepsie, Omaha, and Birmingham. (7) A question immediately springs to the mind of the historian of Europe: Are these high rates of geographic mobility a uniquely North American phenomenon? There are a number of parochial reasons for thinking that they might be: the newness of fixed settlements, population expansion by dint of immigration, dynamic economic growth, the frontier, etc. The hackneyed contrast between the open, footloose American society and the rigidly stratified, sluggish European society would lead one almost instinctively to support the notion of North American uniqueness. Such an assertion can no longer be supported completely. Similarly high rates of transiency--or low rates of persistence--have been found in a number of European communities both during the nineteenth century and in earlier times. (8) In nineteenth-century Bochum and Rotterdam the persistence rate was around fifty percent every decade; that is, half of the population being traced left the city in the course of a ten-year interval. (9)

The phenomenon of high transiency is also characteristic of Graz society in the nineteenth century. By the census of 1869--twelve years after the previous one in 1857--only 40 percent of the persons in our sample were still in the city. The rate of persistence can be raised somewhat by including those who died during the interval (4.6 %) and those who probably died (5.1 %)--that is, who were sixty years or older in 1857 and were not found in 1869--but this still means that one-half of the population of 1857 had departed from Graz by 1869. Surprisingly the rate of persistence was precisely the same for both men and women; however, given the well-known difficulties in tracing women because of name changes upon marriage, the rate of female persistence is undoubtedly understated.

The extent of transiency has a different character when one considers the longer period from 1857 to 1880. Nominally the city had lost over three-quarter of its residents from 1857. But the subtraction of the deceased and the probably deceased reduces the proportion of transients to 60 percent in 1880, compared to 50 percent in 1869. This means that the rate of loss slowed drastically in the second decade following the starting date of the sample. Using the population of the sample remaining in 1869 as a new base, the rate of persistence between 1869 and 1880 is substantially higher than between 1857 and 1869. Fifty-seven percent of the 1869 population was still in Graz in 1880; by adding those who died between 1869 and 1880 the proportion of linked persons is raised to 70 percent of the starting population.

If one takes the active labour force as the population to be traced, the percentages of persistence differ somewhat but the trend remains substantially intact. The most noticeable change is the drop in persistence among females. This is produced by the nature of female employment in Graz; 53 percent of the female labour force was employed in domestic service, an occupational group commonly characterized by high turn-over via marriage and physical departure.

The social meaning of these data on persistence and transiency is an important but difficult question. Under normal political conditions migration is a voluntary act and is, as Judah Matras has written, "probably the most complex of population movements". (10) The particular issue of this essay is how migratory behaviour relates to the process of social mobility. Stated bluntly, is transiency or persistence a definite indicator of upward or downward social mobility? In order to approach an answer one must examine the characteristics of the persisters and the transients. However, since following the fate of out-migrants is virtually impossible, one can only infer the type of mobility associated with persistence or transiency from the status of the individuals when they were in the city.

Such inference necessitates a "model" of migratory behaviour which identifies variables and their potential effect on a decision to move or stay. In this study we can draw on two sets of variables that logically would influence migration: life-cycle variables and socio-economic variables. The available life-cycle variables are: marital status, age, and position within the household. Roughly these variables pertain to a person's psychological commitment to residential stability in that they reflect an individual's legal and emotional ties to other persons such as family and kin. Young, single persons without kin can clearly move more easily and willingly than older, married individuals with children and relatives. The available socio-economic variables are: occupation, position within occupation, and homeownership. These describe a person's economic commitment to the city; the obvious assumption here is that persons with a more substantial position in the urban economy will be less inclined to move elsewhere in search of economic betterment. A final variable to be used in this study is legal domicile or Heimatrecht. Heimatrecht in nineteenth-century Austria was a kind of local citizenship that one acquired through birth, marriage or application. It gave a person permanent right of residence in the city and the right to receive public welfare assistance in times of indigence. Because of this latter provision, Heimatrecht was seldom conferred on migrants and persons tended to keep the legal domicile with which they were born. (11) Thus it is best considered as describing the historic identification of a person's family with a given community. Other variables such as ethnicity and religion that figure so prominently in mobility studies in North America are of insignificant importance in Graz at this time; the population was virtually entirely German and Roman Catholic. Sex is also omitted in this instance because of the lack of substantial variations in persistence according to sex and because of the uncertainty regarding the tracing of females.

Considering the impact of life-cycle variables first, one finds familiar results. Single persons are considerably more likely to be transient than married persons; 60 percent of married persons in 1857 were located in 1869 compared to 38 percent of single persons. The gap widened between 1869 and 1880. By the latter date the proportion of married persons linked was twice as high as for single persons. A curve of the age distribution of persisters clearly identifies the strong connection between youthfulness and transiency. The percentage of persisters in a five-year cohort declines sharply until 25-29 after which it rises and remains steady until the toll of death begins in a massive way in the age-group 60-64. The age distribution of persisters in the male labour force is virtually identical. The major

difference is that the trough is even deeper: less than 25 percent of those under 25 years of age in 1857 remained in Graz by 1869.

The third life-cycle variable--position in household--is a more direct measure of the nature of a person's relationship to the community of residence. In Graz in 1857 position in the household also indicated socio-economic status in the sense that marriage laws and guild regulations made the establishment of an independent household depend on the attainment of a secure living. The record or persistence by position in the household in the long decade between 1857 and 1869 shows a sharp rise in transiency according to the nature of a person's ties to the head of the household: the weaker the strength of kinship links, the higher the transiency. Persons belonging to the family nucleus of the household--heads, spouses, and children--remained in Graz in greater numbers than average. Sixty percent of the male household heads, 60 percent of the spouses, and 47 percent of the children were located in 1869. A very high proportion of the first two groups could also be linked in 1880. Among the children the tendency to stay in Graz after 1869 was also strong; about two-thirds of those still present in 1869 appeared again in the 1880 census. (12)

Outside the family nucleus the rate of persistence drops quickly; just over 40 percent of the coresident relatives and just over 30 percent of the lodgers could be found in 1869. In the case of the relatives, though, once they stayed through the first census period, they were also traceable in the second. About half of the persisting relatives had subsequently established their own households in the city, but the other half--mostly unmarried sisters and widowed mothers--remained as dependents in the original household. Servants and resident employees, lowest on the totem pole of household status, attested their transient membership in both the household and the community by a persistence rate of only 20 percent, less than half the level of the family nucleus. Servants are usually considered the most volatile segment of urban society; in the case of Graz this label must be assigned to the resident employees; only 16 percent of the male resident employees in the 1857 sample could be located twelve years later.

Life-cycle variables, then, clearly exerted a powerful influence on the geographic mobility of Graz residents. Moreover, these variables are well-behaved in the sense that their relationship to persistence and transiency in Graz is consistent with the findings of other studies of urban communities.

The impact of the designated socio-economic variables, on the other hand, is more complex. The most straight-forward one is homeownership. Over 60 percent of the male homeowners in 1857 could be located in the census of 1869, a figure substantially above the average persistence rate for males; however, if one takes male heads of household as the reference point, the gap is narrowed almost to the point of insignificance. Possession of legal domicile in Graz predictably increased the likelihood of staying in the city. Persons with Heimatrecht outside Graz had, after all, already indicated a migratory propensity by coming to Graz in the first place. Counting deceased persons as well, one-half of Graz natives could be found in the city in 1869 and 39 percent were linked with the 1880 census. By contrast barely one-third of the non-natives were located twelve years after the

date of the base sample. To a certain degree the frequency of persistence is inversely related to the distance a migrant has come. Excepting those from outside the Habsburg territories, persons from the surrounding districts of Styria and from the immediate southwestern provinces of Carinthia and Carniola have the lowest rates of persistence. These results suggest that these persons were probably temporary migrants who came to the city for training and experience and did not intend to stay in Graz from the very beginning. (13)

This brings us to a consideration of the impact of occupation and position in occupation upon persistence and the connection between geographic mobility and vertical social mobility. A recurrent assertion in many historical studies of urban social mobility is that transiency was an indicator of a person's lack of economic success in the city. In his study of mobility in Bochum between 1880 and 1900 David Crew argued that out-migrants "were largely the failures in the urban economy and probably had a good change of remaining so wherever they went". (14) Similar statements can be found in other studies. (15)

The Graz data question this common assertion although they do show a strong relationship between position in occupation and persistence. Predictably the higher positions--higher in terms of wealth, income, security and status--have higher than average rates of persistence that correspond to their "investment" in the city. Almost two-thirds of the self-employed men in 1857 were linked to the census of 1869; there was no significant difference between self-employed in the industrial versus the commercial sector or according to size of establishment. (16) More than half of the men in salaried white-collar positions or of those who lived from independent means could also be found. At the other end of the spectrum, only 21 percent of the female servants were located twelve years after the original sample. In this case low persistence probably means a kind of success. Any movement out of the lowly status of household servant could be considered upward mobility; a frequent type of departure was marriage, an event that would change the family name and make it almost impossible for the linking process to be successful.

The persistence behaviour of these socio-economic groups is as expected. A problem arises, however, when we look at male manual workers. If out-migration indicates a failure to achieve upward mobility, one would logically expect to find higher rates of transiency among the unskilled who by definition would be ill-equipped to meet the technical requirements for upward mobility in an industrializing society. Yet contrary to these expectations it is the unskilled workers who persist to a much greater degree than the skilled workers. Only one-quarter of the skilled workers--journeymen and apprentices--in 1857 remained in Graz until 1869 compared to 42 percent of the unskilled. Since we know that, in general, skilled industrial employment did not decline in the city during this period, we must conclude that factors besides position in occupation influenced workers' decisions to leave Graz.

The factors are probably found in the differing life-cycle characteristics of the two groups. In 1857 the skilled worker in Graz was typically young, single, and non-native; he also normally resided in the household of his employer. Seventy-five percent of the skilled

workers were under age 35; 78 percent were single; 65 percent possessed Heimatrecht in a community other than Graz; and 54 percent lived as resident employees, an additional 15 percent as lodgers. By contrast the typical male unskilled workers in 1857 was older and more settled in the city. Only 35 percent of the unskilled workers were under 35; 49 percent were single; 45 percent did not have Graz Heimatrecht; and a mere 10 percent lived in their employer's household, 19 percent as lodgers. Thus the difference in the migratory patterns of skilled and unskilled workers would seem to be less a question of success or failure in socio-economic advancement than of life-cycle. Even without the initial context of a guild economy with its emphasis on Wanderschaft, there would be many plausible non-economic motives for the low rate of persistence of young, single men, among them a simple desire for adventure and, probably more importantly, the call of military service.

Of the variables examined for a relationship with persistence, occupation has the least direct effect. The correlation appears to be quite unsystematic and mostly unconnected to the nature of the occupation and its position in the urban economy. The high persistence of men in agriculture, retail trade and banking is consistent with property ownership and investment in inventory. But it is unclear why only 19 percent of those in metallurgy remained compared to 44 percent in engineering; both occupational groups were expanding rapidly in the course of Graz's industrialization until at least the mid-1870s. Occupational groups that were slowly declining between 1857 and 1880, such as the clothing industry and woodworking, exhibited average or even slightly higher than average rates of persistence. The relative unimportance of specific occupations in determining geographic mobility is not unique to Graz; Michael Katz arrived at similar conclusions for Hamilton in the 1850s.(17)

So far the discussion has dealt with the separate impact of each independent variable on migration to ascertain whether or not there was a significant pattern of influence. To determine the strengths of these influences when all variables are considered simultaneously requires the use of multivariate techniques. For this purpose I used the ANOVA procedure in SPSS which measures the amount of variance in the dependent variable--in this case migratory behaviour expressed as the dichotomy "present" or "not present"-- that can be derived from the additive effects of the independent variables. In addition the procedure adjusts the distribution of persistence within each variable for the effect of the other independent variables and computes a standardized beta figure that describes the relative weight of each variable's contribution to the determination of persistence. (18)

Full results of this analysis are presented in table 10; here I can only point out some highlights. The analysis was applied only to the male labour force with deceased persons excluded; the reason behind this choice was that the migratory behaviour of such a population would be more economically rational than would be the case with a population involving spouses, children and other dependents. In general the life-cycle variables are more important in explaining persistence than the socio-economic variables. The most important single variable is relationship to head of household with a standardized beta of .22. Even after controlling for the effects of age, position in occupation, occupational category, and legal domicile, the dif-

ference in rates of persistence between nuclear family members and lodgers or servants and resident employees remains quite large. According to the adjusted distributions 51 percent of male household heads persisted compared to 25 percent of servants and resident employees. At some distance behind household status in relative importance come position in occupation, age, and legal domicile with standardized betas of .17, .15 and .14 respectively. As anticipated occupation is the least influential component in determining persistence between 1857 and 1869 (beta = .11). The ranking of the variables changes considerably when persistence between 1869 and 1880 is the item analyzed. In fact, the model falls apart with only two of the variables--age and Heimatrecht--having statistically significant contributions.

Taken together all variables "explained" 17 percent of the variation in persistence between 1857 and 1869 and only 9 percent between 1869 and 1880. These low levels provoke the sober recognition that migratory behaviour is a very complex and unpredictable phenomenon that can be only imperfectly captured by "rational" models embodying stage in the life-cycle or socio-economic status. What Michael Katz wrote about Hamilton also applies to Graz during this period: "despite the differences between transients and persisters, every (sic) type of person apparently moved". (19) Geographic mobility was a pervasive characteristic of nineteenth-century urban society, so pervasive, in fact, that its links with a rationalistic, calculating mode of behaviour which responds to measurable characteristics seems to have been very weak. Indeed I am tempted to conclude wryly that many people left Graz in the final analysis simply because the spirit moved them.

If the common contention that out-migration expressed relative socio-economic failure in the city is difficult to demonstrate conclusively in the case of Graz, what can be said about the success or failure of the persisters? Did they make "right" decision in the sense that they were able to realize opportunities for socio-economic advancement? In terms of geographic mobility Graz and the rest of urban Austria in the third quarter of the nineteenth century were open societies; can the same be said for vertical social mobility? Well, no, but there was considerable movement. Between 1857 and 1869 40 percent of the persisting male labour force experienced a change in position in occupation. For the male labour force persisting between 1869 and 1880 the total percent mobile was slightly lower at 37.

However, as shown in table 11, this mobility was clearly circumscribed. The groups classified as professionals and salaried employees exhibited the strictest degree of segregation expressed in terms of occupational self-recruitment and inheritance. For the most part these groups were characterized by academic training that was not available to the average person; three-quarters of the salaried group were in fact civil servants. While there was some exchange between these two groups themselves, there was little between them and the others in the labour force. Between 1857 and 1880 only fourteen persons from these other groups--two from the self-employed and twelve from the ranks of skilled workers--became salaried employees; none became Beamte.

The self-employed tradesmen and master artisans showed a high degree of occupational stability and exclusiveness over the two decades. In-

cluding those who retired, about 80 percent of the self-employed males remained in that category for the entire period from 1857 to 1880. In spite of the vicissitudes of the urban economy in the 1860s and 1870s, they managed substantially to maintain their position at least outwardly. The shift away from smallshop production associated with industrialization and evident in table B was not yet sufficiently strong to take the form of widespread downward mobility among the self-employed. Even the years of depression after 1873 do not seem to have forced proprietors who had established themselves by 1869 into decline and failure in large numbers. Nonetheless there is evidence that self-employment would be threatened in the near future. Between 1869 and 1880 downward mobility was higher than average among the younger self-employed artisans. Rather than hang onto the workshop at all cost, they evidently were forced to seek employment as skilled workers. In the earlier period downward mobility into skilled labour was infrequent; the typical pattern of downward mobility among the self-employed in the 1860s was the decline into unskilled labour or onto the public dole, a turn of events associated with aging and probably infirmity.

As stated earlier most skilled workers in Graz in 1857 were still part of a socio-economic order characterized by guild organizations. In such an economy the status of dependent skilled worker was a function of life-cycle and thus considered a temporary state of affairs. The skilled journeyman aspired to and theoretically ultimately obtained ownership of his own workshop or store. Whatever the reality might have been before 1857, such aspirations during the period covered by this essay were not completely wishful thinking. Between 1857 and 1869, no doubt in part due to the introduction of *Gewerbefreiheit* in 1859, a substantial number of skilled journeymen realized their goal of an independent business. Twenty-nine percent of those skilled workers in 1857 who remained in Graz to 1869 had become self-employed by the latter date. The odds were 2:3 that a skilled worker would rise to proprietorship as opposed to remaining a skilled worker. By contrast the odds that a skilled worker would experience downward mobility into the ranks of unskilled workers, farmers and welfare recipients were less than 1:5.

This seemingly favourable situation began to change in the 1870s. Not only was the general economic picture bleak after 1873 but also in several areas of traditional industrial activity in Graz--leather production, metallurgy, engineering, brewing--the economic viability of small workshops was increasingly threatened by the establishment of modern industrial plants. One effect was to curtail the upward mobility of skilled workers. Between 1869 and 1880 only 16 percent of the skilled journeymen moved into their own businesses; the odds for this type of upward mobility fell to 1:3. At the same time a new channel of upward social mobility--salaried commercial-industrial employment--emerged in a modest way, a portent of future developments. Thus the total percentage of skilled workers experiencing some degree of upward mobility between 1869 and 1880 fell only to 23.

An examination of the occupations involved in the upward mobility reveals limitations in the opportunities implied in the aggregate figures just presented. The odds for realizing a permanent move into self-employment differed considerably from one occupation to another. By and large only occupations dominated by local demand and requiring only modest capital investment were characterized by upward mobility.

Forty-six percent of skilled cabinet makers in 1857 had their own workshop in 1869; 40 percent of skilled retail clerks and 38 percent of skilled workers in clothing manufacture--roughly two-thirds tailors, one-third shoemakers--acquired independent businesses during this period. By contrast only 2 out of 21 skilled workers in metallurgy and engineering and none of the skilled workers in printing made the jump to owner. Similar differentiation was maintained during the period from 1869 to 1880 but with generally lower mobility results.

Can we really treat all movement into self-employment as upward social mobility for a skilled journeyman? For example, the overall position in the urban economy of two of the occupations in which high mobility was found--wood-working and clothing manufacture--declined between 1857 and 1880. Unfortunately I do not have adequate information on income or wealth with which to assign a firm economic ranking to occupational titles. But while the economic position of the independent craftsman was undoubtedly being eroded in the course of industrialization, self-employment certainly still meant upward mobility according to the ethos of the artisan economy. Having one's business generally enhanced one's social position in a variety of own ways; it increased the likelihood of heading one's own household or becoming married; it was an important consideration in applications for Graz Heimatrecht. Moreover, in nineteenth-century Graz self-employment was a crucial contributor to political status in the community; suffrage was based on payment of direct taxes and until the establishment of personal income tax in 1898 only owners of businesses or property paid direct taxes. (20) Of course the degree of success by the attainment of independent economic status varied enormously. As Allen Sharlin has pointed out with respect to Frankfurt am Main, a shift from skilled journeyman to self-employed shopkeeper was both economically and socially ambiguous and often marked relative decline rather than advancement. (21) Sharlin's argument would plausibly apply to Graz as well, but according to my information such moves were infrequent in Graz during the period covered. The majority of skilled workers who became shopkeepers were already employed in the commercial sector so for them it was a logical occupational development. S.M. Miller has suggested another important consideration: namely, how permanent was the upward change in status? (22) In formal terms the "stability of mobility" in Graz between 1857 and 1880 appears to have been high. Only a fifth of the skilled workers who attained proprietorship by 1869 had returned to the ranks of skilled labour in 1880.

Even though the promise of upward mobility for the skilled manual worker in Graz was limited, his occupational career experience still substantially separated him from the unskilled labourers. The persons in this latter group occupied the bottom level of the socio-economic hierarchy and tended to stay there. Less than one-quarter of those classified unskilled experienced any upward shift in status between 1857 and 1880. Unskilled workers had little chance to become self-employed; those areas into which they did move were the marginal services, etc.--which were of doubtful economic viability. Opportunities in skilled work were also few. In both the 1860s and 1870s only 11 percent of male unskilled workers moved into skilled positions, the largest number into the construction branch where skills could be more easily acquired.

In short patterns of social mobility in Graz between 1857 and 1880 reveal a society in which social boundaries were strongly defined. Except for movement--mostly one-way--between skilled workers and self-employed artisans--an emphatic pattern of segregation obtained. And it was evidently not weakening much in the course of early industrialization. One might have expected a narrowing of the differences between skilled and unskilled labour as a counterpart of the diminishing upward mobility of the skilled workers in the 1870s. The Griffens detected this development in Poughkeepsie around this same time, but it does not seem to have occurred in Graz. (23) In Graz the proportion of either group moving into self-employment declined by about half in the 1870s compared to the 1860s. The picture of a society in which occupational status is well-defined and relatively stable is reinforced by the low level of horizontal occupational mobility. Skilled workers, who as a group experienced the greatest degree of upward and downward mobility, remained remarkably faithful to their original occupational categories. Only 15 percent of those who remained at the level of skilled worker changed their occupation; the same percentage applies to those who became self-employed. Even unskilled workers were consistently found in the same jobs over the years although admittedly one of those designations--Tagloehner--is very unspecific. In spite of considerable industrialization Graz's socio-economic structure to 1880 remained strongly influenced by traditional norms. The influence would be reinforced by the revision of the Austrian Gewerbeordnung in 1883 which restored many legal features of the artisan economy in Austria. (24) What effect this move would have on mobility remains to be investigated.

The modest level of advancement among those residents in 1857 who remained in Graz further substantiates the earlier argument that out-migration was not necessarily an indication of economic failure in the city. The possibility of success for workers as measured in the attainment of self-employment was simply limited everywhere. Furthermore there was almost no difference in the persistence rate from 1869 to 1880 between those workers who had achieved proprietorship in the 1860s and those who had not: for the former it was 70.6 percent, for the latter 73.8 percent (disregarding the deceased and probably deceased). In fact in the long run out-migrants might be more successful if one can extrapolate from the record of migrants coming into Graz. Among the skilled workers who remained in the city, the natives had the lowest degree of upward mobility. A fifth of Graz-born industrial skilled workers established themselves as independent artisans in the 1860s compared to almost one-third of those from outside the province of Styria.

Finally a brief comparative note to conclude this sketch. The dimensions of mobility in Graz bear striking resemblance to patterns found in North American cities during this same period. The Graz data are somewhat differently organized but the results are frequently almost interchangeable with those for Poughkeepsie, Hamilton, or Boston. A high level of geographic mobility and population turn-over seems to be a characteristic of cities everywhere in the nineteenth century. In the 1860s and 1870s upward mobility from manual labour into the ranks of self-employed or salaried was possible for a minority but becoming increasingly difficult to achieve; on both sides of the Atlantic the large majority of employed persons stayed in the same occupational group throughout their working life. However, it does ap-

pear that the chances of an unskilled worker achieving upward mobility were somewhat better in Poughkeepsie and Hamilton than in Graz. North American cities also seem to have no equivalent of the Austrian salaried group composed primarily of civil servants whose status, status consciousness and social exclusiveness were pronounced. If these similarities are genuine and not merely an artifice, it will be very interesting to see if they remain or diminish as studies proceed into the late nineteenth and twentieth century.

#### FOOTNOTES

The research on which this essay is based has been made possible by grants from the Social Sciences and Humanities Research Council of Canada; I wish to thank Concordia University and the Inter-University Centre for European Studies in Montreal for generous additional financial support. Diane Ludlow gave advice and programming assistance with great forbearance; I am also grateful to my Graz assistants and, most especially, to the then director of the Graz city archives, Harold Fischer, who gave me his fullest support and cooperation. The essay is dedicated to the memory of a beloved Grazer: Obermedizinalrat Dr. Walther Zechner.

- 1 For an analytical description of the Austrian census see Johannes Ladstaetter, "Wandel der Erhebungs- und Aufarbeitungsziele der Volkszählungen seit 1869," in *Beiträge zur Bevölkerungs- und Sozialgeschichte Österreichs*, ed. by Heimold Helczmanovszki (Munich, 1973), 267-94.
- 2 From the voluminous literature on social mobility I have found three collections of essays especially useful: A.P.M. Coxon & C.L. Jones, eds., *Social Mobility* (Harmondsworth, 1975); W. Mueller & K.U. Mayer, eds., *Social Stratification and Career Mobility* (The Hague, 1973); and N.J. Smelser & S.M. Lipset, eds., *Social Structure and Mobility in Economic Development* (Chicago, 1966).
- 3 See William H. Hubbard, "A Social History of Graz, Austria 1861-1914," (unpubl. Ph.D. diss., Columbia University, 1973). For a comparative view of Austrian cities in the second half of the nineteenth century see William H. Hubbard, "Der Wachstumsprozess in den österreichischen Großstädten 1869-1910," in *Soziologie und Sozialgeschichte*, ed. P.C. Ludz (Opladen, 1973), 386-418.
- 4 On the meaning of Heimatrecht see below, p. 6.
- 5 William H. Hubbard, "Wirtschaftliches Wachstum und sozialer Wandel in Graz, 1850-1914," in *850 Jahre Graz 1128-1978*, ed. by W. Steinboeck (Graz, 1978), 381-98.
- 6 Adna F. Weber, *The Growth of Cities in the Nineteenth Century* (Ithaca, 1963 (1899)).
- 7 Michael Katz, *The People of Hamilton, Canada West* (Cambridge, Mass., 1975), 123; Stephan Thernstrom, *The Other Bostonians* (Cambridge, Mass., 1973), 222; Clyde Griffen & Sally Griffen, *Natives and New-comers* (Cambridge, Mass., 1973); Michael P. Weber, *Social Change in an Industrial Town* (University Park, Penna., 1976), 36.

- 8 Stephen Hochstadt, "Migration and Industrialization in Germany: A Revisionist View," (paper presented to the Social Science History Association, 1979) gives a summary of these studies.
- 9 David Crew, "Definitions of Modernity: Social Mobility in a German Town, 1880-1901," *Journal of Social History* 7 (1973): 51-74; Hendryk van Dyck, "Social Stratification and Social Mobility in Rotterdam," (unpublished paper, 1975).
- 10 Judah Matras, *Social Inequality, Stratification and Mobility* (Engelwood Cliffs, 1975), 358.
- 11 In Graz the acquisition of Heimatrecht by application required a payment of 50 guilder to the communal welfare fund; wives automatically acquired the Heimatrecht of their husbands. Anyone not possessing legal domicile in Graz would be expelled from the city if the municipal authorities could convince the courts that the person was causing public disturbances or had become an illegal burden of public welfare institutions. *Oesterreichisches Staatswörterbuch* (2nd rev.ed., 1904-1907), c.v. "Heimatgesetz" and "Schubwesen".
- 12 The proportion would probably be raised somewhat if one could follow daughters after marriage.
- 13 Hochstadt especially emphasizes the importance of this type of migrational behaviour; see note 8.
- 14 Crew, "Definitions of Modernity," 59.
- 15 Weber, *Social Change*, 42; Thernstrom, *Bostonians*, 41; Peter Knights, *The Plain People of Boston, 1830-1860* (New York, 1971), 115. None of these authors are as blunt as Crew in this regard.
- 16 The criterium for size of establishment was the holding of household servants.
- 17 Katz, *Hamilton*, 132.
- 18 Richard Jensen, "New Presses for Old Grapes: I: Multiple Classification," *Historical Methods* 11 (1978): 174-6.
- 19 Katz, *Hamilton*, 132.
- 20 The only exceptions to the tax requirement were the so-called "academic" voters; civil servants, teachers, and academic professionals qualified for suffrage simply on the basis of their status.
- 21 Allen Sharlin, *Historical Social Mobility Studies in Social Structural Perspective: Occupational Classification Revisited*, (paper presented to the Social Science History Association, 1977).
- 22 S.M. Miller, "Comparative Social Mobility," in *Social Mobility*, eds. Coxon & Jones, 79-112.
- 23 C. Griffen & S. Griffen, *Natives*, 61.
- 24 William A. Jenks, *Austria under the Iron Ring, 1879-1893* (Charlottesville, Va., 1965); Heinrich Waentig, *Gewerbliche Mittelstandspolitik* (Leipzig, 1898).

Table A: Occupational Distribution of Male Labour Force, 1857 and 1880 (in per cent)

occupational category	1857 (N = 1538)	1880 (N = 1353)
agriculture	2.6	3.8
mining-smelting	0.1	0.3
stone-earth	1.2	1.5
metallurgy	7.3	7.0
engineering	2.2	1.4
chemicals	1.3	0.4
energy	0.3	0.1
construction	5.2	5.2
printing	1.1	1.0
textiles	1.0	1.5
papers	0.8	0.7
leather, hair, etc.	1.4	1.8
woodworking	7.9	4.5
food processing	7.2	7.5
clothing	17.0	11.8
other industry	1.4	3.0
hostelry	3.4	5.8
retail & wholesale trade	6.0	7.8
itinerate trade	0.2	0.3
banking, insurance	0.5	0.7
transportation, post	3.3	4.7
other commercial services	0.9	3.0
casual labour	7.5	8.0
household servants	7.3	4.7
civil service	9.5	9.2
education	1.4	1.3
other free professions	1.8	1.9
unclassifiable	0.1	1.3

source: samples from Graz census manuscripts in respective years.

Table B: Status in Occupation of Male Labour Force, 1857 and 1880  
(in per cent)

status in occupation	1857 (N = 1538)	1880 N = 1355)
professional	2.1	2.8
salaried	11.4	12.8
industrial self-employed	12.3	8.8
commercial self-employed	6.2	8.9
industrial skilled	35.1	30.5
commercial skilled	3.0	3.1
apprentice	6.6	5.8
semi-skilled	2.7	2.3
unskilled	12.3	19.5
servant	7.3	4.7

source: samples from Graz census manuscripts in respective years.

Table 1: Basic Dimensions of Persistence, 1857 - 1880

	N at first census	per cent persisting	per cent died <sup>+</sup>	per cent prob. died <sup>++</sup>	per cent absent
			a) 1857 - 1869		
male	2,421	39.6	4.9	4.6	50.9
female	2,718	39.6	4.3	5.5	50.6
total	5,139	39.6	4.6	5.1	50.7
			b) 1857 - 1880		
male	2,421	23.5	10.9	6.0	59.6
female	2,718	21.8	9.0	7.2	62.0
total	5,139	22.6	9.9	6.6	60.9
			c) 1869 - 1880		
male	958	59.3	15.2	3.4	22.1
female	1,077	55.0	11.8	4.3	28.9
total	2,035	57.0	13.4	3.9	25.7

<sup>+</sup> Deaths ascertained through information on record of a family member, usually a spouse.

<sup>++</sup> Persons who were over 60 years of age at last presence in census.

Table 2: Persistence of Active Labour Force, 1857 - 1880

	N at first census	per cent persisting	per cent died <sup>+</sup>	per cent prob. died <sup>++</sup>	per cent absent
a) 1857 - 1869					
male	1,538	36.7	4.6	4.4	54.3
female	873	26.8	1.4	4.2	67.6
total	2,411	33.1	3.4	4.3	59.2
b) 1857 - 1880					
male	1,538	21.1	12.3	6.2	60.5
female	873	15.7	3.6	5.9	74.8
total	2,411	19.1	9.1	6.1	65.7
c) 1869 - 1880					
male	565	52.9	19.1	4.8	23.2
female	260	52.7	5.8	5.8	35.8
total	825	52.8	14.9	5.1	27.2

<sup>+</sup> Deaths ascertained through information on record of a family member, usually a spouse

<sup>++</sup> Persons who were over 60 years of age at last presence in census.

Table 3: Persistence by Marital Status, 1857 - 1880<sup>+</sup>

marital status in 1857	N in 1857			per cent persisting 1869			per cent persisting 1880		
	m	f	t	m	f	t	m	f	t
single	1579	1672	3251	37 (1)	37 (1)	37 (1)	24 (2)	21 (2)	22 (2)
married	769	782	1551	48 (13)	49 (8)	49 (11)	24 (27)	29 (17)	27 (22)
widowed & other	66	256	322	21 (21)	26 (15)	25 (16)	4 (35)	7 (24)	6 (33)
total	2421	2718	5139	40 (5)	40 (4)	40 (5)	24 (11)	22 (9)	23 (10)

<sup>+</sup> The figures in parentheses are the percentages deceased in the category.

Table 4: Persistence by Age, 1857 - 1880<sup>+</sup>

age in 1857	N in 1857			per cent persisting 1869			per cent persisting 1880		
	m	f	t	m	f	t	m	f	t
0- 4	182	196	378	58 ( 1)	59 ( -)	59 ( -)	42 ( 1)	27 ( -)	34 ( -)
5- 9	168	154	322	55 ( -)	51 ( -)	53 ( -)	31 ( 1)	26 ( -)	29 ( -)
10-14	185	155	340	34 ( -)	43 ( -)	38 ( -)	25 ( -)	23 ( -)	24 ( -)
15-19	266	210	476	28 ( 1)	34 ( -)	31 ( -)	20 ( 1)	23 ( -)	22 ( -)
20-24	221	227	448	31 ( -)	31 ( 1)	31 ( -)	21 ( 1)	21 ( 2)	21 ( 1)
25-29	204	281	485	34 ( 1)	34 ( 2)	34 ( 1)	23 ( 5)	26 ( 3)	25 ( 4)
30-34	209	283	492	42 ( 1)	43 ( 2)	43 ( 1)	31 ( 4)	33 ( 4)	32 ( 4)
35-39	200	247	447	48 ( 6)	44 ( 2)	46 ( 3)	32 (11)	32 ( 5)	32 ( 8)
40-44	168	207	375	55 ( 4)	46 ( 2)	50 ( 3)	30 (11)	26 ( 7)	28 ( 8)
45-49	155	199	354	44 ( 3)	49 ( 3)	47 ( 3)	22 (13)	20 (10)	21 (10)
50-54	124	135	259	39 ( 6)	36 ( 7)	38 ( 7)	13 (16)	8 (12)	10 (14)
55-59	102	138	240	44 ( 4)	32 ( 4)	37 ( 4)	11 (37)	7 (24)	8 (34)
60-64	78	108	186	27 (12)	30 ( 7)	28 ( 9)	3 (35)	5 (31)	4 (33)
65-69	73	68	141	23 (27)	22 (28)	23 (28)	- (50)	3 (44)	- (48)
70+	70	90	160	7 (70)	7 (54)	7 (61)	- (77)	- (61)	- (68)
total	2421	2718	5139	40 ( 5)	40 ( 5)	40 ( 5)	24 (11)	22 ( 9)	23 (10)

<sup>+</sup>The figures in parentheses are the percentages deceased in the category.

Table 5: Persistence by Relationship to Household, 1857 - 1880<sup>+</sup>

status in 1857	N in 1857			per cent persisting 1869			per cent persisting 1880		
	m	f	t	m	f	t	m	f	t
head	818	283	1101	47 (12)	32 (11)	43 (12)	24 (28)	12 (21)	21 (26)
spouse	1	684	685	- (-)	52 (9)	52 (9)	- (-)	30 (19)	30 (19)
child	778	834	1612	47 (-)	48 (-)	48 (-)	33 (-)	27 (-)	30 (-)
relative	54	132	186	43 (6)	37 (7)	39 (7)	35 (6)	20 (14)	24 (12)
lodger	305	295	600	28 (3)	26 (4)	27 (4)	14 (6)	11 (8)	12 (7)
servant	104	439	543	34 (-)	21 (1)	23 (1)	14 (6)	12 (2)	12 (3)
resident employee	354	36	390	16 (-)	28 (-)	17 (-)	11 (1)	11 (-)	11 (1)
other	8	15	23	38 (-)	60 (-)	52 (-)	25 (-)	53 (7)	43 (4)
total	2421	2718	5139	40 (5)	40 (4)	40 (5)	24 (11)	22 (9)	23 (10)

<sup>+</sup>The figures in parentheses are the percentages deceased in the category.

Table 6: Persistence by Geographic Origin, 1857 - 1880<sup>+</sup>

Heimatrecht in 1857	N in 1857			per cent persisting 1869			per cent persisting 1880		
	m	f	t	m	f	t	m	f	t
Graz	1307	1586	2893	47 ( 7)	44 ( 6)	46 ( 6)	29 (14)	25 (11)	27 (12)
Middle Styria	366	472	838	31 ( 4)	28 ( 2)	27 ( 3)	20 ( 7)	17 ( 6)	18 ( 6)
Upper Styria	53	81	134	28 ( -)	27 ( 1)	28 ( 1)	8 ( 6)	14 ( 7)	11 ( 7)
Lower Styria	113	124	237	38 ( 4)	29 ( 3)	33 ( 3)	21 ( 9)	17 ( 3)	19 ( 6)
Carinthia- Carniola	88	94	182	20 ( 4)	24 ( 4)	22 ( 4)	16 ( 7)	13 ( 5)	14 ( 6)
Lower & Upper Austria	124	108	232	40 ( 4)	48 ( 3)	44 ( 3)	14 (12)	18 ( 9)	16 (11)
Rest of Cisleithania	228	156	384	31 ( 3)	41 ( 2)	35 ( 1)	18 ( 7)	25 ( 5)	21 ( 6)
Hungary	62	50	112	29 ( 2)	48 ( 2)	38 ( 2)	10 ( 5)	24 ( 2)	16 ( 4)
Foreign	80	47	127	14 ( 1)	28 ( 2)	19 ( 2)	4 ( 2)	15 ( 4)	8 ( 3)
total	2421	2718	5139	40 ( 5)	40 ( 4)	40 ( 5)	24 (11)	22 ( 9)	23 (10)

<sup>+</sup>The figures in parentheses are the percentages deceased in the category.

Table 7: Persistence by Status in Occupation, 1857 - 1880<sup>+</sup>

status in 1857	N in 1857			per cent persisting 1869			per cent persisting 1880		
	m	f	t	m	f	t	m	f	t
self-em- ployed	339	52	391	55 (10)	40 (-)	53 (9)	28 (29)	21 (8)	27 (26)
independent means	144	191	335	38 (18)	30 (12)	34 (16)	15 (32)	10 (21)	12 (27)
salaried	175	8	183	48 (5)	25 (-)	42 (5)	28 (15)	12 (12)	27 (15)
skilled	579	13	592	26 (4)	54 (-)	26 (3)	17 (6)	31 (-)	17 (5)
apprentice	102	13	115	24 (-)	15 (-)	23 (-)	22 (-)	15 (-)	21 (-)
semi-skilled	41	17	58	29 (2)	41 (-)	33 (2)	15 (4)	24 (-)	17 (3)
unskilled	189	308	497	42 (4)	31 (3)	36 (3)	21 (15)	19 (6)	20 (9)
servant	113	462	575	27 (-)	21 (-)	22 (-)	14 (3)	12 (1)	12 (2)
dependent	639	1548	2187	48 (1)	49 (4)	49 (3)	32 (1)	28 (9)	29 (7)
other	100	106	206	28 (14)	25 (15)	26 (15)	15 (19)	10 (25)	12 (22)
total	2421	2718	5139	40 (5)	40 (5)	40 (5)	24 (11)	22 (9)	23 (10)

<sup>+</sup>The figures in parentheses are the percentages deceased in the category.

Table 8: Persistence by Status in Occupation, 1869 - 1880<sup>+</sup>

status in 1869	N in 1869			per cent persisting 1880		
	m	f	t	m	f	t
self-employed	186	21	207	51 (35)	52 (14)	51 (33)
independent means	55	58	113	40 (36)	33 (31)	36 (33)
salaried	84	2	86	58 (20)	50 (50)	58 (20)
skilled	149	7	156	64 ( 8)	57 ( -)	64 ( -)
apprentice	24	2	26	92 ( -)	100 ( -)	92 ( -)
semi-skilled	12	7	19	50 ( 8)	43 ( -)	47 ( 5)
unskilled	79	97	176	51 (27)	61 (10)	56 (18)
servant	31	98	129	52 (10)	57 ( 4)	56 ( 5)
dependent	310	759	1069	67 ( 1)	56 (10)	59 ( 7)
other	28	26	54	58 ( 9)	38 (42)	48 (25)
total	958	1077	2035	59 (15)	55 (12)	57 (13)

<sup>+</sup>The figures in parentheses are the percentages deceased in the category.

Table 9: Persistence by Occupation of Male Labour Force, 1857 - 1880

occupational category in 1857	N in 1857	per cent persisting 1869	per cent persisting 1880
agriculture	40	52.5	15.0
mining-smelting	2	-	-
stone-earth	18	16.7	11.1
metallurgy	113	18.6	8.8
engineering	34	44.1	26.5
chemicals	20	30.0	15.0
energy	5	40.0	-
construction	80	42.5	20.0
printing	17	52.9	29.4
textiles	16	37.5	12.5
paper	13	30.8	7.7
leather, hair, etc.	22	27.3	22.7
woodworking	121	31.4	22.3
food processing	111	24.3	17.1
other industry	22	31.8	18.2
hostelry	53	32.1	15.1
retail & wholesale trade	92	53.3	23.9
itinerate trade	3	33.3	-
banking, insurance	7	57.1	28.6
transportation, post	50	42.0	30.0
other commercial services	14	35.7	14.3
casual labour	115	40.0	22.6
household service	113	27.4	14.2
civil service	146	45.2	31.5
education	22	54.5	22.7
other free professions	27	25.9	3.7
unclassifiable	1	-	-
clothing	261	41.0	27.6
total	1538	36.7	21.1

Table 10: Determinants of Persistence in Male Labour Force, 1857 - 1869<sup>+</sup>

dependent variables and categories	unadjusted per cent persisting	eta	adjusted per cent persisting	significance of F statistic
age		.20	.15	.001
0-19	.25		.37	
20-29	.30		.41	
30-39	.46		.44	
40-49	.52		.45	
50-59	.42		.28	
60-99	.34		.19	
relationship to household		.33	.22	.001
head	.56		.51	
child	.43		.40	
relative	.34		.38	
lodger	.30		.32	
employee	.18		.25	
geographic origin		.23	.14	.001
Graz	.50		.45	
Styria	.33		.36	
Carinthia-Carniola-Lower & Upper Austria	.29		.34	
Rest Austria-Hungary	.30		.36	
foreign	.09		.16	
status in occupation		.29	.17	.001
self-employed with servant	.64		.51	
self-employed without servant	.59		.48	
salaried	.51		.52	
skilled	.27		.32	
unskilled	.37		.37	
occupational group		.17	.11	.024
agriculture	.57		.52	
stone,metallurgy,engineering	.24		.32	
chemical,printing,paper, leather,food	.29		.37	
construction, woodworking	.37		.43	
textile, clothing	.42		.43	
hostelry,trade,banking	.47		.42	
transportation,casual labour	.43		.39	
government service,professions	.45		.30	
grand mean = .39		$r^2 = .169$		$N = 1417$

<sup>+</sup> Deceased persons excluded from analysis; cases with missing data also excluded.

Table 11: Mobility of Male Labour Force, 1857 - 1880  
(outflow percentages)

occupational status at start	occupational status at end of period							N
	1)	2)	3)	4)	5)	6)	7)	
1) professional								
57 - 69	58	33	8	-	-	-	-	12
69 - 80	74	9	9	-	9	-	-	11
2) salaried								
57 - 69	5	89	1	1	1	-	2	84
69 - 80	9	77	4	-	2	2	7	57
3) industrial self-employed								
57 - 69	-	1	78	5	2	5	9	112
69 - 80	-	1	71	8	13	4	4	90
4) commercial self-employed								
57 - 69	-	2	12	69	-	12	4	48
69 - 80	-	-	4	74	4	8	11	27
5) skilled								
57 - 69	-	2	24	5	51	12	6	176
69 - 80	1	6	10	6	55	13	9	155
6) unskilled								
57 - 69	-	-	5	4	11	70	9	122
69 - 80	1	-	1	4	11	67	16	93
7) other, farmer								
57 - 69	-	-	9	-	-	-	91	11
69 - 80	-	-	-	-	-	-	100	2
total N								
57 - 69	11	84	145	54	102	123	46	565
69 - 80	15	54	84	40	98	107	37	435