

Background Information on the Rule of 90 Early Normal Retirement Age Provision

1. Statutory Definition of Retirement. The various Minnesota defined benefit retirement plans either do not define the term, define the term to mean the period of time after a plan member becomes entitled to an accrued retirement annuity to be paid, define the term to mean the withdrawal by a plan member from active employment, define the term to mean the period of time after the cessation of active employment, or define the term as the commencement of the payment of a retirement annuity.
2. Definition of Normal Retirement
 - a. General Definition. The “normal retirement age” is the earliest age under a retirement plan at which a retirement annuity is payable without any reduction for an early retirement.
 - b. Commission Principles of Pension Policy Normal Retirement Age Policy Provision. Principle II.C.4. of the Principles of Pension Policy of the Legislative Commission on Pensions and Retirement indicates that the normal (unreduced for early retirement) retirement ages should be set based on the employability limits of average public employees and will be different for public safety employees when compared with general employees.

Specifically, the applicable principle states:

II.C.4. Appropriate Normal Retirement Ages

The normal retirement age should be set in a reasonable relationship to the employability limits of the average public employee and should differentiate between regular public employees and protective and public safety employees.

The current set of principles, last revisited by the Commission in 1996-1996, with respect to this particular principle, largely continued the earliest statement of the principle in 1980, emphasizing normal retirement ages at usual employability limits, but without any of the 1980 age specificity.

- c. General Policy Considerations Concerning Normal Retirement Ages. The historic reason for creating and maintaining pension plans, in the private sector or the public sector, was to augment an employer's personnel and compensation system by assisting in the recruitment of new qualified employees, the retention of existing qualified employees, and the systematic out-transitioning of existing employees at the conclusion of their normally expected working careers. The pension system does this by providing retirement annuities (and frequently other casualty or ancillary benefit coverage) that are deemed adequate in view of both the employer and the employees and that are deemed affordable by the employer. This traditional pension plan purpose apparently underlies the development of public pension plans in Minnesota, although it never has clearly been articulated in law.

The systematic out-transitioning of existing employees at the conclusion of their normally expected working careers is the basis for setting normal retirement ages. The Commission's Principles of Pension Policy indicate that the normal retirement age of Minnesota public pension plans should be set in accord with the employability limits of the average public employee, and indicate that the normal retirement age generally should differentiate between general public employees and set at an earlier age for protective and public safety employees.

Age 65 has generally come to be the traditional age at which many employees are expected to retire. It is, however, unclear from a policy perspective why this age has become the regularly expected retirement age for Social Security and for many public retirement plans. Age 65 does not appear to represent an empirically determined conclusion about when most employees retire that was drawn from the experience of employees before the creation of Social Security and the significant expansion of employment-based pension coverage in the 1930s. Before the 1930s, retirement for most people appears to have been a function of a physical inability to continue in employment, at whatever age that occurred. Early employee retirement plans were frequently referred to as superannuation plans and some plans substitute the term “superannuation age” for what is referred to as the “normal retirement age” in other plans. Until recent decades, the most impoverished sector of the population was older folks and the improvement of their situation was one of the goals of President Franklin Roosevelt in proposing the Social Security System in 1934. The age 65 normal retirement age is frequently attributed to Chancellor Otto Von Bismarck of Germany, who is reported to have set age 65 as the normal retirement age for the retirement coverage provided to the Prussian army.

Since the 1960s, in both larger corporate defined benefit pension plans and public employee pension plans, the trend clearly appears to have been to institute normal retirement ages earlier

than age 65. The age 62 with 30 years of service and the Rule of 90 provisions are early normal retirement age Minnesota public pension plan provisions, where a benefit unreduced for early retirement is provided at an age before the generally applicable normal retirement age. The age 62 with 30 years of service early normal retirement age provision was added to the statewide general employee retirement plans in 1973 as the first generally applicable early normal retirement age provision. The Rule of 90 early normal retirement age provision, where a person becomes eligible for an unreduced retirement benefit when the person's age and years of credited service equal or exceed the sum of 90, was enacted for the General Employees Retirement Plan of the Public Employees Retirement Association (PERA-General) in 1982 (Laws 1982, Ch. 519, Sec. 2). In 1989 (Laws 1989, Ch. 319, Art. 13), the Rule of 90 provision was extended to the General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General), the Teachers Retirement Association (TRA), and the coordinated programs of the first class city teachers retirement fund associations, applicable to only pre-July 1, 1989, hires. That restriction was also made applicable to PERA-General in 1989.

In the opposite direction, based on considerations of lengthening expected life spans and of the related cost of providing benefits for ever-lengthening retirement periods, as part of 1986 Congressional amendments, Social Security has instituted a later full benefit retirement age, as follows:

Social Security		Social Security	
Year of Birth	Normal Retirement Age	Year of Birth	Normal Retirement Age
Before 1938	Age 65	1955	Age 66, 2 months
1938	Age 65, 2 months	1956	Age 66, 4 months
1939	Age 65, 4 months	1957	Age 66, 6 months
1940	Age 65, 6 months	1958	Age 66, 8 months
1941	Age 65, 8 months	1959	Age 66, 10 months
1942	Age 65, 10 months	1960 and later	Age 67
1943-1954	Age 66		

- d. Summary of the Current Minnesota Defined Benefit Retirement Plan Normal Retirement Age Provisions. Minnesota public pension plans currently reflect some uniformity in normal retirement ages. The following compares the normal retirement ages applicable to the various Minnesota public pension plans:

MSRS-General	PERA-General	TRA	First Class City Teachers Coordinated Plans
"Normal retirement age" means age 65 for a person who first became a covered employee or member of a public pension fund listed in section 356.30, subdivision 3, before July 1, 1989, and the higher of age 65 or the "retirement age" defined in 42 USC Section 416(l), as amended, but not greater than age 66 for a person who first became a covered employee or member of a public pension fund listed in section 356.30, subdivision 3, after June 30, 1989. [352.01, Subd. 25]	"Normal retirement age" means age 65 for a person who first became a covered employee or member of a public pension fund listed in section 356.30, subdivision 3, before July 1, 1989, and the higher of age 65 or the "retirement age" defined in 42 USC Section 416(l), as amended, but not greater than age 66 for a person who first became a covered employee or member of a public pension fund listed in section 356.30, subdivision 3, after June 30, 1989. [353.01, Subd.37]	"Normal retirement age" means age 65 for a person who first became a covered employee or member of a public pension fund listed in section 356.30, subdivision 3, before July 1, 1989, and the higher of age 65 or the "retirement age" defined in 42 USC Section 416(l), as amended, but not greater than age 66 for a person who first became a covered employee or member of a public pension fund listed in section 356.30, subdivision 3, after June 30, 1989. [354.05, Subd. 38]	"Normal retirement age" means age 65 for a person who first became a covered employee or member of a public pension fund listed in section 356.30, subdivision 3, before July 1, 1989, and the higher of age 65 or the "retirement age" defined in 42 USC Section 416(l), as amended, but not greater than age 66 for a person who first became a covered employee or member of a public pension fund listed in section 356.30, subdivision 3, after June 30, 1989. [354A.011, Subd. 15a]
MSRS-Correctional	State Patrol	PERA-Correctional	PERA-P&F
"Normal retirement age" means age 55. [352.93, Subd. 1]	"Normal retirement age" means age 55. [352B.08, Subd. 2a]	"Normal retirement age" means age 55. [35E3.04, Subd. 1, 4]	"Normal retirement age" means age 55. [353.651, Subd. 1, 3]
Legislators Plan	Judges Plan		
"Normal retirement age" means age 62. [3A.01, Subd. 8]	"Normal retirement age" means the date on which a judge attains the age of 65. [490.121, Subd. 21f]		

The 1986 resetting of the Social Security full retirement benefit receipt age appears to have been motivated largely by financial concerns and by a need to reduce future benefit outlays in order to delay the date of a benefit default than by any clearly delineated empirical evidence that American workers were actually continuing working to later ages. Indeed, the literature on the topic suggests that the last 20 years have seen continuing reductions in the retirement age of many workers compared to the normal retirement age applicable to prior generations of workers. The life expectancy of American workers, however, has been increasing throughout the 20th century, meaning that workers could delay the start of their retirement period compared to prior generations without causing any actual reduction in the duration of benefit receipt compared to earlier generations. Although the potential employability limits of general employees appear to be lengthening, it is not clear that the same phenomenon is true to some extent for public safety employees.

3. Rule of 90 Early Normal Retirement Provisions. Historically, it has been Commission policy to set an age 65 normal retirement age for general (nonpublic-safety) employees and an age 55 normal retirement age for public safety employees. While age 65 or age 55 normal retirement ages remain a common requirement, different normal retirement ages have been established over time. For the oldest programs of the first class city plans and local police and salaried firefighter relief associations, younger normal retirement ages have long existed before 1989, as follows:

Plan	Age or Ages
Duluth Teachers Retirement Fund Association (DTRFA) Old Law Program	Age 60
Minneapolis Teachers Retirement Fund Association (MTRFA) Basic Program	Age 60 or any age w/30 years of service
St. Paul Teachers Retirement Fund Association (SPTRFA) Basic Program	Age 60 with 25 years of service
Minneapolis Employees Retirement Fund (MERF)	Age 60 or any age w/30 years of service
Most local police or salaried firefighter relief associations	Age 50

In 1973, the Commission and the Legislature initially recognized long service as a qualification for an earlier normal retirement age for the statewide general employee pension plans, with the enactment of the age 62 with 30 years of service normal retirement age provision.

In 1982, after several sessions of considering proposed legislation to create earlier normal retirement ages, the Legislature enacted the Rule of 90 for the Public Employees Retirement Association (PERA), in lieu of the PERA age 62 with 30 years of service provision. The Rule of 90 provision allows a person to retire with an unreduced retirement annuity when the person's combined age and service total at least 90.

In 1989 (Laws 1989, Ch. 319, Art. 13), the Legislature extended this Rule of 90 early normal retirement provision to the Minnesota State Retirement System (MSRS), TRA, and the three first class city teacher plans as part of a major benefit improvement. That benefit increase was added as a House of Representatives floor amendment to proposed legislation relating to teachers' salaries in Independent School District No. 709 (Duluth), without a favorable recommendation by the Legislative Commission on Pensions and Retirement. The Rule of 90 provision is part of the Tier I benefit package, which consists of an earlier retirement age, a lower benefit accrual rate for the initial ten years of service (1.0% rather than 1.5% for Tier II Coordinated Programs, and 2.0% rather than 2.5% for Tier II Basic Programs), and a subsidized early retirement reduction amount.

During the 1989 Session, several Senate members of the Legislative Commission on Pensions and Retirement supported a general benefit accrual rate increase at age 65 while several House of Representatives members of the Commission supported the Rule of 90 early normal retirement age provision. The 1989 benefit increase legislation, an amendment derived from 1989 Session S.F. 1329 (Pogemiller); H.F. 1302 (Simoneau), ultimately was enacted.

Specifically, the 1989 benefit increases related to the Rule of 90 benefit tier and the level benefit tier are as follows:

- a. Level Benefit Tier. All plan members are eligible to receive a retirement annuity using a level benefit accrual formula rate of 1.5% credit for all years of service, rather than the current 1% of each of the first ten years of service, followed by 1.5% thereafter. If the individual retires before the normal retirement age, the benefit is actuarially reduced. The normal retirement age for new employees will be automatically changed to correspond to the Social Security retirement age, as that age changes over time. The normal retirement age is age 65.
- b. Rule of 90 Benefit Tier. Plan members first hired before July 1, 1989, if their age plus years of service total the sum of 90, are eligible to receive a benefit accrual formula rate of 1% for each of the first ten years of service, followed by 1.5% per year thereafter, with no early retirement reduction. If the member does not meet the Rule of 90 eligibility requirement, with a benefit accrual rate of 1% for each of the first ten years and 1.5% thereafter, the early retirement reduction rate is 3% per year.

The 1989 benefit accrual rates, including the Rule of 90 Benefit Tier, were increased in 1997 (Laws 1997, Ch. 233, Art. 1).

The argument made by the proponents for the Rule of 90 benefit tier was that the benefit program would be restricted to then current plan members (pre-July 1, 1989, hires) and that the Legislature reserved the right to eliminate the provision if its utilization exceeded 45% of eligible retirees. The Rule of 90 reporting requirement and elimination provision was repealed in 1993 (see Laws 1993, Ch. 280) at the request of the various major general employee retirement plan administrators when the TRA utilization approached the triggering level.

The 1989 Rule of 90 extension, with its restriction to pre-July 1, 1989, hires, reflects a compromise based on policy and cost considerations. Although the accrual rate for the first ten years of service is less than under a level benefit computation, the waiver of any early retirement benefit reductions that would otherwise be required tends to more than outweigh the lesser accrual rate used of the first ten years of service, creating a subsidized benefit. This subsidy of those who have sufficient age and years of service to qualify for and use the Rule of 90 adds to the plan cost, to be paid by many who will never have sufficient service to qualify for this benefit. Restricting the Rule of 90 to only those who started in covered employment before July 1, 1989, made the cost manageable under the 1989 bill. However, it has created a difference between the benefit provisions available to the pre-July 1, 1989, hires and those who came afterwards, leading to frequent requests by the more recent hires to have the Rule of 90 extended to them. So far, the Legislature has resisted those requests, for a number of reasons. One reason is that it is not viewed as an issue needing prompt attention. Individuals who started employment after 1989 either are sufficiently young that retirement is not a serious concern, or their service is rather short, leaving them far from qualifying for a Rule of 90 benefit if one were to be offered. The second consideration is cost. It would be necessary to increase the contributions to all these plans to cover the added liabilities that would be created by extending the Rule of 90. The third consideration is policy conflicts created by these early retirement provisions. An effort to extend early retirement provisions to post-1989 hires is in conflict with changes in federal retirement policy. The Social Security system has been increasing the age at which individuals can qualify for full Social Security benefits, and without those Social Security benefit checks and related Medicare coverage, most individuals who might wish to retire early from a Minnesota public plan cannot afford to do so, because of the high cost of health care. Also, given the increases in expected lifespan that has occurred and that will continue to occur, one can argue that average retirement age may need to be increased rather than decreased, to control plan cost. Fourth, given current and future labor markets, there is a need to encourage the post-World War II baby boom generation to stay in the labor force, rather than encouraging their withdrawal. The next generation is too small to fill all the positions that will become vacant. To some extent Rule of 90 provisions encourage withdrawal from the labor force. Finally, Rule of 90 provisions are inconsistent with the concepts upon which our defined benefit plans were based. These plans were intended to attract sufficient capable workers, to act as a retention tool to keep them in government employment, and to out-transition them at the end of their productive years, providing sufficient income in retirement, along with Social Security benefits and private savings, to allow the retiree to retain a reasonable standard of living. Many who retire under the Rule of 90 are not ready to leave the labor force, and thus the benefits are not used to provide retirement income. Retirement benefits paid to those who simply transition to other employment add to plan cost and may not be serving a useful public purpose.

The benefit accrual rates enacted in 1989 were increased again in 1997 (Laws 1997, Ch. 233, Art. 1). Following the enactment of the 1997 revisions, a benefit computed under the level benefit tier would use an accrual rate of 1.7% per year of service, rather than 1.5%. Benefits computed under the Rule of 90 benefit tier now use an accrual rate of 1.2% per year for each of the first ten years, and 1.7% for each year thereafter. As part of the 2006 merger of the Minneapolis Teachers Retirement Fund Association (MTRFA) into TRA, the Legislature again increased accrual rates, but only for TRA and only for prospective service.

In addition to the Rule of 90, there are other benefits generally found in these general employee plans which apply only to the pre-July 1, 1989, hires. These include an age 65 normal retirement age, rather than age 66. The lower age 65 normal retirement age will lessen the amount of a reduction due to early retirement compared to use of age 66, and will allow individuals to retire with full benefits a year earlier. Another is a 30-year provision, which allows individuals with 30 years of service credit to retire prior to normal retirement age with a reduction applied only to age 62 rather than age 65, creating a larger benefit. A third provision applicable only to the pre-July 1, 1989, hire group is an early retirement benefit computed using the Rule of 90 tiers described above with a 3% per year reduction due to early retirement.

4. 1989 Benefit Increase Legislation.

- a. Summary of the 1989 Benefit Increase Legislation. In 1989 (Laws 1989, Ch. 319, Art. 13), the Legislature enacted a controversial omnibus retirement bill that included a major benefit increase. The 1989 benefit increase legislation included the following:
 - i. Reduction in Vesting Requirement. The vesting period was reduced from five years to three years. Normal retirement, early retirement, disability, portability, and survivor benefit provisions were changed to three-year service eligibility rather than five-year.
 - ii. Increased Interest on Refunds. Interest on refunds of member contributions taken when an individual leaves employment was increased to 6% from 5%.

- iii. Increase in Deferred Annuity Augmentation. Under prior law, individuals who have vested and then leave employment prior to retirement can have a deferred annuity, leaving their contributions in the retirement plan and eventually receiving an annuity at retirement age. Deferred annuities augmented at 3% per year during the deferral period. Under the 1999 law, deferred annuities augmentation increases to 5% on January 1 of the year after the member reaches age 55.
 - iv. Automatic Bounce-Back, Joint and Survivor Annuity. The 1999 law provided a subsidized, automatic bounce-back annuity for individuals selecting a joint and survivor annuity. If the designated beneficiary of a joint and survivor annuity dies before the annuitant, the former employee's annuity automatically bounces back to the single life annuity level.
 - v. New Level Benefit Formula, Post-1989 Employees. Post-June 30, 1989, employees will receive a level formula of 1.5% credit for all years of service, rather than the current 1% for each of the first ten years of service, followed by 1.5% thereafter. If the individual retires before the normal retirement age, the benefit is actuarially reduced. The normal retirement age for new employees will be automatically changed to correspond to the Social Security retirement age, as that age changes over time. The normal retirement age for existing employees remains at age 65.
 - vi. Current Benefit Formula with 3% Early Retirement Reduction. The benefit accrual rate was set at 1% for each of the first ten years, plus 1.5% for each year thereafter, with a 3% annual reduction for early retirement, or
 - vii. Level Benefit Formula with Actuarial Reduction. The benefit accrual rate was set at 1.5% for all years of service, with an actuarial reduction for early retirement, or
 - viii. Rule of 90 with Current Benefit Formula Rates. If age plus years of service equal at least 90, the benefit accrual was set at 1% for each of the first ten years of service, followed by 1.5% per year thereafter, with no early retirement reduction. Use of the Rule of 90 must be reviewed periodically. If use exceeds 45% of the members eligible to retire under that provision, the provision is voided.
 - ix. Contribution Rate Increases. The employee contribution rate for members was increased.
 - x. Interest Assumption Increases. The pre-retirement interest rate assumption was increased to 8.5% for the following retirement plans: the Legislators Retirement, MSRS-General, MSRS-Military Affairs, MSRS-Transportation Department Pilots, MSRS-Correctional, MSRS-State Troopers, the Elective State Officers Plan, PERA, PERA-P&F, PERA- Correctional, TRA, and the Judges Retirement Plan. For the Minneapolis, St. Paul, and Duluth teacher funds, the pre- and post- retirement interest assumption was increased to 8.5%.
 - xi. Amortization Date Extended. For the retirement plans listed in point x, the amortization target period was extended to the year 2020.
- b. Legislative Process in Enacting the 1989 Benefit Increase Legislation. The 1989 benefit increase legislation was reviewed as a proposal by the Legislative Commission on Pensions and Retirement, but was not recommended by the Commission because of personal disagreements on the Commission that limited its function. The 1989 legislation built on Commission hearings on benefit adequacy, pension funding, and pension administration issues that occurred during the 1988-1989 Interim. The 1987-1988 and 1989-1990 membership of the Legislative Commission on Pensions and Retirement was as follows:

1987-1988	
Senate	House
Donald M. Moe (St. Paul)	Karen Clark (Minneapolis)
Lawrence J. Pogemiller (Minneapolis)	Bob A. Johnson (Bemidji)
Earl W. Renneke (LeSueur)	Gerald Knickerbocker (Hopkins)
Gene Waldorf (St. Paul)	Leo J. Reding (Austin)
Darrel Wegscheid (Apple Valley)	Wayne Simoneau, Chair (Fridley)

1989-1990	
Senate	House
Donald M. Moe, Chair (St. Paul)	Bob A. Johnson (Bemidji)
Steven Morse (Dakota)	Gerald Knickerbocker (Hopkins)
Lawrence J. Pogemiller (Minneapolis)	Rich O'Connor (St. Paul)
Earl W. Renneke (LeSueur)	Leo J. Reding (Austin)
Gene Waldorf (St. Paul)	Wayne Simoneau (Fridley)

The 1989 benefit increase legislation took a somewhat tortured path to enactment. Benefit increase proposals were introduced as S.F. 1329 (Pogemiller); H.F. 1302 (Simoneau) and were heard by the Commission, but the bill was laid over without further action on April 12, 1989.

Eventually, S.F. 783 (Solon) became the vehicle bill. S.F. 783 (Solon), a bill introduced to authorize a fifth year incentive plan for teachers in the Duluth public schools, passed the Senate on May 1, 1989, on a 67-0 vote. On the House floor, S.F. 783 (Solon), a non-pension bill relating to teacher salaries in Independent School District No. 709 (Duluth), was amended with a “delete-everything” amendment that included the various retirement benefit increase proposals that were assembled by the Pension Subcommittee, chaired by Representative Bob A. Johnson, and by the House Governmental Operations Committee, chaired by Representative Wayne Simoneau, and was returned to the Senate on May 19, 1989, four days before the adjournment deadline for the 1989 Legislative Session. Although the Duluth teacher salary provision was not retained by the House in S.F. 783 (Solon), Senator Sam Solon moved that the Senate concur in the House amendments on May 19, 1989. Senator Lawrence J. Pogemiller made a substitute motion for the Solon concurrence motion that the Senate not concur in the House amendment and that a conference committee be named. The Senate approved the Pogemiller motion to not concur on a vote of 34-33. Then current, past, and future Commission members voted as follows:

For Pogemiller Motion				Against Pogemiller Motion	
Langseth	Morse	Renneke	Stumpf	Johnson, D.E.	Metzen
Moe, D.M.	Pogemiller	Spear	Waldorf	Larson	

Subsequently, five Senators were appointed as a conference committee, Senators Solon, Moe, D.M., Moe, R.D., Pogemiller and Renneke. The House failed to appoint conferees and on May 22, 1989, the final day of the legislative session, Senator Gen Olson moved to recall S.F. 783 (Solon) from the House and the Olson motion was approved on a 35-28 vote, with current, past, and future Commission members voting as follows:

For Olson Motion		Against Olson Motion			
Johnson, D.E.	Metzen	Langseth	Morse	Spear	Waldorf
Larson	Renneke	Moe, D.M.	Pogemiller	Stumpf	

The House returned S.F. 783 (Solon) to the Senate later on May 22, 1989, and Senator Gen Olson then moved that the Senate reconsider the vote on the Pogemiller non-concurrence motion of May 19, 1989. The Olson reconsideration motion prevailed on a voice vote, whereupon Senator Sam Solon moved that the Senate concur in the House amendments. Senator Richard Cohen moved to table the Solon motion, but the Cohen motion failed on a 23-37 vote, with then current, past, and future Commission members voting as follows:

For Cohen Motion			Against Cohen Motion		
Langseth	Morse	Spear	Johnson, D.E.	Metzen	Stumpf
Moe, D.M.	Renneke		Larson		

The Senate then approved the Solon concurrence motion on a 37-28 vote, with past, then current, and future Commission members voting as follows:

For Solon Motion		Against Solon Motion			
Johnson, D.E.	Metzen	Langseth	Pogemiller	Spear	Waldorf
Larson	Morse	Moe, D.M.	Renneke	Stumpf	

On final passage on S.F. 783 (Solon), the Senate approved the bill and sent it to the Governor on a 40-26 vote, with the following votes:

Those who voted in the affirmative were:

Anderson	Chmielewski	Johnson, D. J.	Lessard	Novak	Schmitz
Beckman	Decker	Knaak	Marty	Olson	Solon
Belanger	Dicklich	Knutson	McGowan	Pariseau	Storm
Benson	Frank	Kroening	McQuaid	Piper	Taylor
Bernhagen	Frederick	Laidig	Mehrkens	Purfeerst	Vickerman
Bertram	Frederickson, D.F.	Lantry	Metzen	Ramstad	
Brataas	Johnson, D.E.	Larson	Morse	Samuelson	

Those who voted in the negative were:

Adkins	Dahl	Gustafson	Moe, D.M.	Pogemiller	Waldorf
Berg	Davis	Hughes	Moe, R.D.	Reichgott	
Berglin	DeCramer	Langseth	Pehler	Renneke	
Brandel	Diessner	Luther	Peterson, D.C.	Spear	
Cohen	Freeman	Merriam	Peterson, R.W.	Stumpf	