National Library of Canada
Bibliothèque nationale du Canada

Canadian Theses Service
Services des thèses canadiennes

Ottawa, Canada
K1A 0N4

CANADIAN THESES

THÈSES CANADIENNES

NOTICE

The quality of this microfiche is heavily dependent upon the quality of the original thesis submitted for microfilming. Every effort has been made to ensure the highest quality of reproduction possible.

If pages are missing, contact the university which granted the degree.

Some pages may have indistinct print especially if the original pages were typed with a poor typewriter ribbon or if the university sent us an inferior photocopy.

Previously copyrighted materials (journal articles, published tests, etc.) are not filmed.

Reproduction in full or in part of this film is governed by the Canadian Copyright Act, R.S.C. 1970, c. C-30. Please read the authorization forms which accompany this thesis.

AVIS

La qualité de cette microfiche dépend grandement de la qualité de la thèse soumise au microfilmage. Nous avons tout fait pour assurer une qualité supérieure de reproduction.

S'il manque des pages, veuillez communiquer avec l'université qui a conféré le grade.

La qualité d'impression de certaines pages peut laisser à désirer, surtout si les pages originales ont été dactylographiées à l'aide d'un ruban usé ou si l'université nous a fait parvenir une photocopie de qualité inférieure.

Les documents qui font déjà l'objet d'un droit d'auteur (articles de revue, examens publiés, etc.) ne sont pas microfilmés.

La reproduction, même partielle, de ce microfilm est soumise à la Loi canadienne sur le droit d'auteur, SRC 1970, c. C-30. Veuillez prendre connaissance des formules d'autorisation qui accompagnent cette thèse.

THIS DISSERTATION
HAS BEEN MICROFILMED
EXACTLY AS RECEIVED

LA THÈSE A ÉTÉ
MICROFILMÉE TELLE QUE
NOUS L'AVONS REÇUE

NL 339 (r. 86/01)

Canada

National Library of Canada
Bibliothèque nationale du Canada

Canadian Theses Division
Division des thèses canadiennes

Ottawa, Canada
K1A 0N4

0-315-24841-6

PERMISSION TO MICROFILM — AUTORISATION DE MICROFILMER

• Please print or type — Ecrire en lettres moulées ou dactylographier

Full Name of Author — Nom complet de l'auteur

Alan Willard Reese

Date of Birth — Date de naissance

Feb. 26, 1956

Country of Birth — Lieu de naissance

U.S.A.

Permanent Address — Résidence fixe

8452-117 Street
Edmonton, Alberta
T6G 1R4

Title of Thesis — Titre de la thèse

John Amos Comenius: His Philosophical, Religious, and Educational Background.

University — Université

University of Alberta

Degree for which thesis was presented — Grade pour lequel cette thèse fut présentée

Master of Education

Year this degree conferred — Année d'obtention de ce grade

1984

Name of Supervisor — Nom du directeur de thèse

Dr. Harry Garfinkle

Permission is hereby granted to the NATIONAL LIBRARY OF CANADA to microfilm this thesis and to lend or sell copies of the film.

The author reserves other publication rights, and neither the thesis nor extensive extracts from it may be printed or otherwise reproduced without the author's written permission.

L'autorisation est, par la présente, accordée à la BIBLIOTHÈQUE NATIONALE DU CANADA de microfilmer cette thèse et de prêter ou de vendre des exemplaires du film.

L'auteur se réserve les autres droits de publication; ni la thèse ni de longs extraits de celle-ci ne doivent être imprimés ou autrement reproduits sans l'autorisation écrite de l'auteur.

Date

July 16, 1984

Signature

Alan Reese

JOHN AMOS COMENIUS: HIS PHILOSOPHICAL, RELIGIOUS AND EDUCATIONAL BACKGROUND

by

ALAN WILLARD REESE

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE

OF MASTER IN EDUCATION

IN

THE HISTORY OF EDUCATION

DEPARTMENT OF EDUCATIONAL FOUNDATIONS

EDMONTON, ALBERTA

FALL, 1984

THE UNIVERSITY OF ALBERTA

RELEASE FORM

NAME OF AUTHOR Alan Willard Reese

TITLE OF THESIS John Amos Comenius: His Philosophical, Religious, and Educational Background

DEGREE FOR WHICH THESIS WAS PRESENTED M.Ed.

YEAR THIS DEGREE GRANTED 1984

Permission is hereby granted to THE UNIVERSITY OF ALBERTA LIBRARY to reproduce single copies of this thesis and to lend or sell such copies for private, scholarly or scientific research purposes only.

The author reserves other publication rights, and neither the thesis nor extensive extracts from it may be printed or otherwise reproduced without the author's written permission.

Alan Reese

PERMANENT ADDRESS:

8452 - 117 Street

Edmonton, Alberta

Canada T6G 1R4

DATED July 13, 1984

THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled JOHN AMOS COMENIUS: HIS PHILOSOPHICAL, RELIGIOUS, AND EDUCATIONAL BACKGROUND submitted by Alan Willard Reese in partial fulfilment of the requirements for the degree of Master of Education in the History of Education.

Henry Janzen
.....
Supervisor

Nicholas Wickenden
.....

David G Wangler
.....

Date May 14 1984

DEDICATION

To my parents -- Willard and Barbara -- whose encouragement and assistance have kept so many options open.

ABSTRACT

This study is concerned with the background of the thought of the famous Czech educational reformer John Amos Comenius (1592-1670). The author's initial point of departure was his encounter with Ivan Illich's statement that Comenius had attempted in his educational thought to apply the principles of Medieval alchemy to the reform of education. While attempting to substantiate this statement the author came to discover that the accounts of Comenius in the textbooks of the history of education differed markedly from the treatment of Comenius by the scholars working from the broader historical perspectives of cultural and intellectual history. This thesis, therefore, takes up the following two major tasks: (1) To more clearly define the nature of Comenius's philosophical, religious and educational background; and (2) to therefore provide a more accurate account of the character of Comenius's thought. It is found that the accounts of Comenius in the textbook presentations of Comenius in the history of education are misleading in their characterization of him as a "sense-realist" at the forefront of a modern pedagogy based on an empirical world view. Instead it is discovered that Comenius may only be properly understood in relation to those mystical and esoteric cosmological philosophies which, together with his deep Protestant piety, so thoroughly imbued his educational theory and his very life.

TABLE OF CONTENTS

CHAPTER ONE

INTRODUCTION

PROLOGUE

After several years of reading various and sundry books and articles on the general theme of the "transmutation" of consciousness and philosophical alchemy, I happened to encounter the following passage in an article by Ivan Illich:

> The endeavour to put all men through successive stages of enlightenment is rooted deeply in alchemy, the Great Art of the waning Middle Ages. John Amos Comenius, a Moravian bishop, self-styled Pansophist, and pedagogue, is rightly considered one of the founders of the modern schools. He was among the first to propose seven or twelve grades of compulsory learning. In his Magna Didactica, he described schools as devices to "teach everybody everything" and outlined a blueprint for the assembly-line production of knowledge, which according to his method would make growth into full humanity possible for all. But Comenius was not only an early efficiency expert, he was an alchemist who adopted the technical language of his craft to describe the art of rearing children. The alchemist sought to refine base elements by leading their distilled spirits through twelve stages of successive enlightenment, so that for their own and all the world's benefit they might be transmuted into gold. Of course, alchemists failed no matter how often they tried, but each time their "science" yielded new reasons for their failure, and they tried again.[1]

Now it is evident that Illich is no friend of alchemy and his argument as he develops it from this passage is that our whole system of education is rotten to the core because educators are attempting to impose "enlightenment" on children just as the alchemists sought to transmute base metals into gold. Despite my own misgivings about certain aspects of Illich's thought, I was fascinated by his contention

that Comenius, "the father of modern pedagogy," was an alchemist. I became determined to find out about this Comenian alchemy and its relation to education for this seemed a wondrous link between my own fascination with the alchemical philosophy and my studies in the history of education. I have not been disappointed!

Illich is wrong to call Comenius an "alchemist" without explaining the difference between the popular notion of alchemy and that held by philosopher alchemists from Hellenistic times until the seventeenth century.[2] The popular notion of alchemy is that of benighted old fools in foul "alchemical kitchens" producing "great stinks" in the vain attempt to change lead into gold. Granted that there were indeed many "puffers" or "charcoal burners" (as the vulgar kind of alchemists are correctly known) during the period of the late Renaissance, at least, alchemy became more of an esoteric philosophical system than the last refuge of prescientific superstition.[3] Much the same thing happened in ancient China when Taoism split into two general schools of thought: religious Taoism (which sought to mix or discover "the elixir of immortality,"), and philosophical Taoism (which sought to discover the wisdom of Nature and live according to its principles).[4] Like philosophical Taoism the philosophical alchemy of the late Renaissance sought in Nature not the path to easy riches or a shortcut to immortality but answers to the riddles of the relations between the physical and the metaphysical dimension of being. As the alchemical text - Rosarium philosophorum - states: "Aurum nostrum non est aurum vulgi"[5] - which reads in English - "Our gold (the "gold" of the philosopher alchemist) is not of the common sort (i.e. metallic gold)". Comenius may be said to be an "alchemist" only in a very

loose sense. His actual connections with the alchemical tradition are rather complex and will be explored later in this work. However, suffice it to say at this point that Illich correctly calls Comenius an alchemist only if we take him to mean that there are indeed very deep affinities that exist between Comenian "Pansophy" and the general intellectual and social context of philosophical alchemy. Comenius himself did not consider his work to be that of an alchemist.[6] In his allegorical book entitled The Labyrinth of the World and the Paradise of the Heart (1623)[7] Comenius describes the "pilgrim's" encounter with vulgar alchemy in no flattering terms:

> And gazing at them [i.e. at the alchemists in their alchemical kitchens] I said: "Of those who work here in vain I see many, but I see no one who obtains the stone [i.e. the "philosophers' stone" which, in vulgar alchemy, is the agent of the transmutation of base metals into gold] I see, indeed, that smelting gold and broiling the elements of life, these men squander and dissolve both... On the whole, they had so many excuses that they knew not how to defend their art.[8]

From this it is evident that Comenius concurs with Illich in Illich's contention that "no matter how often they tried...their "science" yielded new reasons for their failure..." We therefore see that Comenius is no mere "puffer" and that if we are to understand the "alchemical" language of his educational theories we will have to look carefully at the intellectual milieu that shaped Comenius's thought.

That milieu which so shapred Comenius's thought is briefly but aptly described by R.J.W. Evans in his remarks, which follow, on the sources and content of Comenius's Labyrinth:

> Although the Labyrinth of the World dates after 1620 the work and its author are fully representative of the currents of thought [of the period 1576-1612]...Comenius was a late inheritor of

> the Rudolfine mood. This is true of the sources of the book in a narrow sense: the idea of the "labyrinth" was a prevalent one at the time, and others viewed it, like Comenius, in eschatological terms, with connotations of pilgrimage and alienation. His obsession with prophecy and chilastic beliefs was a survival from the years around 1600 ...and the vision of an inner paradise, a center of security, finds close parallels in the symbolism of alchemy and the religious mystics,...It shows links too with Neoplatonist doctrines of emanation, especially with the metaphysical position of Cusanus, whom Comenius read and greatly admired. His nearest literary model was the Lutheran mystic Valentin Andreae, whose Utopian political dream "Christianopolis" he adapted, and there were also Bohemian anticipations of this theme.[9]

In this Prologue I have, it is true, moved rather rapidly from my initial discovery of Comenius's "alchemical" pedagogy to the background of his thought in late Renaissance. It is, however, hoped that this Prologue might serve as a bridge between my personal enthusiasms and the issue of the place of Comenius in intellectual history in general and, more specifically, in the history of education.

THE PURPOSE AND SCOPE OF THIS THESIS

John Amos Comenius (1592-1670), the last bishop of a persecuted Czech Protestant sect and the alleged "father of modern education", is one of the most fascinating and complex figures in the intellectual history of the seventeenth century. His fame today rests chiefly upon his authorship of the first illustrated textbook for school children (the Orbis Sensualium Pictus - 1658) and on his recognition of the rôle of the senses in the acquisition of knowledge. Accordingly, Comenius is presented in the standard histories of education as a forerunner of the movement toward "sense-realism" and empiricism in educational practise. According to Robert Herbert Quick's classic of educational history entitled Essays on Educational Reformers (1890):

"Comenius is now recognised as the man who first treated education in a scientific spirit, and who bequeathed the rudiments of a science to later ages."[10] Quick's enthusiasm for the rediscovery of Comenius's "scientific" approach to education set the pattern for descriptions of Comenius in many later accounts of the progress of pedagogy through the ages. Comenius's admiration for Francis Bacon (1561-1626) is made much of by subsequent historians of education who see Comenius turning the attention of educators away from the narrowly literary concerns Renaissance pedagogy to modern scientific methodology. For example Adolphe E. Meyer has depicted Comenius as a sense-realist who followed "Francis Bacon and his bullhorn blasts for the advancement of learning by way of objective and systematic experimentation."[11] Although at first glance the goals of Comenius's educational reform seem to foreshadow the emergence of empirical science and its concern with sense data and all that is quantifiable, this popular view of Comenius's educational thought is not merely oversimplified but is essentially misleading.

What historians of education have so far failed to do is to take proper cognizance of the fruits of recent scholarship in the broader areas of cultural, intellectual and religious history. It is the purpose of this thesis to explore the matrices of Comenius's thought with the help of the results of such scholarship.

To anticipate matters somewhat, it will be seen that between the dawn of the Renaissance and the coming of the modern world-picture, there was in European intellectual history a period of extraordinary complexity and creativity whose contours are only now being delineated. It has now become evident that Comenius shared a common world-view

with certain intensely religious philosophers of the late Renaissance who combined Christian faith and esoteric studies with the desire to help foster a new and better world. Indeed we learn from Mircea Eliade that:

> The enthusiasm provoked by the rediscovery of Neoplatonism and Hellenistic Hermetism at the beginning of the Italian Renaissance continued for the following two centuries. We know now that Neoplatonic and Hermetic doctrines had a profound and creative impact on philosophy and the arts and also played a major role in the development of alchemical chemistry, medicine, the natural sciences, education and political theory.[12]

It will be shown in Chapter Two of this thesis how the intellectual lineage of Comenius's thought may be traced from the Middle Platonism of Hellenistic Alexandria through the Christina Middle Ages to Renaissance Platonism. In addition some attention will be paid to Cabalistic philosophy and Hermetism which together with Neoplatonism influenced and inspired Comenius.

Chapter Three of this thesis has as its concern the religious character of Comenius's thought in the light of the history and doctrine of his church - the Unity of Czech Brethren. By an examination of the specific phases by which the original character of the Unity changed from the fifteenth century, when it orginated (as an exclusive sect of peasants practising a form of Christian perfectionism characterized by anti-intellectualism and millenarian socialism) to Comenius's own time, the role of Comenius's church in shaping his thought is more clearly defined. It is significant that, by Comenius's time, the Unity of Czech Brethren was dominated by nobles and had been brought into a kind of political-spiritual alliance with moderate Calvinism abroad.

Chapter Four, in turn, provides the reader with an account of the early life of Comenius and his education at home in Moravia and abroad in the Calvinist institutions of higher learning in Herborn and Heidelberg. During his studies abroad Comenius was befriended by some of the greatest minds of Calvinist Europe. The special character of Calvinist thought in the Palatinate in the late sixteenth and early seventeenth centuries will be examined as the link between the philosophical origins of Comenius's thought (as discussed in Chapter Two) and his religious background as discussed in Chapter Three. Following the discussion of Comenius's formal education the influences upon him of his older contemporaries - Valentin Andreae, Tommaso Campanella, and Francis Bacon - will be assessed. To the best of this author's knowledge, the occult tendency in the major sources of Comenius's thought has never been linked to Comenius's educational theory as a major influence.[13] Accordingly, this occult tendency as described in the works of R.J.W. Evans and Frances Yates, will be emphasized in the latter part of Chapter Four.

Finally, in Chapter Five, this thesis will demonstrate the antithesis between Comenius's cosmology, which is found to be of the pre-Copernican hierarchical kind, and the new world views initiated by the seventeenth century's intellectual revolution. It will then be concluded that the current interpretation of Comenius, as found in the standard histories of education, is lacking in insight into the true character and aspiration of Comenian educational reform.

A REVIEW OF THE HISTORIOGRAPHIC TRADITION REGARDING COMENIUS

At this point of our introduction we consider how it was that Comenius has come to be so misunderstood by so many historians of

education. It is important to observe at the outset of this discussion that, in Comenius's own lifetime, his works were increasingly criticized as being mixtures of theology with philosophy. Such prominent thinkers of seventeenth century as René Descartes (1596-1650) and Pierre Bayle (1647-1706) had grave misgivings about the very validity of Comenius's modes of analysis. Despite some praise from Leibniz (1646-1716) we are told by John Edward Sadler that:

> ...most people at the beginning of the eighteenth century accepted the judgement of Pierre Bayle, the French exile in Rotterdam, that [Comenius] was an impractical visionary, if not a dangerous fanatic...Apart from the textbooks which continued the memory of his name there was little direct influence of Comenius for over a hundred years.[14]

The Czech Historiographic Tradition Regarding Comenius

Comenius's reputation, while suffering among the thinkers of the Enlightenment, survived among the Bohemians who lived under the rule of the Austrian Empire. They were proud of the fact that one of their oppressed Czech-Speaking forefathers had, in his lifetime, achieved international recognition. They also deeply appreciated the self-appointed task of Comenius in making the Czech language one in which works of philosophy, theology, and science could be written and understood.

In 1829 František Palacký (1798-1876) did much to revive the name of Komensky (i.e. Comenius in Czech) as a national hero and patriot. Palacky wrote one of the first biographies of Comenius entitled Zivot J.A. Komenského in which Comenius is presented as an exponent of the values of democracy and freedom of thought.[15] In this manner the significance of Comenius was defined in struggle of the Czechs against the political and cultural domination of the German speaking Austrian

government. What therefore happened to Comenius in Czech historiography is aptly illuminated by the following passage by the Czech historian Hans Kohn concerning the relationship between histriography and democracy:

> Democracy can develop vigorously only if supported and inspired by historical tradition, embodied in some conspicuous works and deeds...Historical facts and examples grow into social myths which are closely interwoven into the whole texture of national life. Historiography frequently plays a great role in this process. Interpretation of the national past serves to answer the question of the meaning and the destiny of the national existence of a people, as a symbol around which the national cultural life is integrated and by which the vision of the future is determined.[16]

Comenius became a "symbol" of the cultural aspirations of the Czech-speaking people and as such he has remained in almost all Czech historiography despite the ideological shifts which have occured in the nineteenth and twentieth centuries. The present-day Czechs, notwithstanding their enormous production of "Comeniological" studies, seem only to have restated their traditional beliefs concerning Comenius's patriotism and modernity. Just as Palacký wrote of the essential "democratic" character of Comenius's thought in the nineteenth century so too in the twentieth century we read of Comenius's "socialism" in Czech publications. In the Czech-sponsored edition of Comenius's Opera didactica omnia [18] we are presented with the following account of Comenius which well illustrates the tendency of the Czechs to interpret Comenius in patriotic and ideological terms:

> In the year 1657 ...Comenius published in Amsterdam the complex of his pedagogical works - Opera didactica omnia. [it comprises] ...the results of Komenský's life endeavour after an amelioration of human affairs by educating youth. All the years, spent in exile ...Komenský continued thinking of his native country, of the way how to help his

> people to be set free from their distress and humiliation.
>
> After three centuries in Komenský's native country, there arise the conditions that will make possible the realization of even his most daring plans. The socialist society realizes the unified school system from the primary school up to the highest school standard, as Komenský has proposed it....[19]

As will be seen, this equation of Comenius's educational goals with those of the secular "socialist" society of Czechoslovakia today, derives from a complete misunderstanding of the spiritual purpose of all of Comenius's works and dreams. According it comes as no surprise that the survival of Comenius's fame among the Czechs contributed little to his rediscovery by the history of education.[20]

The German Historiographic Tradition Regarding Comenius

The German historiographic tradition regarfing Comenius was little better than that of the Czechs. Its erroneous views, however, came to enjoy more popularity and diffusion. Early in the nineteenth century a number of important historical and social factors contributed to the revival of the study of Comenius's works by German scholars. Sadler informs us that among these factors:

> ...was the movement towards popular education in the early nineteenth century brought about by a combination of forces - the explosive idealism of the French Revolution, the hopes and fears engendered by the Industrial Revolution, but particularly the upsurge of nationalist feelings in Prussia following the humiliation of the defeat of Jena in 1806. Fichte's Addresses to the German People, published while the French were still in possession of Berlin, were an impassioned plea for national regeneration through education... mass education required a philosophical basis for its pedagogy and it was doubtful whether Pestalozzi could supply this.[21]

What Pestalozzi seemed unable to provide, Comenius could provide with

certain "alterations". Therefore in 1842 Karl von Raumer wrote his famous History of Pedagogy which hailed Comenius, not Pestalozzi, as "the founder of the science of education".[22] Von Raumer commended the study of Comenius to all educators as an "inexhaustible treasure."[23] The interests of the German fathers of Geschichte der Pädagogik differed from the patriotic and ideological ones of the Czech writers on Comenius. For while the Czechs stressed Comenius's national hopes for his people, the Germans signaled out for admiration Comenius's schemes for the standardization of education for the purposes of the achievement of universal literacy.[24] It was Comenius's enthusiasm for educating an entire society that a particularly appealed to the German educational theorists. Passages from Comenius's works such as the following from his Great Didactic had greatly excited the imaginations of the Germans:

> Our desire is that the art of teaching be brought to such perfection that there will be as much difference between the old system and the new, as there is between the old method of multiphying books by the pen and the new method introduced by the printing-press; that is to say, the art of printing, though difficult, costly, and complicated, can produce books with greater speed, accuracy, and artistic effect, than was formerly possible; and, in the same way, my new method, though its difficulties may be somewhat alarming at first, will produce a greater number of scholars and will give them a better eudcation...than did the old lack of method.[25]

Moreover for establishing an industrial economy it was important to produce a highly disciplined and efficient work-force which would be able to read instructions, orders, and gages. The program of mass education outlined in the Great Didactic seemed useful for the achievement of such a work-force. The following passage, in which Comenius expands his analogy between the mechanical production of books

and of knowledge in the young, is well worth considering in this light:

> In didachography...the same elements are present. Instead of paper, we have the pupils whose minds have to be impressed with the symbols of knowledge. Instead of type, we have the class-books and the rest of the apparatus devised to facilitate the operation of teaching. The link is replaced by the voice of the master, since this it is that conveys information from the books to the minds of the listener; while the press is school-discipline, which keeps the pupils up to their work and compels them to learn.[26]

Thirdly, in addition to providing a literate and disciplined work-force, the educational theories of Comenius promised even more - a God fearing and honest generation of children reared and educated to obey their parents and social superiors. With respect to these goals we read again in the Great Didactic:

> For those who are in any position of authority...it is necessary to be imbued with wisdom as it is for a guide to have eyes,...Similarly, those in subordinate positions should be educated that they may know how to obey their superiors wisely and prudently, not under compulsion, with the obedience of an ass, but of their own free will and from love of order. For a rational creature should be led, not by shouts, imprisonment, and blows, but by reason. Any other method is an insult to God, in whose image all men are made, and fills human affairs with violence and unrest.[27]

Comenius seemed to provide in his educational thought a combination of traditional values (which made for social stability in an era of rapid change) with an open-minded enthusiasm for the fruits of scientific discovery. According to Sadler, after von Raumer's recommendation of Comenius:

> A considerable number of books and dissertations followed and two societies were formed to stimulate interest and research - the Leipzig Comenius-Stiftung of 1871 and the Berlin Comenius-Gesellschaft of 1892. At Leipzig a pedagogical library was

> formed...The Berline Gesellschaft was led by Ludwig Keller and it helped to maintain the interests of teachers in Comenius through its journal - the Monatshefte - which continued under various names until 1914.[28]

The influence of the German historians of education spread throughout those countries which were also concerned with rapid industrial expansion. Quick's 1868 Preface to his Essays on Educational Reformers informs his readers from his position as lecturer on the history of education at Cambridge that "All study of this kind, however, is very much impeded by want of books. 'Good books are in German,' says Professor Seeley. I have found that on the history of Education, not only good books but all books are in German...."[29]

When books on the history of education began to be written in the English speaking countries they tended to follow the German understanding of Comenius. In Scotland, for example, we find the educational studies of S.S. Laurie at the University of Edinburgh where he was professor of the Institutes and History of Education. In his many writings on educational history Comenius held a prominent place. Of special interest are his books - John Amos Comenius: Bishop of the Moravians: His Life and Educational Works (1884),[30] and Studies in the History of Educational Opinion from the Renaissance (1903).[31] Laurie believed that "Comenius is to be regarded as the true founder of modern method."[32] He believed that Comenius (and Ratke) "were the apostolic missionaries of the specific Baconian realistic movement in the field of education."[33] The theological concerns of Comenius are not considered of much significance by Laurie since he believed them to be merely a carry-over of the barbarous times in which Comenius lived. Instead Laurie draws upon those assertions of Comenius which

lend themselves to an interpretation of his significance as a practical man of ideas far in advance of his troubled times. Laurie summarized the significance of Comenius in the following passage from his Studies:

> He lived at a time when men of intellect were divided into two classes, those who looked back and those who looked forward; he was essentially a modern, and at once put his hand to the work that was most urgent in the interests of Europe, viz. an irenicon, scientific organization, and education.[34]

Comenius is interpreted as the initiator of the modern approach to education and is considered by Laurie to exemplify in his thought the following "characteristics of what may be called the Modern Period in education:"

> 1st. Belief in the power of mere knowledge to educate the human mind. 2nd. A tendency to exalt the sense-realistic, and consequently to advocate the study of physical science as opposed to the Humanities. 3rd. The application of the inductive method to instruction.[35]

This understanding of Comenius, so far removed from the seventeenth century's own criticism of Comenius, persists to this day in so many studies of Comenius in the history of education.

At this point let us turn from Europe to briefly examine the place of Comenius in the North American interpretation of the history of education. The desire for industrial expansion was also keen in the United States and in Canada (primarily Ontario) during the nineteenth century. It therefore comes as no surprise that American educators keenly followed the educational development of Europe. Canada's own "hero" of mass, public, tax-supported education - Egerton Ryerson - travelled to Europe and was particularly impressed with the national schools of Prussia. It was not long before the German notion of history of education made its way into North American teacher-training

institutions (or "norman schools" as they were called). In his book entitled Education in the Forming of American Society (1960),[36] Bailyn states that in the early part of the twentieth century, American historians of education such as Thomas Davidson and Will Seymour Monroe held a high conception of the importance of their subject. They believed that it was to serve as an initiation for prospective teachers into the highest ideals and aspirations of the American public school system. Bailyn tells us that:

> A subject that could give the neophyte an everlasting faith in his profession clearly deserved a central position in the curriculum. And such a position it duly received. The History of Education came to be taught as an introductory course, a form of initiation, in every normal school, department of education, and teachers college in the country. A subject of such importance could not be left to random development; the story had to be got straight. And so a few of the more imaginative of that energetic and able group of men concerned with mapping the over-all progress of "scientific" education, though not otherwise historians, took over the management of the historical work in education. With great virtuosity they drew up what became the patristic literature of a powerful academic ecclesia.[37]

The effect of this kind of historiography was to perpetuate the image of Comenius as the father of modern "scientific" education in many generations of aspiring school teachers. In the American presentation of Comenius there were indeed some new developments which had not been present in the standard European accounts of Comenius outside of Bohemia and Moravia. Comenius came to be seen also as a hero of social progress and democracy. This "progressivist" interpretation of Comenius is wonderfully illustrated in Thomas Davidson's A History of Education (1911).[38] Davidson was of the opinion that one could equate all that was intellectually progressive with those currents of thought which emanated from the Protestant Reformation. The rise of

democratic institutions and the ideal of intellectual freedom were direct results of Protestantism. The following passage expresses Davidson's conception of the place of Comenius in the great scheme of Protestant-inspired progress:

> With Comenius, the cause of truth and freedom in education was virtually won. Authority and tyranny had yielded to truth and sympathy...The movement away from authority and toward freedom, which found expression in the experimental science of Bacon and the pedagogy of Comenius, made itself felt in all departments of human life, especially in religion and politics. In religion, it produced the Reformation; in politics, that persistent tendency to ignore the divine right of kings, and to place the seat of authority in the people, which beginning about 1600, has ever since been growing. English Puritanism and the Scotch Covenant were essentially democratic, though theocratic. They accepted God as ruler, indeed, but denied that he had any special viceregent on earth. They used theocracy to shake off monarchy, and then dropped theocracy...so many victories for freedom...The Reformation, indeed, was so little aware of its own implications, that it remained for nearly a century and a half without a philosophy. At last however, it formed this also, thanks to René Descartes...and John Locke...they agreed in looking for the guarantee of all truth in some form of experience, thus virtually placing the seat of all authority in the human breast - the very essence of Protestantism![sic!][39]

We see in Davidson, then, the attempt to equate in the mind of the Student all progressive movements with the progressive pedagogy of Comenius. A more recent version of this interpretation of Comenius is found in R.F. Butt's text The Education of the West (1973).[40] In this work Butts quotes Comenius's statement "that at last the whole of the human race may become educated, men of all ages, all conditions, both sexes and all nations." On this statement Butts comments:

> This is an extraordinary vision, well before the Enlightenment, of the possibility of improving the welfare of all nations of the earth of a level of equality. Indeed Comenius stated succinctly the

> aspirations of mankind which have in the twentieth century been called the revolution of rising aspirations. Indeed these tenets come close to the demands for national development and for modernization that have marked the independence movements of the 1960s and 1970s. Comenius anticipated them by 200 years...[41]

Once again we find the concerns and motivations of modern men read into the struggles and thinking of the past. In this anachronistic interpretation of Comenius we find an almost total lack of insight into the deepest values and commitments of Comenius and those who initially responded to his call for edcuational reform. Bailyn is particularly to the point when, in reference to American educational historiography, he tells us:

> How much they lost, how great was the sacrifice of intellectual leverage that resulted from the concentration on formal institutions and from the search for recognizable antecedents...[42]

In concluding this review of the historiography of Comenius's educational thought a number of points should be noted: (1) that there is a general tendency for textbooks in the history of education to be well behind the findings of cultural and especially intellectual history; (2) that, in addition, the presentations of earlier conceptions of education are narrowly concerned with "recognizable antecedents" of current practice and aspiration, and there is still a tendency for the history of education to be written as a cumulative process toward the gradual achievement of our current educational systems which, in turn, results in (3) a marked inability on the part of those conditioned by such history to enter into the social, intellectual, and spiritual ambiance of the period in which a given educational thinker lived and wrote. With respect to the kind of educational historiography which the author of this thesis would like

to see employed, the following passage of G.H. Bantock is well worth consideration:

> ... the study of educational theory as a facet of intellectual and cultural history should prove intrinsically interesting and at the same time not without a certain profit for those with minds open enough to sense that past achievements have not always proved inferior to contemporary ones and that previous conditions of high accomplishment may conceivably have more than an historical interest. Educational theory has been neglected partly because the richness of its affiliation has been neglected. The most hackneyed curriculum recommendation, methodological injunction or psychological observation may summon up a whole configuration of thought or affective processes historically significant and by their very difference intellectually provocative.[43]

This thesis represents an attempt to go beyond the usual approaches to Comenius found in the history of education. It is hoped that, by an examination of "the richness of its affiliation", the thought of Comenius may be illuminated in its proper cultural and intellectual context. By so doing it will be found that Comenius's thought, far from providing mere anticipations of current educational practice, is in itself most "intellectually provocative" and worthy thereby of reconsideration by historians of today.

NOTES

[1] Ivan Illich, "An Alternative to Schooling," Saturday Review, 19 June 1971, p. 46. cf. also Idem. Tools for Conviviality (New York: Harper & Row, 1973).

[2] Note that in recent times the study of alchemy from a philosophical perspective has been revived by such scholars as C.G. Jung (1875-1961) and Titus Burckhardt (1908-).

[3] For a good source book of alchemical lore see John Read, Prelude to Chemistry: An outline of Alchemy, (London: G. Bell and Sons, 1936; Reprinted in Cambridge, Mass.: M.I.T. Press, 1966). Note statement on rear cover of 1966 paperback edition:

> "...The study of alchemy is more than the study of chemical prehistory. Modern anthropology and psychology have unearthed evidence that the symbols of alchemy are pervasive through the history, thoughts, and dreams of mankind." (Ibid.)

[4] Mircae Eliade tells us that in Chinese Taoist alchemy:

> "The search for gold was also a spiritual quest... belief in the natural metamorposis of metals was common in China. The alchemist only accelerated the growth of metals. Like his Western colleague, the Chinese alchemist contributes to Nature's work by precipitating the tempo. But we should not forget that the transmutation of metals into gold also has a spiritual aspect; gold being the imperial metal, "perfect", freed from impurities, the alchemical operation must seek to imitate the perfection of nature which is, in the final instance, its absolution and liberty. The gestation of metals in the bowels of the earth obeys the same temporal rhythms as those which bind man to his carnal and fallen condition; to hasten the growth of metals by the operation of alchemy is tantamount to abolishing them from the laws of time." (Mircea Eliade, The Forge and the Crucible, second edition, tr. by Stephen Corrin, Chicago: University of Chicago Press, 1978, pp. 113 & 114). cf. also Herrlee G. Creel, What is Taoism? And Other Studies in Chinese Cultural History (Chicago: University of Chicago Press, 1970).

From Eliade we see that the Taoist alchemists were capable of making use of the symbols of alchemy for spiritual understanding - a practise common to both eastern and western alchemical speculation. With respect to the "natural metamorphosis of metals" it is interesting to note that Comenius incorporates this belief in his famous textbook, the Orbis Sensualium Pictus wherein he writes under the chapter heading,

"The Fruits of the Earth," that: "Metals, Stones and Minerals grow under the earth." (John Amos Comenius, The Orbis Pictus of John Amos Comenius, tr. by C. Hoole in 1659, ed. C.W. Bardeen 1887; Reissued - Detroit: Singing Tree Press, 1968, p. 14).

[5]C.G. Jung citing the Rosarium philosophorum (included in the two vol. edition of Artis Auriferae printed in Basel, 1593) in Idem. The Psychology of the Transference, tr. by R.F.C. Hull (Princeton, N.J.: Princeton University Press, Bolligen Series, 1969).

[6]That is to say that Comenius does not seem to have involved himself with the craft of vulgar alchemy and, accordingly, did not make use of alembics, crucibles and the like in his investigation of nature.

[7]John Amos Comenius, The Labyrinth of the World and the Paradise of the Heart, ed. and tr. by Count Lutzow (Reprint edition - New York: Arno press & New York Times, 1971).

[8]Ibid., pp. 148 & 149.

[9]R.J.W. Evans, Rudolf II and His World: A study in intellectual history 1576-1612 (Oxford: Oxford University Press, 1973), p. 277.

[10]Robert Herbert Quick, Essays on Educational Reformers, International Education Series, ed. William T. Harris, vol. XVII, (New York: D. Appelton and Co., 1908), p. 119.

[11]Adolphe E. Meyer, Grandmasters of Educational Thought, (New York: McGraw-Hill, 1975), p. 112.

[12]Eliade, Forge, p. 266.

[13]Note that G.H. Bantock makes some use of the work of Frances Yates and R.J.W. Evans in his Studies in the History of Educational Theory vol. one; Artifice and Nature 1350-1765 (London: George Allen & Unwin, 1980). It is however interesting to note also that Bantock makes no quotations from either Yates or Evans in his chapter on Comenius. This may be owing, in part, to Bantock's rather narrow focus on Comenius's efforts in England shortly before the Civil War in 1641. It must be stated to Bantock's credit that his treatment of Comenius in England, while brief, is second to none in its analysis of the relations between the Puritan notion of societal reform and that of Comenius.

[14]John Edward Sadler, J.A. Comenius and the Concept of Universal (London: George Allen & Unwin, 1966), p. 28.

[15]Anna Heyberger, Jean Amos Comenius (Komensky): Sa vie et son

oeuvre d'educateur, (Paris: Librairie Ancie-ne Honore Champion, 1928), p. 13. cf. also Hans Kohn, "The Historical Roots of Czech Democracy," in Robert J. Kerner, ed., Czechoslovakia, (Berkeley: University of California Press, 1949), pp. 91-105.

[16]Kohn, "Czech Democracy," p. 93.

[17]cf. The Czeckoslovakian Academy of Science, Acta Comeniana, Revue Internatioanle Des Etudes Comeniologiques, (Prague: Verlag ACADEMIA, 1971, vols. 1 & 2).

[18]Academia Scientiarum Bohemoslovenica, Opera Didactica Omnia, vols. 1 & 2, (Prague, Czech Academy of Sciences, 1957).

[19]Ibid., introduction to vol. one, no page numbers.

[20]This is not to say that no Czech has ever written anything of historical value on Comenius - indeed there are many Czechs in exile or of Czech background who have, like Matthew Spinka for only one example, contributed much to the study of Comenius in history. My point is, however, addressed to those publications originating in Czechoslovakia herself which continue to this very day to be so thoroughly imbued with ideological and patriotic colours that they are most tedious to read.

[21]Sadler, Universal Education, pp. 29 & 30.

[22]Ibid., p. 30

[23]Ibid.

[24]v. R.J.W. Evans, Rudolf II and his World: A study in intellectual history 1576-1612, (Oxford: Clarendon Press, 1973), pp. 186-190 for a fascinating discussion of the symbolic significance of the mechanism in late sixteenth century thought in and around the court of Rudolf II. This discussion is helpful in the attempt to understand the potential which Comenius believed to exist in mechanisms for human betterment.

[25]John Amos Comenius, The Great Didactic, tr. by M.W. Keatinge, (New York: Russell & Russell, 1910; reprint edition from the second revised edition of 1910 - reissued, 1967 by Russell & Russell), p. 287.

[26]Ibid., p. 289.

[27]Ibid., p. 56.

[28]Sadler, Universal Education, p. 31.

[29]Quick, Essays, p. xiv.

[30]S.S. Laurie, John Amos Comenius: Bishop of the Moravians: His Life and Educational Works, (Cambridge: Cambridge University Press, 1884; reprint edition, 1904).

[31]Idem, Studies in the History of Educational Opinion from the Renaissance, (Cambridge: Cambridge University Press, 1903).

[32]Laurie, Comenius, p. 222.

[33]Idem, Studies, p. 146.

[34]Ibid., p. 157.

[35]Ibid., p. 119.

[36]Bernard Bailyn, Education in the Forming of American Society, (New York: W.W. Norton and Co., 1960).

[37]Ibid., p. 8.

[38]Thomas Davidson, A History of Education, (New York: Charles Scribner's Sons, 1911).

[39]Ibid., pp. 196 & 197.

[40]R. Freeman Butts, The Education of the West, (New York: McGraw-Hill, 1947, revised edition 1973).

[41]Ibid., p. 214.

[42]Bailyn, Education, p. 12.

[43]Bantock, Studies, p. 5.

CHAPTER TWO

THE PHILOSOPHICAL BACKGROUND OF COMENIUS'S THOUGHT

In establishing the philosophical background of Comenius's thought it is important first to reflect upon the seventeenth century's understanding of the life of the mind. According to Robert Mandrou:

> Intellectual life is not confined - especially not in the sixteenth and seventeenth centuries - to the elaboration and diffusion of one of those great systems which impress us even today with their logical rigour. It is made up of gropings, rough sketches and confrontations which often prove futile (in the eyes, that is, of those whose converse is solely with geniuses) but which were certainly needed in order that a great philosophy might be perfected....It seems clear...that all intellectual life must signify thinking in the broad sense, still recognised by men of the seventeenth century...which includes imagination and emotion: douting, conceiving, affirming and denying, wanting and not wanting, imagining and feeling.[1]

The thought of Comenius corresponds well to Mandrou's portrayal of intellectual life in its breath and "gropings". Since Comenius did not leave a rigourous "system of thought", the background of Comenius's thought is indicative of the eclectic character of his "gropings" and defies easy analysis. Nevertheless throughout his works several themes predominate which have their origins in the broad stream of Neoplatonic thought in its Christian form. They are (1) the notion of an hierarchical universe (2) that man stands in relation to the universe as microcosm to macrocosm (3) the human society (or the mesocosm) can be rectified by the restoration of the pristine state of the world (when political power and philosophical enlightenment were manifested by the monarch) and (4) that each individual must return to his primordial state of goodness by the contemplation of the

Good, the True, the Beautiful which aid the soul's recollection of its divine nature and origin. Since these themes are found throughout Comenius's works (although in Christianized form) an examination of the origins of these themes is important to understanding Comenius's thought. What follows will be a survey (in roughly chronological order) of the major currents of Platonism that came to be especially influential for Comenius.

LATE ANTIQUE PLATONISM

The Christian Neoplatonism which influenced Comenius and so many other Renaissance scholars is not the "pure" Platonism so carefully reconstructed by the modern classical scholars.[2] Rather, the rediscovery of Plato by the Renaissance humanists was a rediscovery not necessarily of the actual thought of Plato but of a "continuous tradition". According to Paul Oskar Kristeller in his Renaissance Thought and its Sources:

> ...ever since classical antiquity, Platonist philosophers have tried not so much to repeat or restate Plato's doctrines in their original form as to combine them with notions of diverse origin, and these accretions, like the tributaries of a broadening river, became integral parts of the continuing tradition. They are as necessary for a proper understanding of the history of Platonism as they might be misleading if used uncritically for an interpretation of Plato himself.[3]

To be able to understand the roots of the Platonism of the Renaissance, and consequently, of Comenius it is important to look at the teaching of Middle Platonism.

MIDDLE PLATONISM

Middle Platonism was a kind of Platonism which flourished from approximately 80 B.C. to A.D. 220. It marked the transition between

the Old Academy in Athens and the great synthesis of the Neoplatonic Philosophy of the third century A.D. According to Kristeller, Middle Platonism was characterized by its eclectic tendency, borrowing from many schools of thought including that of Aristotle and the Stoics. By the beginning of the Christian era it "had replaced Skepticism in the Athenian Academy, had established a kind of school in Alexandria... and had begun to pervade the thought of a widening circle of philosophical and popular authors." Kristeller goes on to state that "Middle Platonism made at least one important contribution to the history of Platonism, for it formulated the doctrine...that the trancedent ideas or intelligible forms are concepts of a divine intelligence."[4] We learn from Frederick Copleston that Middle Platonism resulted in part from "the influence of contemporary religious interests and demands." Copleston goes on to say that:

> We find in Middle Platonism the...insistence on the divine transcendence...together with the theory of intermediary beings and a belief in mysticism.[5]

The mystical and eclectic tendencies of Middle Platonism were encouraged in Alexandria by the presence of the Neopythagoreans and those who wrote in the name of Hermes Trismegistus. We read in Kristeller's Renaissance Thought and Its Sources that:

> Middle Platonism had many elements in common with the Neopythagoreanism which flourished during the first centuries of our era and forged many Platonizing works under the name of Pythagoras and his early pupils, and with the Hermetics...who flourished in Alexandria and composed a corpus of writings that were attributed to the Egyptian divinity Hermes Trismegistus [i.e. Thoth].[6]

Plutarch of Chaeronea

Among the most influential and representative of the Middle

Platonists was the famous biographer Plutarch of Chaeronea (A.D. 45-120). Typical of the Middle Platonists, his thought was influenced by Aristotle's successors, the Stoics, and the Neo-pythagoreans all in addition to Plato.[7] Copleston tells us that Plutarch adopted "a strong opposition to superstitition...due...perhaps, to his desire for a purer conception of the Deity." He goes on to state that Plutarch:

> Combined therewith a belief in prophecy and "revelation" and "enthusiasm". He speaks of an immediate intuition or ceontact with the Transcendental, which doubtless helped to prepare the way for the Plotinian doctrine of ecstasy.[8]

Middle Platonism provided not only the inspiration of Plutarch (who was widely read and appreciated even in Comenius's own time) but also served as the source of the Platonism of Philo Judaeus (fl. 20 B.C.-A.D. 40) and the Church Fathers Clement of Alexandria (c.150 - c.213) and Origen (c.185 -253). Kristeller tells us that the "first attempts to combine the teachings of Biblical religion with Greek philosophy" which Philo, Clement, and Origen involved themselves with, did much to prepare the "ground...both among pagans and Christians when philosophical Platonism was revived during the third century A.D. in Alexandria by Ammonius Saccas and by his great pupil Plotinus."[9] By pointing to the use of Middle Platonism made by the early Church Fathers Clement and Origen, the later Christian Neoplatonists could justify their own interest in Plotinus and his followers.

NEOPLATONISM

Although Middle Platonism had a certain influence on the Platonism of the Renaissance, its contribution was not generally

recognized by the Renaissance scholars themselves. Accordingly, attention should be paid to the thought of the Neoplatonists who directly influenced the development of the Christian Platonism of the Medieval and Renaissance periods.

Plotinus

The most important philosopher of the Neoplatonists in terms of the later development of Neoplatonism in the Middle Ages and Renaissance in western Europe was Plotinus (A.D. 205-270), a native of Egypt.[10] It was Plotinus who led the third century revival of philosophical Platonism which his teacher, Ammonius Saccas, had initiated.[11] We learn from Kristeller that the school of Plotinus took Plato's dialogues as its chief authority "but tried to fit Plato's scattered doctrines into a coherent system and to incorporate in it other ideas derived from the Stoics and especially from Aristotle."[12] They held the physical world to be "a web of hidden affinities originating in a world soul and other socmis souls." Copleston summarizes the system of Plotinus as follows:

> In the system of Plotinus, then, the Orphic-Platonic-Pythagorean strain of "otherworldliness," intellectual ascent, salvation through assimilation to and knowledge of God, reach their most complete and systematic expression. Philosophy now includes, not only logic, cosmology, psychology, metaphysics and ethics, but also the theory of religion and mysticism: in fact, since the highest type of knowledge is the mystical knowledge of God and since Plotinus, who most probably based his theory of mysticism on his own experience...evidently regards mystical experience as the supreme attainment of the true philosopher, we may say that in Plotinian Neo-Platonism philosophy tends to pass into religion...[14]

The Transmission of Neoplatonic Philosophy to Christian Thought

If Middle Platonism had prepared the ground for the philosophy of the earliest Church Fathers, Neoplatonism provided "practically

all later Greek Church Fathers and theologians with their philosophical terms and concepts."[15] Despite the pagan background of Neoplatonism it was immensely popular with Christian intellectuals who saw in it many enlightening parallels with Christian teachings. F.C. Happold summarzied the attractive power of Plotinus's vision for the Christian intellectual in the following passage:

> [Plotinus's] canvas was indeed an immense and magnificient one, a picture of an 'intelligible' world, the real world, timeless, spaceless, and containing in itself the archetypes of the sensible world as an image of the Divine Mind, [the Nous] which is itself a reflection of the One; of the whole universe as a vast organism, an immense living being, held together by the Power and Logos of God, so that all existence, men, and things, is drawn by a sort of centripetal attraction towards God.[16]

The "Divine Mind" of Plotinus from which all things take their form was an exciting concept for Christian intellectuals struggling to articulate their understanding of the Scriptures. The opening passage of the fourth Gospel seemed especially to be illuminated in the light of Neoplatonism; according to the St. John's Gospel:

> In the beginning was the Word [logos in Greek] and the Word was with God, and the Word was God. He was in the beginning with God, all things were made through him, and without him was not anything made that was made. In him was life, and the life was the light of men. The light shines in the darkness, and the darkness has not overcome it. [John 1:1-5, RSV]

With reference to this quotation Happold tells us that:

> Christian Neoplatonism equated the Logos of St. John's Gospel, the Second Person of the Trinity, the divine Activity, the World Principle, and the That which is the basis of the manifold, and which was present in Jesus Christ, with the Nous of Plotinus.[17]

Pseudo-Dionysius The Areopagite

Of highest importance in the passing on of Neoplatonic ideas to

the Christian Middle Ages and Renaissance were the writings of the Pseudo-Dionysius, a Syrian monk who lived during the late fifth and early sixth century A.D.[18] The mystical writings of this monk enjoyed enormous authority in that they were written under the name of St. Paul's Athenian convert Dionysius the Areopagite. Happold tells us that "he was thought for centuries to have been a contemporary of the Apostle and his writings were given the same authority as those of the authors of the New Testament."[19] The Pseudo-Dionysius attempted in his writings "to reconcile neo-Platonism and Christianity ..."[20] and was probably inspired in part by the Neoplatonic philosopher Proclus (418-485 A.D.).[21] Happold tells us that:

> The author of The Mystical Theology [i.e. the Pseudo-Dionysius] gave to mystical literature some of its key ideas, notably the conception of the Supreme Godhead as the Divine Dark, the negation of all that the surface conscious perceives. In his writings, too, are found, for the first time in Christian mysticism, the terms "divine ignorance" and "unknowing" as descriptions of the way the soul reaches the highest truth.[22]

Copleston interprets the Pseudo-Dionysius's understanding of the relation between the world of the senses and God as follows:

> ...Pseudo-Dionysius speaks of the "emanation": ...of God into the universe of things; but he tries to combine the neo-Platonic emanation theory with the Christian doctrine of creation and is no pantheist...God exists indivisibly and without multiplication of Himself in all individual, separate and multiple things, and,...they participate in the goodness which springs from Him...the world, in short, is an outflowing of the divine goodness, but it is not God Himself. On this point of God's transcendence as well as on that of His immanence the Pseudo-Dionysius is clear; but his fondness for depicting the world as the outflowing of the over-brimming Goodness of God, as well as for drawing a kind of parallel between the internal divine Processions [i.e. those of the Trinity] and the external procession in creation, lead him to speak as though creation were a spontaneous activity of God...God

> is the final Cause of all things, drawing all things to Himself as the Good. He is, therefore, "the Beginning and End of all things", "the Beginning as their Cause, the End as their Final Purpose." There is, then, an outgoing from God and a return to God, a process of multiplication and a process of intercommunion and return. This idea became basic in the philosophy of the "Areopagite's" translator, John Scotus Eriugena.[23]

THE INFLUENCE OF LATE ANTIQUE PLATONISM ON COMENIUS

As has been pointed out above, many early Christian intellectuals including some of the Church Fathers were deeply influenced by the Platonism of Late Antiquity. Comenius frequently cites the Church Fathers of both the Latin West and the Greek East in his own works and may well have heard something of Plotinus himself. John Edward Sadler tells us that:

> Comenius was strongly inbued with the view of the Church Fathers that the world was wholly bad but that God had provided a way of escape for the Christian. Ultimately this escape could only be realized in the hereafter but even in this life man could give his allegiance to the Other World.... [The] concept of mysticism as a higher form of activity...and...the superiority of the life of contemplation came into Christianity through Plotinus' interpretation of Plato in the third century A.D. and Comenius himself was much influenced by it.[24]

The related Neoplatonic concepts of the divine immanence and transcendence are found to be of great importance in Comenius's thought. In the 1642 English translation of Comenius's book A Reformation of Schooles we are provided with an excellent illustration of his indebtedness to the Neoplatonic tradition. Commenting on his eighth aphorism, Comenius tells us that:

> Therefore it is most certaine, that both the creatures, and their Ideas have issued from this one fountaine. And, seeing that among the creatures

> every agent naturally labours to assimilate to its object into itselfe, why should we not acknowledge the same in God, who hath imprinted this property in the creatures? especially seeing God can find nothing fit to be the end of his works, but himselfe. Therefore we conclude that God takes from himselfe the rule of his workes, as well at the end of them, and power to effect them; the matter onely whereof the creatures are compos'd, and wherein they differ chiefly from their Creator, he takes out of nothing.[25]

In this we see that Comenius has followed the spirit of Neoplatonism in his assertion that the "Ideas" of creatures precede their manifestation in the world and that the Ideas are those of God. Like the Pseudo-Dionyius, Comenius takes pains to avoid the semblance of his teaching to that of the doctrine of pantheism. Accordingly Comenius takes the material cause of the creation (that nihilum from which God is said to have created the world) to be the chief difference which exists between the Creator and his creation. By so doing Comenius can preserve the distinction between the Creator and the creation - so important in orthodox Christianity - and at the same time affirm the conception which we have seen in the Pseudo-Dionysius of the "intercommunion and return" to the divine which is both the source and goal of all creation. For we see in Comenius's quotation above that, outside of the material cause, the creation and its Creator enjoy a relationship which transcends in its intimacy the distinctions of subject and object.

MEDIEVAL CHRISTIAN PLATONISM

Despite the great debt which Comenius's thought owes to the Late Antique Platonism discussed above, Comenius seemed reluctant to cite pre-Augustinian Christian platonists as authoritative interpretors of Christian philosophical truth. For example we find in the 1651

English translation of Naturall Philosophie Reformed by Divine Light the following reference to Origen. "Origen joyned heathen philosophy with Christian religion: with no ill intent perhaps, but sure it is with very bad event."[26] Comenius's concern with Origen's thought was not so much that he made use of "heathen philosophy" (which Comenius himself believed was of great value in establishing "the Temple of Wisdom") but rather the syncretic character of Origen's "Christian" philosophy. Comenius was convinced that, for Christianity to benefit from the wisdom of the ancient pagan philosophers, pagan philosophy must be clearly seen and used as a handmaiden to the deeper mysteries of Biblical revelation. In this Comenius followed St. Augustine and the spirit of Medieval Platonism in general.

St. Augustine of Hippo

During the early Medieval period in western Europe very little survived of Plato's thought itself beyond fragments of the Timaeus in a Latin translation. Kristeller maintains that the Platonic tradition was however passed on indirectly to the early Middle Ages by Cicero, Boethius, and most importantly by St. Augustine of Hippo. St. Augustine owed a lot to the works of Neoplatonic philosophers whose thought helped him to come to believe in the Christian Faith. St. Augustine "always spoke with respect of the Platonists and, in spite of his unquestioned piety and originality, was indebted to them for many of his philosophical ideas."[27] We learn from D.A. Rees that:

> Like the Alexandrian school, St. Augustine... recognised no line of demarcation between philosophy and theology. His philosophical inheritance, unlike theirs, derived from the Neoplatonic tradition, as found in Plotinus and Porphyry. Platonic influence on his thought emerges in his interpretation of the doctrine of the Trinity (which draws upon the Neoplatonic

> hypotheses), his doctrine that the true ultimate goal of knowledge is a state of beatitude, his theory of Ideas and eternal truths as subsisting in the mind of God, and his accounting for human knowledge through reference to an illumination by the Divine Mind. On the other hand, the aspects of his theology for which he is most widely known, his treatments of predestination, or original sin, and of divine grace, have a very different origin.[28]

St. Augustine's thought, while it "was the chief source and inspiration of philosophical as well as of theological thought" during the early Medieval period, was not the only important source of Platonic influence.[29]

John Scotus Erigena

In the dark ages following the period of Late Antiquity, Neoplatonism was not entirely lost to the West but was preserved by a few Christian scholars. Among the most important of these was John Scotus Erigena (c. 815-c.877). Scotus Erigena was, as his name implies, born in Erin or Ireland (as it is commonly known). The Irish monks had in the nineth century managed to maintain a higher standard of intellectual achievement than had their colleagues on the continent and still possessed a knowledge of Greek long after it had been forgotten in western Europe.[30] The Neoplatonic influence which is found in Erigen's works owes much to the Pseudo-Dionysius (whose writings he translated into Latin). Of the other important influences on his thought Yates suggests that:

> He has caught the spirit of Greek thinking, not from the originals, but through the Greek Fathers whom he knows very well indeed, particularly Origen, Basil, Maximus the Confessor, and Gregory of Nyssa. His knowledge of Greek physics has reached him tinged with the mysticism of the Greek patristic commentary on the Mosaic account of Creation.[31]

Erigena's greatest work, the De divisione naturae (composed between

862-866), is imbued with Christian Neoplatonic mysticism. In this work, which outlined his teaching on Nature, he attempted to "effect a synthesis between Augustine, whom he quotes perhaps more than any other writer, with the Greek Fathers and with Pseudo-Dionysius."[32] In this attempt he wished "to build a universal philosophy, an account of Nature, which is also a Christian philosophy."[33]

In Erigena's account of Nature he makes a fourfold division "of the things which are":

1. creating and not created;
2. created and creating;
3. created and not creating;
4. not creating and not created.[34]

For the purposes of this study the fourth division is of special interest. Yates summarizes this fourth division as follows:

> 4. nec creat nec creatur. God as the end of all. the whole creation, as it came from the primordial causes, so it will return to them. Man is the microcosm, containing within himself the whole creation, the point of union between what is above him and what is below him. This position constitutes the Dignity of man. When the Second Person of the Trinity redeemed man the whole creation was also redeemed in him, and so he and the whole creation may rise back to their primal dignity in the primordial causes, to their end, which is God. Hence the primordial causes, which are the Logos as creator, both descend through the whole of creation, and ascend up again through it, through the Logos as Redeemer.[35]

Raymond Lull

Standing between Scotus Erigena and the Renaissance is Raymond Lull (c. 1232-1316). Yates tells us that:

> In the thirteenth century, the age of the rise of scholasticism, Lull and his Art provide a channel through which another tradition runs through the scholastic age, medieval platonism, particularly in forms descending from Scotus Erigena, in which there is some simularity to Cabalistic ways of thinking. Erigena's philosophy of expansion and

> retraction has more in common with dynamic Cabalism than with purely static Platonism.[36]

As we shall see later in this chapter under the heading "Renaissance Cabalism" the confluence of Neoplatonic and Cabalistic notions came to play a major role in the formation of the thought of some of the most important influences on Comenius.

Raymond Lull believed that he had discovered a "universal art" based on "natural reasons."[37] He claimed that "...his Art was more than a logic; it was a way of finding out and 'demonstrating' truth in all departments of knowledge..." nothing less than a key to the secrets of nature.[38] This notion of a "universal art" as we shall see has a most interesting parallel in Comenius's understanding of pansophia.[39] Concerning Lull's claims, Yates states:

> These are stupendous claims. They seem to imply that Lull believed that he had discovered, or had revealed to him an Art of thinking which was infallible in all spheres because based on the actual structure of reality, a logic which followed the true patterns of the universe. He valued this infallible Art most for its virtue in the theological sphere, on which level he believed that it could "demonstrate" the truth of the Incarnation and the Trinity to unbelievers...[40]

The "true patterns" of the universe were, for Lull and his followers, arranged hierarchically and formed a "ladder" or "chain" connecting all things to each other. Part of Lull's Art consisted of giving symbolic form to this ontological "ladder", Yates tells us that:

> If we look at the "Alphabet"...of the Art, we perceive that...A is a trinity, and B to K as "absoluta" are divine attributes, or, perhaps, emanations. Moreover, B to K as "subjects" are a "ladder" (to use one of Lull's own favorite mystical symbols) rising from the primitive elemental world (elementativa), through the vegetable world (vegetativa), the animal world (sensitiva), the human world (homo), to the celestial world (coelum), and thence to all the angelic and divine

> worlds (angelus, Deus). On all these subjects the Art could be used.[41]

THE INFLUENCE OF MEDIEVAL PLATONISM ON COMENIUS

The thought of St. Augustine was enormously influential among the Protestant Reformers and Comenius himself made a number of direct quotations from him in his works. For example, we read in Comenius's Via Lucis: "...They are grievously at fault who (as Augustine tells us in the De Origine Animae) declare that it makes no difference to the truth of the faith what opinion man entertains about created things, so long as the right opinion is entertained concerning God."[42] Another example of Comenius's respect for Augustine's thought is found in A Reformation of Schooles where he cites the authority of Augustine on the question of whether there is any true philosophy outside of Christianity. Comenius informs his readers that:

> It becomes us Christians, and none others, to professe Pansophy, for out of Christianity, there neither is, nor can be any Pansophy. Which AUGUSTINE of old maintained (lib. 3. contra Acad. cap. 19.) providing that onely Christianity is true Philosophy. And not without cause, for seeing divine revelation is no where to be met withall, out of the Church, and without it our understandings can reach no farther than this present-life,...; what can there be considerable in such wisdome as is gathered onely from the senses, & from natural reason, which is not much before them? It may in deed for a few days feed us with some painted joncates, and afterward send us empty away.[43]

It is then quite likely that the writings of Augustine were especially important for their influence not only on the Neoplatonic character of most of Comenius's philosophical thought but also for their role in helping Comenius to provide a Christian interpretation of the philosophical inheritance from antiquity.

Although Comenius did not directly cite the works of Scotus Erigena, many of Erigena's cosmological speculations seem to be echoed in Comenius's thought. Like Erigena, Comenius too took the Mosaic account of the Creation to be an anagogical statement of the principles of the created order of things as well as an account of the sequence in which things came to be. These views are found in Comenius's work on physics entitled in the English translation: Philosophy Reformed by Divine Light or A Synopsis of Physicks (1651). In the second chapter of this work we are provided with an example of Comenius's treatment of the Genesis story as a revelation of the inner mysteries of the created order. Comenius cites the authority of "Chrysostome" and "Danaeus" for the interpretation of the "hovering spirit" of the first verse of Genesis as a "created spirit" which is "the soul of the world" or the Anima Mundi.[44] He informs the reader that: "...the spirit of God stirring upon the waters, produced the Spirit or soul of the world, which puts life into all living things ..."[45]

In citing these authorities Comenius was indebted to Erigena who introduced western European scholars in the Middle Ages to the cosmological speculations of the eastern Church Fathers and made, in turn, a most significant contribution to Christian cosmology himself. One of the most important doctrines found in Erigena (and other sources both indirectly and directly influential on Comenius) is that of the microcosm-macrocosm correspondence. That man is a microcosm of the whole creation is a teaching which Comenius took as axiomatic and essential to his philosophy of education.[46]

The importance of Raymond Lull and his Ars combinatoria to Renaissance intellectual circles has been carefully examined in

Frances A. Yate's collected essays entitled Lull & Bruno (1982). In this work the great influence of Lull and his followers in the "Lullist" school is demonstrated with respect to certain notable figures in the intellectual circles of the Renaissance. Yates tells us that:

> The Renaissance seized on Lullism with intense enthusiasm; in fact, it is perhaps hardly an exaggeration to say that Lullism is one of the major forces in the Renaissance. Pico della Mirandola acknowledged that his system owed much to the Ars Combinatoria of Raymondus. Nicholas of Cusa collected and himself copied Lull manuscripts. Giordano Bruno and Agrippa of Nettesheim were both Lullists. So was John Dee....The Lullian medical theories were known to Paracelsus.... the system was certainly known to Descartes who acknowledged that it was in his mind when he conceived of his new method of constituting a universal science...And all this while the "pseudo-Lullian" alchemical tradition pursued its mysterious course.[47]

From this we can see that the concern with "method" was not new to the Renaissance but rather has its roots well into the Medieval Period in Lull's Art. Concerning Lull's influence on the Renaissance conception of "method" Yates writes:

> The immense significance of Lull's Art for the formation of method is now realized. The seventeenth century in its constant search for method was always aware of the Art of Raymond Lull, even when it discarded it. Bacon and Descartes both knew it.... In fact it is not an exaggeration to say that the European search for method, the root of the European achievement began with Raymond Lull.[48]

The Art of Raymond Lull came to influence Comenius by way of his friend and mentor John Henry Alsted (1588-1638) who was his professor while at Herborn. While the details of Comenius's education are discussed in Chapter Four, it is interesting to note that Alsted was himself a serious student of the ars magna of Lull.[49]

It is important to draw attention to the origins of that understanding of method which came to influence Comenius. This is because there are some who equate Comenius's concern with method with a much different understanding of it based on nineteenth century notions of empiricism and "scientific objectivity". The tradition stemming from Lull and influencing Alsted and Comenius is one in which there is no division made between the "objective" world of the sensible and the "subjective" world of the spirit. The truthes of the spiritual order are taken as axiomatic principles which, if correctly discerned, can provide man with a knowledge of all things, including the mysteries of Natural Philosophy. This could not be more alien to those whose concept of method, following Bacon, rejected all "theological impedimenta" in their pursuit of it.

RENAISSANCE PLATONISM

According to Kristeller Renaissance Platonism recognised:

> ...that there is a comprehensive universal truth in which the doctrines of each school or individual thinker merely participated, thus reasserting in a more positive fashion the intellectual variety and liberty at which the eclectics and skeptics had aimed.[50]

As thinkers whose thought embodied the above mentioned notion of "a comprehensive universal truth", Kristeller mentions Nicolas Cusanus and Pico della Mirandola.

Nicolas Cusanus

Nicolas Cusanus (1401-1464) was a man who combined in his life an astonishing number of vocations. F.C. Happold tells us that he was:

> ...Papal Legate, Bishop and Cardinal; philosopher, mathematician, and mystic; practical man of affairs

> playing an important role in the Councils of the Church which were called to try to end the scandal of the Great Schism, and, at the same time, a leader of the thought of his age.[51]

He stood in the tradition of the Pseudo-Dionysius and, according to Yates, "...found in the 'learned ignorance' of Dionysius the only final solution, or mode of approach to the divine..."[52] In his book De docta ignorantia he gave expression to his understanding of the Pseudo-Dionysius. Happold summarizes the philosphy of Cusanus as follows:

> He had the mathematician's passion for unity. He was impatient of the opposites which conditioned his perception, the opposition of the infinite and finite, of thought and being, of good and evil, of time and eternity...He envisaged reality as having two aspects: an invisible and ultimate reality, which is God and a visible derived reality, which is the world. God is the original and communicative, the world is the originated and communicated reality. As uncreated all is God; as created all is the world. All begins from God and ends in God, as motion begins from rest and ends in rest.[53]

With respect to his doctrine of universal truth, Kristeller writes:

> In his metaphysics each particular being is nothing but a particular manifestation or contraction of the one infinite and divine principle, and, in the same way, each human doctrine is but a special expression of the universal truth that can never be expressed in any one particular statement. On this basis, it is possible for Casanus to find a partial truth in a variety of philosophical and religious doctrines, including Mohammedanism.[54]

This ability to see truth in many diverse forms and mainfestations is often, among deeply religious men such as Casanus, combined with a tendency toward mysticism. Sidney Spencer tells us that Cusanus in his book The Vision of God places special emphasis on his view "that God is Himself the absolute Vision ; the true unlimited Sight,' in which all lesser modes of vision are included."[55] Spencer

continues:

> It was a familiar Neo-Platonic thought that the universe owes its being to the divine activity in contemplation. So Nicolas says "I am, because Thou dost look at me"...God beholds us and all things, and in beholding us He gives Himself to us, that we may see Him. To attain the vision of God, to see His face unveiled, we must put away the pretensions of intellectual knowledge and "enter into a certain secret and mystic silence." In this silence or "ignorance", the divine Vision, which is the divine Love, may possess us.[56]

The Academic Platonica of Florence

One of the most significant developments of the Platonic tradition took place in Italy in the second half of the fifteenth century. At that time the Academia Platonica of Florence (1642-1521) was founded by Cosimo de'Medici and became the most important centre of Renaissance Platonism. Cosimo de'Medici had been inspired by Giorgius Gemistus Pletho (c.1355-1452) a Byzantine scholar whose presence in Italy greatly stimulated the study of Greek and of the newly available Greek sources of the Platonic tradition.[57] D.A. Rees tells us that:

> The Academy's most celebrated members were Marsilio Ficino (1433-1499), who translated both Plato and Plotinus into Latin and developed in his Theologia Platonica an elaborate form of Christian Platonism which drew on many sources, and Giovanni Pico della Mirandola...a pupil of Ficino who drew both on the pseudo-Dionysius and on the Jewish cabalistic tradition.[58]

Pico Della Mirandola

The most significant member of the Academia Platonica (for the purposes of this thesis) was Pico della Mirandola (1463-1494). Pico was the recipient of the best of humanist education and learned Latin and Greek at an early age. He went on to study canon law and later philosophy, and later came to learn Hebrew and Arabic from Jewish scholars. In the following passage Kristeller presents us with an

excellent summary of Pico's thought:

> For Pico, the idea that truth is universal and that thinkers of all philosophical and religious traditions have a part in it is one of his most pervasive and fundmental assumptions....Pico's notion of the truth shares with the skeptics the rejection of the dogmatic claims of any particular master or school and with the eclectics the intellectual freedom to choose from the writings of any philosopher what seems to be true or useful. Yet unlike the eclectics, he does not choose at random what he pleases, but he seems to be guided by an intuitive certainty of what is true (and this he derives from the Platonic tradition);....He feels perfectly free to reject the views of any past thinker on any point, but he is convinced that the work of every philosopher worthy of the name contains some true statements...[59]

This syncretism of Pico enabled him and those who he influenced to read with curiosity and respect a great number of authors of varying perspectives and backgrounds.

THE INFLUENCE OF RENAISSANCE PLATONISM ON COMENIUS

As we have seen both Cusanus and Pico were able to make use of Platonic tradition in new and creative ways as influential men of the Renaissance. The importance of these two men to our study is the fact that both Comenius and his professors read and greatly respected the thought of these men. In Comenius's desire for a truly Christian pansophia, which would take into account all the collected wisdom of all places and all ages, we may discern much of the spirit of Renaissance Christian Platonist speculation. The following quotation from A Reformation of Schooles provides an excellent example of Comenius's own adaptation of Renaissance universalism to the provision of a Christian pansophia.

> It is not likely, that any one alone, or some few men of an age or two, have had the priviledge to see all things, and others to see nothing: but as no soyle yeelds all kinds of fruits, and yet every one yeelds something in their seasons yeare after yeare: so God

> also scattereth in mens minds various spakes of his light respectively, in divers Nations, and Ages. The wind blow..h where it listeth, saith Christ, speaking of the holy Ghost, and his operations. And there want not examples of some, out of the bounds of the Church, whom the spirit of Wisdome hath severally inspired: as Job, Elephaz, Elihu, Mercurius Trismegistus, Socrates, Epictetus, Cicero. Therefore none must be contemned, especially in such things, wherein the light of nature may guide us"...60

The doctrine of universal truth which was characteristic of both Cusanus's and Pico's Platonism may well have also inspired, in part, the irenicism of Comenius. On the foundation of universal truth and irencism Comenius hoped to perpetuate the dream of the Renaissance Platonists' for the co-operation of all Christendom in the reformation of religion, politics, and education.

With special reference to Cusanus it must be stated that it was his mystical thought that came to have the greatest influence on Comenius. Like Cusanus, Comenius firmly believed that an intimate knowledge of God, based on what we would call today "mystical experience", is the only solid foundation upon which any reformation could take place.[61]

With respect to Pico it is known that Comenius was greatly impressed by his erudition which he was able to acquire in a very short life. Concering Pico Comenius wrote:

> Giovanni Pico Mirandola, who was even younger than Alexander when he died, attained by his philosophical studies such proficiency in all the departments of human knowledge, the he was considered the marvel of his age.[62]

Among the traditions which contributed to Pico's syncretic Platonism (and came later to influence Comenius) were those of Cabalism and the Hermetic Philosophy. These traditions shall be respectively discussed later on in this chapter.

The influence of Pico was mediated to Comenius by his professors at the Calvinist institutions of higher learning at both Herborn and Heidelberg. For at that time slightly before the advent of the Thirty Years War (1618-1648) the Calvinist intelligentsia were enjoying a period of spiritual and intellectual exuberance and inspiration which was never to be seen again in Calvinist circles.[63] Pico's philosophy was of great use to those concerned with the reform of the church and the advancement of learning. With respect to Pico's influence on northern Christian humanism, John T. McNeill writes:

> [the Christian humanists]...sought by the aid of Neoplatonist conceptions to break the hold of Aristotle and to bring to expression an undogmatic spiritual view of Christianity. The Florentine exponents of this Christian Platonism, Marsilio Ficino and Pico della Mirandola, both died before 1500, but the influence of Pico was still potent in northern hujanism. Jacob Wimfehling and Erasmus were both indebted to him.[64]

RENAISSANCE CABALISM

Among the important philosophical traditions that come to influence Renaissance Platonism was that of Cabalism. The chief text of Cabalism is the Zohar, a book whose title implies that it is a book of "brightness" or "splendour," and stands in relation to Jewish mysticism in much the same way as the Pseudo-Dionysius writings stand in relation to Christian Neoplatonic mysticism.[65] The probable author or redactor of the Zohar is Moses de Leon who first circulated the book some time between 1280 and 1300.[66]

In the Zohar the role of the "creative power of speech"[67] is taken as axiomatic since God created by means of his "word." This power which underlies all things "is embodied, not only in the written

word of Scripture, but in all that exists in the seen and unseen worlds, and in the deepest mysteries of the life of God, which Scripture unfolds."[68] Accordingly in the Zohar (and Cabalism in general) greatest emphasis is placed on the occult and anagogic sense of Scripture. This is because "language and in particular the language of Scripture, is the clue which unlocks the hidden mysteries of being."[69] There exists for the Cabalists an understanding of the underlying, occult relation which unites all things in creation from the lowest to the highest orders of being. This teaching has of course many interesting parallels in Platonism and no doubt was of great interest to the Christian Platonists who had access to it during the Renaissance.

Another Cabalistic teaching which is found also in some forms of Platonism is that of man being a microcosm of the macrocosm. With respect to this doctrine in the Cabala Sidney Spencer comments:

> Although man has fallen into separateness and mortality, he is still in his essence a spiritual being. His body is "an outer covering," a "veil", not the man himself. Yet the human form has a cosmic significance. It is a microcosm, which includes all things, higher and lower, in itself. "The different parts of our body correspond to the secrets of the divine wisdom" but "the real part of man is his soul" ...The soul, while essentially a unity, is threefold in its nature, and the three elements are themselves an amanation from the world of the Sefiroth i.e. the "channels" or "emanations" of "the divine Light whereby the transcendent God becomes immanent in the world."[70]

Pico della Mirandola

It was chiefly through the efforts of Pico that the study of the Cabala spread from Jewish scholars to include a number of Christian scholars during the Renaissance. Pico believed that the study of the Hebrew language would enable him to understnad the mysteries of

creation because Hebrew was the language not only of the Old Testament but of God himself. Yates tells us that:

> Among the eager activities which Pico undertook for his total synthesis of all knowledge...was the learning of Hebrew which he seems to have known quite well...He had a number of learned Jewish friends...Elia del Medigo, for example, and Flavius Mithridates. These and others supplied him with the necessary books and manuscripts, and he had probably read the Hebrew Scriptures in their original language, together with many commentaries, including Cabalist commentaries and works. He seems to have some knowledge of the Zohar and of the mystical commentary on the Song of Solomon.[71]

Pico's use of the Cabala was typical of almost every Christian Cabalist since his time, namely that it became a means of attempting the conversion of the Jews by cabalistic demonstration of the divinity of Christ and the threefold or trinitarian character of the Godhead. Pico's defense of his use of this "Hebrew magic" is defended by him as "confirming the Christian religion from the foundations of Hebrew wisdom."[72]

Rabbi Judah Loew Ben Bezalel (c.1520-1609)

The work of Christian Cabalists continued throughout the Renaissance to be deeply influenced by the Jewish Cabalists. The Jewish Cabalists, while resisting the attempts of such Christians as Pico to convert them, nevertheless continued to befriend and teach many outside their faith who were interested in their studies. Among the greatest Jewish Cabalists and certainly the most important for this thesis was Rabbi Judah. Rabbi Judah was one of the foremost figures in the renewal of Cabalistic studies during the late Renaissance in central Europe. The result of this renewed study of the Cabala was a renewal of Jewish intellectual life at the end of the sixteenth century. Rabbi Judah himself lived in the centre of

this renewal in the great city of Prague, the capital of the Kingdom of Bohemia. We learn from R.J.W. Evans that Rabbi Judah:

> was a man of vast learning and a prolific author. His philosophical writings are mostly concerned to justify the irrational and the supernatural in traditional Jewish teaching. He challenges the rationalism of the school of Maimonides and the benighted educational methods of the time in favor of a higher exegesis of scripture which proceeds from the divine illumination of the intellect. Loew's was the characteristic Cabalist and Hermetic striving for harmony, set in something of the ecstasy of the mystic, and his thought accepted the same cosmology of divinely-moved powers and influences. He was a master of the manipulations of numbers and letters typical of the practical Cabala. At the same time he believed in the reform and perfection of mankind through new principles of education and in the recovery of true harmony through the imminent end of the world as he knew it.[73]

THE INFLUENCE OF RENAISSANCE CABALISM ON COMENIUS

Comenius alludes respectfully to the Cabala in a number of his works. He was introduced to this most spiritual of linguistic studies by his friend and mentor at Herborn, Alsted. Milada Blekastad tells us that "his teacher Johan Heinrich Alsted, professor or theology, had a profound influence on Comenius, who in his System physicae harmonicae involves and brings into a unity 'physical mosaica, physica hebraeorum, rabbinica and cabbalica etc...'"[74] A more complete treatment of the relations between Alsted and Comenius will be taken up in the chapter concerning Comenius's education. In his Lexicon Reale Pansophicum Comenius includes the following definition of "Cabala":

> Cabala, scientia secretorum oretenus tradita. In sic Rabbinis dicitur, occultum et mysticum Scripturae sensum, ex materia et ordine Vocum venandi ars. Idem ergo apud Hebraeos est, quod apud nos sensus reconditus, mysticus, Caelestis, anagogicus, occultam rerum proprietatem signis Scripturae artem retegens. V. Signum.[75]

This definition in English reads, according to this author's translation as follows:

> Cabala is defined as the science of mysteries hanced down by word of mouth. In view of the rabbis it is thus said to be the art of hunting, from the subject-matter and arrangement of the sacred Language, the hidden and mystical sense of the Scriptures. It is therefore the same among the Hebrews as it is for us, namely the art of revealing the abstruse, mystic, heavenly, anagogic, and hidden property of the figures of the Scriptures.[76]

From this is evident Comenius attitude of respect for the Jewish philosophy of the Cabala. An important aspect of the Cabalistic philosophy for Comenius's thought is the doctrine of the threefold divisions of the Sefiroth.[77] The emphasis on triadic divisions may well have provided a significant source for Comenius's own doctrine of the Trichotomy. Concerning his Trichotomic Principle Comenius wrote:

> One thing is singular, and even wonderfull in our Method, that all the chiefest divisions of things are made by a Trichotomie, which I protest I sought not by any superstitious affectation, but that it offered itselfe freely unto mee in things of greatest moment, even from the first attributes of things (One, True, Good) that I was for a while at a stand, being amazed with the newness of the thing....Let therefore this Christian Pansophy, unfolding the Ternary mysteries be sacred unto that eternall Trinity, JEHOVAH, God onely wise, Almighty, most good, and ever to be worshipped.[78]

As mentioned earlier it was the hope of the Christian Cabalists of the Renaissance such as Pico della Mirandola to bring about the conversion of the Jews by Cabalistic demonstration of the truth of the doctrine of the Holy Trinity. The triads of the Sefiroth and certain numerological operations on the Tetragrammaton (the four Hebrew letters comprising the most sacred name of God as revealed to Moses and latinized as JEHOVAH) formed the basis of the Christian Cabalists' hopes of the conversion of the Jews. Comenius, believing

this triadic division to be at the core of all God's emanation of Himself in creation, based his theory of societal reform on this Trichotomic Principle.[79] Briefly put, the trichotomic system of Comenius involves a threefold division of society which corresponds to Christ's threefold office of being Prophet, Priest, and King. Corresponding to Christ's office of Prophet Comenius has the tribunal of scholars who make up the "College of Light" which oversees all research and schools of all levels. The priestly office of Christ finds its corresponding institution in society in the "Consistorium" which is the tribunal of clergymen whose function is to take care of the spiritual needs of society. Lastly, Christ's office of being King finds its societal realization in the institution of the "Dicasterium" which is a tribunal of politicians (arranged hierarchically) having the responsibility of maintaining law and order among all peoples. The principle of the unity of the three in one is therefore made a principle of the harmonius ordering of society.[80] This application of a mystical principle to the world of ordinary human life is typical of the Cabalists and especially of the famous Rabbi Judah Loew ben Bezalel.

Hugo Stransky in his article entitled "Rabbi Judah Loew of Prague and John Amos Comenius: Two Reformers in Education",[81] holds the view that Comenius's own system of eudcational reform owed much to the Cabalistic thought of Rabbi Judah. Like Comenius in the seventeenth century, Rabbi Judah "...presented the world of experience as a transparent symbol of the highest realms of divinity."[82] Evans draws the relation between Rabbi Judah and Comenius as follows:

> Ultimately the arguments for such an interpretation of ideas remain a matter of speculation. There are striking similarities between the development of

> Jewish thought and Christian in the [late sixteenth century]...Loew's theories issued, like those of Comenius, in a universal educational reform tinged with chiliasm. The Cabala of Horowitz and other Safedists has elements which were later elaborated by Jakob Boehme, and it is entirely possible that the Lusation mystic absorbed the influence during visits to Bohemia, just as he must have learnt somewhere the alchemy of which his philosophy is full.[83]

Accordingly, there still remain many unanswered questions concerning the full extent of the influences on Comenius originating in the Cabalistic tradition. Nevertheless we now know that these links exist and that the thought of Comenius was enriched by its Cabalistic influences.

THE HERMETIC PHILOSOPHY

While the Middle Platonists were forming their eclectic doctrines in the early centuries of the Christian era another philosophical tradition was also very active and influential in Alexandria. This was the tradition of what is now known as Hermetic philosophy which is named after its mythological founder the Egyptian god Thoth or (in Greek) Hermes Trismegistus. This Hermetic Philosophy had no small influence on Middle Platonism and its teachings are remarkably consonant with both Platonism (in its Middle and Neoplatonic forms) and Cabalism.[84] This is most evident in the Hermetic doctrine of the relation of man as microcosm with the cosmos or macrocosm. According to Titus Burckhardt's understanding of the Hermetica:

> ...the traditional doctrine of the reciprocal correspondence of the cosmos and the human being is also founded on the idea of the uni e and Transcendent Intellect, whose relationship to what is commonly called "intellect" (namely reason alone) is like that of a source of light to its reflection in a restricted medium. This idea, which is a link between cosmology (the science of the cosmos) and

> pure metaphysics is by no means the special prerogative of Hermeticism although it is expounded with particular clarity in the writings of Hermes Trismegistos....In one of these writings it is said of the Intellect or Spirit: "The intellect (nous) derives from the substance (ousia) of God...The Intellect is not a part of the substance of God, but radiates from the latter as light shines forth from the sun. In human beings, this Intellect is God..."[85]

Renaissance Hermetic Philosophy

The Hermetic Philosophy was rediscovered in the Renaissance by Ficino and Pico in the Academia Platonica of Florence. Together with Ficino, Pico believed that the Hermetica (or the writings attributed to Hermes Trismegistus) was an extraordinarily rich source of the most ancient wisdom of man surpassing even the Books of Moses in their antiquity. For, according to Yates, Hermes Trismegistus "was, for the Renaissance, a real person, an Egyptian priest who had lived in times of remote antiquity and who had himself written [the Hermetica]."[86] It was the common belief among the Renaissance scholars of the Hermetica that in these works they had found "the fount of pristine wisdom whence Plato and the Greeks had derived the best that they knew."[87]

It was believed by Pico della Mirandola and the other intellectuals of the Renaissance who were trying to devise a "Christian" Cabalism that "there was a certain parallelism between the writings of Hermes Trismegistus, the Egyptian Moses, and Cabala which was a Jewish mystical tradition..."[88] The Cabala together with the Hermetic philosophy was believed by Pico to confirm the essential teachings of the Christian faith.[89]

> Looking at the Hermetic writings and at Cabala with the eyes of Pico, certain symmetries begin to present themselves...The Egyptian law giver held to be Hermes Trismegistus had given utterance to wonderful mystical teachings, including an account of creation in which he seemed to know something of

> what Moses knew....In Cabala, too, there was a marvellous body of mystical teaching, derived from the Hebrew law-giver, and new light on the Mosaic mysteries of creation. Pico lost himself in these wonders in which he saw the divinity of Christ verified....Hermetism and Cabalism also corroborated one another on a theme which was fundamental for them both, namely the creation by the Word. The mysteries of the Hermetica are mysteries of the Word, or the Logos, and in the Pimander, it was by the luminous Word, the Son of God issuing from the Nous that the creative act was made. In Genesis, "God spoke" to form the created world, and, since He spoke in Hebrew, this is why for the Cabalist the words and letters of the Hebrew tongue are subjects for endless mystical meditations....[90]

The Hermetic Philosophy presented Pico and other Renaissance scholars a doctrine of the soul which together with Platonic and Cabalistic teachings proved to be a source of tremendous optimism with respect to mankind's potential. Concerning this doctrine of the soul in the Hermetic Philosophy we learn from Titus Burckhardt that:

> it is said that the soul (psyche) is present in the body in the same manner as the intellect (nous) is present in the soul, and as the Divine Word (Logos) is present in the intellect...God is called the Father of all.
>
> It will be seen how close this doctrine is to that of Johannine theology - a fact which explains how Christian circles in the [late] Middle Ages [or early Renaissance] were able to see in the writings oft the Corpus Hermeticum (as in those of Plato) the pre-Christian "seeds" of the Logos. (St. Albert the Great, amongst others, looked on the hermetic writings in this way)....The Universal Intellect is not one numerically, but one in its indivisibility. In this way it is wholly present in each creature, and from it each creature derives its uniqueness, for there is nothing which possesses more unity, wholeness and perfection than that through which it is known.[91]

Francesco Patrizi

Among the Renaissance scholars of the Hermetica was Francesco Patrizi (1529-1597), an Italian philosopher who studied the thought of Ficino and others of the Academia Platonica of Florence. Jason L.

Saunders tells us that:

> Patrizi's chief philosophical work, Nova de Universis Philosophia (1591), contained four parts: Panaugia, on light; Panarchia, on first principles; Pampsychia, on souls; and Pancosmia, on mathematics and natural science...its aims were the linking of Christianity with the teachings of Zoroaster, Hermes, and Orpheus; the derivation of the world from God through emanation; and the insistence on a quantitative study of nature.[92]

Patrizi's greatest hope was to see the Hermetic-Platonic philosophy replace the quasi Aristotelian philosophy among the intelligensia of the Catholic Church. This hope is expressed in the dedication to his work, the Nova de universis philosophia, in which he recommends to his old fellow student and friend Pope Gregory XIV "the teaching of Hermetic-Platonic philosophy as a better way of bringing people back to the Church than 'ecclesiastical censures' or 'force of arms'."[93] Many aspects of Patrizi's thought found greater acceptance among Protestant intellectuals than among Catholics, especially following the Council of Trent.

Jakob Boehme

Jakob Boehme (1575-1624), although self-educated and of humble birth, had a far-reaching influence on thinkers as far away from his native Silesia as England. His influence seems to have extended to Comenius who lived in neighbouring Moravia.[94] Boehem's philosophy has much in common with Neoplatonism, Cabalism, and above all, Hermetic-Alchemical speculation.[95] Like Comenius Boehme read widely and was influenced by "Paracelsus (1493-1541) and Valentin Weigel (1538-1588) the Lutheran mystic."[96] For Boehme despite "the fact of evil" and "man's actual separation from God," the Presence of God "dwells in our inmost being" and mans true goal in life is to achieve union with God

in the heart.[97] The doctrine of "the heart" is important to consider in the light of Comenius's use of this symbol in his allegorical work entitled The Labyrinth of the World and the Paradise of the Heart (1623). We will therefore briefly look at this doctrine in Boehme as a possible source of Comenius's understanding of "the heart."[98]

Concerning the place of "the heart" in Boehme's theology Ninian Smart writes that in Boehme's understanding of his vision of "the Being of Beings, the Byss and the Abyss, the eternal generation of the Trinity, the origin and descent of this world, and of all creatures through the Divine Wisdom"[98] that:

> The "Abyss" is God considered as the Ungrund - the undifferentiated Absolute that is ineffable and neither light nor darkness, neither love nor wrath. The "eternal generation of the Trinity" occurs because the Ungrund contains a will to self-intuition. This will (identified with the Father) finds itself as the "heart (the Son). Emanating from these is the "moving life" (the Spirit). This eternal process toward self-knowledge and outgoing dynamic activity generates the inner spiritual world, which is the prototype of the visible universe. With differentiation, conflict of wills becomes possible; and Satan, in severing himself from the "heart" falls.[100]

With respect to Boehme's doctrine of the "centre" Happold quotes the following passage from Boehme which Happold introduces:

> The Master, in one of the Dialogues of the seventeenth century German mystic, Jacob Boehme, gives these instructions to the Disciple:
> "Cease from thine own activity, fix thine eye upon one point ...Gather in all thy thoughts and by faith press into the Centre...Be silent before the Lord, sitting alone with Him in thy inmost and most hidden cell, thy inward being centrally united in itself, and attending His will in the patience of hope.[101]

Bohme's doctrine of Nature is also interesting as it links his doctrine of the heart with his cosmology. Carl Jung, speaking of Boehme's use

of alchemical symbolism, writes:

> The mystical associations of the wheel play no small part in Jakob Bohme. Like the alchemists he too operates with the wheels of Ezekiel saying:..."The wheel of nature turns in upon itself from without; for God dwells within himself and has such a figure...for God is everywhere entire, and so dwells in himself. Mark: the outer wheel is the zodiac with the stars, and after it come the seven planets, ...Albeit this figure is not fashioned sufficiently, it is nevertheless a meditation: and we could make a fine drawing out it on a great circle for the meditation of those of less understanding. Mark therefore, desire goes in upon itself to the heart, which is God."[102]

Boehme also made ample use of alchemical symbolism and expressed some of his deepest insights with it. Carl Jung wrote that "Boehme's mysticism is influenced by alchemy in the highest degree."[103] Since alchemical symbolism was not only important for Boehme but for other influences on Comenius as well (such as J.V. Andreae, 1586-1650, whose influence will be discussed in the chapter on Comenius's educational background), it is worthwhile to now make a brief excursus into the subject of alchemical speculation in the Renaissance.

Alchemical Speculation

In order to understand the ideas of those who made use of the symbols and procedures of alchemy in their philosophic speculations, and, to be able to understand the rather confusing relation between alchemical speculation and the Hermetic philosophy, it is helpful to refer to Mircea Eliade:

> With regard to alchemy, we must keep in mind that a number of its basicpresuppositions - such as the growth of ores, the transmutation of metals, the Elixir and the obligatory secrecy - were carried over from the Middle Ages to the Renaissance and Reformation. Scholars of the seventeenth century did not question, for instance, the natural growth of metals; rather they inquired whether the

> alchemist might assist Nature in this process... But under the impact of Neoplatonism and Hermeticism, the traditional alchemy, i.e. arabic and western medieval alchemy, enlarged its frame of reference. The Aristotelian model was replaced by a Neoplatonic one, which emphasized the role of spiritual intermediaries between man, cosmos and the Supreme Deity. The old and universally diffused conviction of the alchemist's collaboration with Nature now received a Christological significance. The alchemists came to believe that, as Christ redeemed man through his death and resurrection, the opus alchymicum would redeem Nature. The sixteenth century Hermetist Heinrich Khunrath identified the Philosopher's Stone as Jesus Christ, the "Son of Macrocosm", and thought that its discovery would reveal the true nature of the macrocosm, just as Christ bestowed wholeness on the microcosm, man.[104]

Renaissance alchemical speculation in its new "enlarged frame of reference" was to influence quite a wide spectrum of theological thought including Lutheranism. The parallels between Christianity and alchemy may seem far-fetched to those unfamiliar with the history of alchemy. Nevertheless the intimate relationship between alchemical speculation and early Protestant Christianity has been documented and is now quite well established. Martin Luther's views on occult teachings were, for the most part, not encouraging. However in the case of alchemical speculation he was rather open-minded: in J.W. Montgomery's article "Cross, Constellation, and Crucible: Lutheran Astrology and Alchemy in the Age of the Reformation," Luther is quoted:

> The science of alchemy (ars alchimica) I like very well, and, indeed, it is truly the natural philosophy of the ancients. I like it...also for the sake of the allegory and secret signification, which is exceedingly fine, touching the ressurrection of the dead at the Last Day. For, as in a furnace the fire retracts and separates from a substance the other portions, and carries upward the spirit, the life, the sap, the strength, while the unclean matter, the dregs, remains at the bottom like a dead and worthless carcass...even so God, at the [illegible] of judgment, will

> separate all things through fire, the righteous from the ungodly.[105]

Titus Burckhardt also sees the relation between alchemy and Christian mysticism and tells us that:

> As a way which can lead man to knowledge of his own eternal being, alchemy can be compared to mysticism. This is already indicated by the fact that alchemical expressions were adopted by Christian and even more so by Islamic mysticism. The alchemical symbols of perfection refer to the spiritual mastery of the human state, to the return to the centre or mean, to what the three monotheistic religions call the regaining of the earthly paradise.[106]

THE INFLUENCE OF THE HERMETIC PHILOSOPHY ON COMENIUS

Together with many men of the Renaissance Comenius believed in the authenticity of the Hermetica and in the divine inspiration of the pre-Christian sage Hermes Trismegistus (or as Comenius calls him Mercurius Trismegistus) who anticipated by his foreknowledge the religion of Christ. The mystical teaching in the Hermetica of the correspondence between the microcosm and the macrocosm together with the doctrine of "correspondences" forms an important part of Comenius's pansophic system. We find in Comenius a description of the microcosm-macrocosm relationship in terms of that of the human intellect to the divine Intellect. In both the Hermetic and Comenian accounts there is a strong emphasis on the metaphor of light (auge in Greek). In the Panaugia of Comenius we find the following example of Comenius's indebtedness to Hermetic Philosophy:

> CAPUT VI. De secundo Lucis fonte, Animo nostro: splendente scilicet in nobis Imagine DEI.
>
> Alterum theatrum, in quo ludos suos perageret Sapientia DEI, intra Hominem ipsum exstruxit, MENTEM, seu ANIMUM Hominis: cum indita eidem Luce, quae illuminet omnem hominem venientem in hunc Mundum, ad solerter vestigandum, clare intelligendum, liberrimeque dijudicandum, omnium

quas Mundus habet rerum rationes.[107]

This passage reads in English, according to this author's translation, as follows:

> Chapter VI. Concerning a second source of Light, our Rational Soul: namely the Image of GOD shining in us.
>
> The Wisdom of GOD cultivates his creative play in a second theatre in which he thrusts forth within Mankind itself. This is the MIND, or RATIONAL SOUL of Mankind. The MINDS or RATIONAL SOUL of Mankind, together with the Light which is given it, is that which gives illumination to every man coming into this World. It gives light for skillfully tracking down the causes of things, for clearly comprehending and for most boldly discerning; the rational grounds or causes of all things which the World contains.[108]

Within this passage is contained a most significant indirect quotation from the Gospel of St. John. The verse alluded to reads: "The true light that enlightens every man was coming into the world." (John 1:9 RSV)[109] The significance of this is that we find in Comenius's passage from the Panaugia an equation of the "true light" of St. John's Gospel with the Mind or Rational Soul of mankind. This "true light" spoken of by St. John is equated by the Apostle with the divine Logos which "...was with God, and...was God." (John 1:1 RSV) Accordingly we see, in Comenius, the theme found in the Hermetic philosophy of the mystical corresopndence of the human intellect to the divine Intellect. This doctrine accounts in part for the unbounded confidence which Comenius had in man's capacity to "grasp all things."[110] It may be that Comenius was inspired indirectly by Pico's Oration on the Dignity of Man which spoke of man's limitless freedom and potential which God gave him at his creation.[111]. It is highly likely that Pico's esoteric studies had much to do with this tremendous faith in man in that both the Cabalistic and Hermetic philosophies had much to say about man's freedom and dignity arising out of his relation to the divine at

microcosm. Comenius has a similar understanding of man's place in the cosmos and it is most probable that he was taught something of Pico's thought while he was a student at Herborn and Heidelberg.

The influence of Francesco Patrizi and of his Platonic-Hermetic philosophy on Comenius, is evident not only in the similarity of their interests and aspirations for societal reform but also from the terms and even titles of books which Comenius seems to have borrowed from him.[112] Yates tells us that Comenius derived his concept of "Pansophia" in part from Patrizi who had earlier used the term. In addition we are told that "Pansophia" expressed for Patrizi "a doctrine of universal harmonies, and a connection between the inner world of man and the outer world of nature - in short, a macro-microcosmical philosophy."[113] Much the same description could be made of Comenius's understanding of "Pansophia." Indeed, Comenius too wished to see a new philosophy arise which would like in a philosophical synthesis the doctrine of divine emanations with an empirical natural philosophy. He looked to the day when scholastic Aristotelianism (which seemed to separate nature from grace) would be superceded by the doctrine of macro-microcosmic correspondences. Both Patrizi and Comenius believed that man could come to know God better through a religiously inspired reading of "the Book of Nature".

Like Martin Luther, Comenius saw the spiritual and intellectual potential of alchemical symbolism for the elucidation of truth. Throughout his works Comenius made use of a number of alchemical expressions. The following passage from his Naturall Philosophie provices an illustration of Comenius's indebtedness to alchemy and its practitioners the "Chymists".

> Because therefore things themselves, and their Conceptions, and Words the expressions of those Conceptions are parallel [illegible] to the other, and in each of them there are certaine fundamentalls from which the rest of them result: I thought that it is not impossible, to collect also the fundamentalls of Things themselves, and their conceptions, as well as hath been done already in Words. Also the practis of the Chymists came to my mind, who have found a way to clear and unburden the essences, and spirits of things from the surcharge of matter, that one small drop extracted out of Mineralls, or Vegetables contains more strength, and vertue in it, and is used with better successe, and efficacie, then can be hoped for from the whole, and entire lumpe. And is there no means to be found out, thought I with my selfe, whereby the precepts of wisdome (so divided in the severall enclosures of Sciences, yea and infinitely dispersed out of their due bounds) may bee united and concentrated together? why should I despaire?[114]

CONCLUSION OF CHAPTER TWO

In this chapter we have noted the roots of the thought of Comenius from their Alexnadrian origins in Hellenistic times to the mysticism of Boehme and the speculative use of alchemical philosophy. We have noted the dominant role of Neoplatonic thought in most of the philosophers, mystics, and esoteric philosophies surveyed. It is of greatest importance to realize that, despite the dominance of the ideas of Neoplatonism in Comenius's own thought, Comenius himself does not consider his philosophy "Platonic" byt Pansophic. Comenius is actually quite critical of what he calls the "Platonical" school for its failure to grasp the importance of the trichotomy of "Sense, Reason, and Revelation." In the book entitled Naturall Philosophy Reformed by Divine Light Comenius tells us that:

> Therfore if any one desire the true knowledge of things these three principles of knowing must of force by conj[illegible]ed. Otherwise, he that will follow the guidance of sense onely, will never be wiser then the common sort...On the contrary if a man

> contemplate on abstract things and consult onely with reason without the testimony of sense, he will be rapt away with meer phantasies, and create himself a new world: like the Platonicall and Aristotelicall,&...[115]

The fact that Comenius is critical of the "Platonical" school of thought does not, however, diminish the importane of the influence of Neoplatonism on his philosophical system. Comenius was not an exception to the trends which had influenced Protestant intellectuals from the sixteenth century until well into the seventeenth. Rejecting the Aristotelianism of Catholic scholasticism they took up the cause of Plato over Aristotle. In this they followed the example of the humanists of pre-Reformational times who had looked to Platonism as a viable alternative to the sterility of scholasticism. Bokser writes:

> The humanists challenged this over-concentration on dialectics. They regarded the poring over Aristotelian texts a sterile business. Reflecting the trend to mysticism, they preferred the Platonic philosophy in which they saw a greater appreciation for the values of direct experience over those of the purely intellectual life. They showed a keen appreciation for the study of nature which was regarded as a faithful model of human behavior. This conception of nature derived from the notion emphasized by the mystics that nature was but the materialization of God's creative thoughts and that man was a microcosm, a miniature edition of the universe itself. The important pedagogic inference was drawn from this that education was to follow nature, grading subjects of study on the basis of the child's natural development.[116]

In Comenius too we find as emphasis on "the values of direct experience" whether in religion or in the sciences. For Comenius the secret of achieving a comprehensive understanding of all things was to understand the truth of man's place in nature as the microcosm. As he states in The Great Didactic:

> Philosophers have called man a Microcosm or Epitome of the Universe, since he inwardly comprehends all

> the elements that are spread far and wide through the Macrocosm, or world at large;...The mind, therefore of a man who enters this world is very justly compared to a seed or to a kernel in which the plant or tree really does exist, although its image cannot actually be seen...It is not necessary, therefore, that anything be brought to a man from without, but only that that which he possesses rolled up in himself be unfolded and disclosed, and that stress be laid on each separate element. Thus Pythagoras used to say that it was so natural for a man to be possessed of all knowledge...; since the light of Reason is a sufficient standard and measure of all things. Still it is true that since the Fall, Reason has become obscure and involved, and does not know how to set itself free...[117]

Direct experience is that which provides the key for unlocking all that man as "microcosm" has locked up, or "rolled up" within himself. Accordingly Comenius's doctrine of mysticism in religion and naturalism in education are intimately linked. Both are based on the necessity of having direct experience of their object or goal for there to be the possibility of true knowledge. The relation between man and Nature is likened by Comenius to that between a student and the school which will prepare him to take his proper place in the "real world". Comenius tells us that:

> The visible world itself, from whatever point of view we regard it, bears witness that is has been created for no other end than that it may serve for the progeneration, the nutrition, and the training of the human race....And because He had made man in His own image and had given him a mind, in order that its proper nutrition might not be wanting to that mind, He divided each class of creatures into many species, that this visible universe might be a continual mirror of the infinite power, wisdom, and goodness of God, and that by its contemplation man might be compelled to marvel at the Creator, moved to recognise Him, and enticed to love Him, when the might, the beauty, and the sweetness that lie invisible in the abyss of eternity shone out on all sides through these visible manifestations, and suffered themselves to be handeled seen, and tasted. Thus the world is nothing but our nursery, our

> nurturing place, and our school, and there is, therefore, a place beyond, whither we shall be transferred when we are dismissed from the classes of this school and are sent to that university which is everlasting.[118]

In this chapter we have seen that Comenius's thought is in the tradition of Christian mysticism. That his thought has been taken to be an anticipation of "modern" educational theory is most interesting in light of Comenius's intellectual background with its roots so deeply sunk into the past. By investigating the sources of Comenius's thought we have in this chapter found that Comenius looked to the wisdom of the ages for inspiration rather than starting philosophy anew as did Descartes. Frances Yates aptly described the attitude of Comenius to the role of the past, in the reformation of human affairs, when she wrote the following passage on the relation of the Renaissance to the past:

> The cyclic view of time as a perpetual movement from pristine golden ages of purity and truth through successive brazen and iron ages still held sway and the search for truth was thus of necessity a search for the early, the ancient, the original gold from which the baser metals of the present and the immediate past were corrupt degenerations. Man's history was not an evolution from primitive animal origins through ever growing complexity and progress; the past was always better than the present, and progress was revival, rebirth, renaissance of antiquity... The religious reformer returned to the study of the Scriptures and the early Fathers with a sense of recovery of the pure gold of the Gospel, buried under later degenerations.[119]

Comenius throughout his life longed for the restoration of all things which would come about "soon" with the return of Jesus Christ. The age in which he lived was believed by Comenius to be the last age of evil before the end of times. Comenius's efforts to build a world of peace and co-operation were not to prepare the way for a world of secular

progress (although progress was an element) rather the philosophy of Comenius was to prepare the world to receive its King. To quote the Via Lucis of Comenius:

> The results of that light which is promised is the conversion of all peoples to the Church so that Jehovah shall be King over all the earth...Then the Gospel of the kingdom shall be preached in the whole circle of the world, for a witness to all peoples, before the end shall come...Nor will the uncertainties of opinions make any man perplexed when all are taught not by men who differ from one another in their opinions, but by God who is the Truth...[120]

How the intellectual background of Comenius's thought became wedded to such millenarian Christian notions as those of Comenius will be the subject of the next two chapters concerning the religious background of Comenius's thought and, following, the educational background of Comenius.

NOTES

[1]Robert Mandrou, From Humanism to Science: 1480-1700, trans. Brian Pearce, The Pelican History of European Thought Vol. III, (New York: Penguin Books, 1978), pp. 10-11.

[2]Paul Oskar Kristeller, Renaissance Thought and its Sources, ed. Michael Mooney, (New York: Columbia University Press, 1979), pp. 50-51.

[3]Ibid., p. 50.

[4]Ibid., p. 52.

[5]Frederick Copleston, A History of Philosophy, vol. 1: Greece & Rome, part two, "Middle Platonism," (Westminister, Maryland: Newman Press, 1946; paperback edition - New York: Image Books, 1962), p. 195.

[6]Kristeller, Renaissance, p. 52. It should be noted that the question of the origins and inspiration of the works attributed to Hermes Trismegistus is still under discussion. Titus Burckhardt affirms the authenticity of these works as follows:

> "Thus...the so-called Corpus Hermeticum, which comprises all the texts ascribed to Hermes-Thoth, has come down to us in Greek and clothed in a more or less Platonic language. That these texts are nevertheless descended from a genuine tradition, and are in no wise pseudo-archaic fabrications of the Greeks, is proved by their spiritual fruitfulness...In favor of an Egyptian origin of Near-Eastern and Western alchemy is the fact that a whole series of artisanal procedures, related to alchemy and furnishing it with many of its symbolic expressions, crop up as a coherent group, from late Egyptian times onwards, finally making an appearance in medieval prescription books. This corpus of procedures contains some elements clearly derivable from Egypt. (Titus Burckhardt, Alchemy: Science of the Cosmos, Science of the Soul, trans. William Stoddart, The Penguin Metaphysical Library gen. ed. Jacob Needleman, Baltimore, Maryland: Penguin Books, 1971, pp. 16-17).

[7]Copleston, op.cit., p. 197.

[8]Ibid.

[9]Kristeller, Renaissance, p. 52.

[10]Copleston, op.cit., p. 207.

[11]Kristeller, Renaissance, p. 52.

[12]Ibid., pp. 52-53.

[13]Ibid., p. 53.

[14]Copleston, op.cit., pp. 215-216.

[15]Kristeller, Renaissance, p. 53.

[16]F.C. Happold, Mysticism: A Study and an Anthology, (New York: Penguin Books, revised edition, 1970), p. 205.

[17]Ibid., p. 204.

[18]Ibid., p. 211.

[19]Ibid. Note that this belief in the antiquity of the Pseudo-Dionysios is this author's rationale for placing him before St. Augustine.

[20]Frederick Copleston, A History of Philosophy, vol. 2: Mediaeval Philosophy, part one, "Augustine to Bonaventure," (Westminster, Maryland: Newman Press, 1950; paperback edition - New York: Image Books, 1962), p. 107.

[21]Ibid., p. 108.

[22]Happold, Mysticism, p. 211.

[23]Copleston, "Augustine to Bonaventure," pp. 112-113.

[24]John Edward Sadler, J.A. Comenius and the Concept of Universal Education, (London: George Allen & Unwin, 1966), pp. 40-41.

[25]John Amos Comenius, A Reformation of Schooles, trans. and published by Samuel Hartlib (London, 1642); facsimile reprint edition - (Menston, England: Scholar Press, 1969), p. 38.

[26]Idem., Naturall Philosophie Reformed by Divine Light: Or a Synopsis of Physicks, trans. Robert and William Leybourn for Thomas Pierrepont (London:1651); microfilm edition-University Microfilms, Ann Arbor, Michigan; reel PR 01 139 reel 23:3. Note that this book

does not have regular page numbers and that time did not permit this author to decipher the printers' "signatures" used to keep order among the large sheets upon which a number of "pages" were printed. A useful guide to such lore is Philip Gaskell, A New Introduction to Bibliography (Oxford: Oxford University Press, 1972; reprinted with corrections 1979).

[27]Kristeller, Renaissance, p. 129.

[28]The Encyclopedia of Philosophy, vol. 6, editor in chief: Paul Edwards (New York: Macmillan and Free Press, 1967; reprint edition, 1972), s.v. "Platonism and the Platonic Tradition," by D.A. Rees, p. 338.

[29]Ibid.

[30]Colpeston, "Augustine to Bonaventure", p. 131.

[31]Frances A. Yates, Lull and Bruno: Collected Essays, vol. 1, (London: Routledge and Paul, 1982), p. 81.

[32]Ibid.

[33]Ibid., p. 82.

[34]Ibid.

[35]Ibid., pp. 82-83.

[36]Ibid., p. 6.

[37]Ibid., p. 7.

[38]Ibid., p. 11.

[39]With respect to Comenius's pansophia it is interesting to note the following quotation from his work: A Patterne of Universal Education (1643):

> "We stile the Temple of Wisdome a Book in which to man, as to a Creature made to view the works of the Creator, all things which are shall be offered for his contemplation...We may bring for a witness the whole Quire of Creatures and all the workes of nature joined in so close an order amongst themselves that none of them hath a being by itself, but everything depends on another, serves another and is obtained by another...The form of this Booke of Pansophy gives

> a universal harmony or consonance and agreement of each thing to other....the inmost nature of those very things is to be detected with that artifice, that as there is no dissonance in God, the Author or things, nor in his workes and words, so there may be left no differences in our apprehensions. What things formerly appertained to this or that man, or nation, tongue or sect may become common unto all mankind. Now Pansophy propoundeth this to itself so to expand and lay open to the eyes of the whole university of things as both everything may be pleasurable to be viewed in itself and also necessary." (Comenius, A Patterne of Universal Education, trans. and published by Samuel Hartlib [London:1651]; paras. 1, VI, XIV cited by John E. Sadler, ed. Comenius, Educational Thinker Series [london:Collier-Macmillan, 1969], p. 23).

Another interesting description of "The Book of Pansophy" is found in the Via Lucis of Comenius:

> "Pansophia: This book will be nothing else than a transcript duly arranged of the books of God - of Nature, of Scripture and the Notions innate in the mind; so that whoever shall read and understand this book shall at the same time read and understand himself, the nature of the world, and God." (Comenius, Via Lucis, chap. XVI, paras. 1, 4, 9; cited by Sadler, Comenius, p. 26-27).

Finally let us look at the definition of pansophy provided in Comenius's Lexicon:

> "Pansophy is the universal science. It means a selection of reality....Three things are necessary: (1) To know everything in its essence; (2) to understand everything through the forms in which it exists; (3) to show the ends and the right uses of everything. By everything we do not mean every individual thing but every genus of things; by the word "form" we do not mean the particular forms of nature which are infinite but the general ideas to which they tend; by "ends" we do not mean particular ends but universal ends which illustrate the glory of God." (Comenius, Lexicon Reale Pansophica; cited by Sadler, Comenius, p. 27).

[40]Yates, Lull and Bruno, pp. 11-12.

[41]Ibid., p. 12.

[42]Comenius, Via Lucis, Chap. XIV,7; cited by Sadler, Comenius, p. 19.

[43]Comenius, Schooles, pp. 52-53.

[44]Comenius, Schooles, pp. 52-53.

[45]Ibid.

[46]Comenius, Great Didactic, p. 42.

[47]Yates, Lull and Bruno, p. 67.

[48]Ibid., p. 7.

[49]Evans, Rudolf II, p. 283.

[50]Kristeller, Renaissance, p. 203.

[51]Happold, Mysticism, p. 333.

[52]Frances A. Yates, Giordano Bruno and the Hermetic Tradition (London: Routledge & Kegan Paul, 1964; Reprinted, Chicago: University of Chicago Press, 1977), p. 124.

[53]Happold, Mysticism, p. 334.

[54]Kristeller, Renaissance, p. 204.

[55]Sidney Spencer, Mysticism in World Religion, (Baltimore, Maryland: Penguin Books, 1963), p. 242.

[56]Ibid.

[57]Encyclopedia of Philosophy, vol. 6, s.v. "Platonism and the Platonic Tradition," by D.A. Rees, p. 339.

[58]Ibid.

[59]Kristeller, Renaissance, pp. 205, 208-209.

[60]Comenius, Schooles, p. 31.

[61]The best source for this doctrine of Comenius is his allegorical book entitled The Labyrinth of the World and the Paradise of the Heart, edited and translated by Count Lutzow (New York: E.P. Dutton & Co., 1901; reprint edition, (New York: Arno Press & New York Times, 1971).

[62]John Amos Comenius, The Great Didactic, translated into English

and edited with biographical, historical and critical introductions by M.W. Keatinge, (New York: Russell & Russell, 1910; reprint edition from the second revised edition of 1910, reissued, 1967, by Russell & Russell) p. 105.

[63]See H.R. Trevor-Roper's article "The Religion Origins of the Enlightenment" in his book Religion, the Reformation and Social Change, second edition, (London, Macmillan, 1972), pp. 193-236.

[64]John T. McNeill, The History and Character of Calvinism, (Oxford: Oxford University Press, 1954; paperback edition, p. 16.

[65]Spencer, Mysticism, p. 189.

[66]Ibid.

[67]Ibid., p. 190.

[68]Ibid.

[69]Ibid.

[70]Spencer, Mysticism, p. 193.

[71]Yates, Giordano, p. 94.

[72]Ibid.

[73]Evans, Rudolf II, p. 240.

[74]Milada Blekastad, Comenius, Versuch eines Umrisses von Leben, Werkund und Schicksal des Jan Amos Komensky (Oslo-Prague, 1960), p. 32, cited by Stransky, op.cit., pp. 112-113.

[75]Comenius, Lexicon Reale Pansophicum included as an appendix in the Czech publication of Comenius, De Rerum Humanarum Emendatarum Consultatio Catholica, vol. 2 (Prague: Czech Academy of Sciences, 1966), p. 476.

[76]To the best of this author's knowledge this passage from the Lexicon Reale Pansophicum has not hitherto been translated into English. The Lexicon itself was not published or even completed by Comenius but rather was not well known till 1935, it was not published till 1966.

[77]Spencer, Mysticism, pp. 191-192.

[78]Comenius, Schooles, p. 51.

[79]See R.K. Krempl's article "The Trinitary System in the Works of Comenius" in the Czechoslovak Society of Arts and Sciences in America, Inc.'s book Comenius (edited by Vratislav Busek and translated by Kaca Polackova, 1972), pp. 55-76.

[80]Ibid., p. 61.

[81]Hugo Stransky, "TRabbi Judah Loew of Prague and Jan Amos Comenius: Two Reformers in Education," in Vratislav Busek, ed. Comenius, tr. Kaca Polackova, (New York: Czechoslovak Society of Arts and Sciences in America, 1972), pp. 104-116.

[82]Ibid.

[83]Evans, Rudolf II, p. 240.

[84]It is interesting in this regard to note the following passage from Titus Burckhardt:

> "Late Egyptian Alexandria was doubtless the melting-pot in which alchemy, along with other cosmological arts and sciences, received the form in which it is now known to us, without thereby being altered in any essential respect. It may well have been at that time also that alchemy acquired certain motifs from Greek and Asiatic mythologies. This must not be regarded as in anyway an artificial happening. The growth of a genuine tradion resembles that of a crystal, which attract homologous particles to itself, incorporating them according to its own laws of unity" (Titus Burckhardt, Alchemy, p. 17).

That the Corpus Hermeticum is indeed the fruit of ancient Egyptian wisdom is still contended in scholarly circles today. For a well-documented defense of the truth and antiquity of the lorge of "Thrice-Greatest Hermes" or Hermes Trismegistos see G.R.S. Meads three volume work: Thrice-Greatest Hermes: Studies in Hellenistic Theosophy and Gnosis - being a translation of the extant sermons and fragments of the Trismegistic Literature with Prolegomena, Commentaries and Notes, (London: John M. Watkins, 1964). With respect to the role of Hermes Trismegistus in the Hermetic philosophy, Mead writes:

> "The Hermes, as we have seen, had been for the Egyptians from the earliest times the teacher of all ancient and hidden wisdom; he was par excellence the writer of all sacred scripture and the scribe of the gods. We should naturally expect thst his dominating influence would play a leading part in

> new development [i.e. of the intimate contact of Greek thought and philosophy with the Egyptian mysteries at the beginning of the Hellenistic Period] and this, indeed, is amply demonstrated by the evidence of the religious art of the time, which presents us with specimens of statues of the Greek type of Hermes, bearing at the same time either the feather of truth (the special symbol of Maat) on the head, or the papyrus-roll in the hand - both symbols of Toth in his dual character as revealer and scribe." (Mead, Thrice-Greatest Hermes, vol. 1, p. 68).

[85]Burckhardt, Alchemy, p. 36.

[86]Yates, Giordano, p. 6.

[87]Ibid.

[88]Ibid., p. 84.

[89]Ibid., p. 85.

[90]Ibid.

[91]Burckhardt, Alchemy, p. 37.

[92]Encyclopedia of Philosophy, vol. 6, s.v. "Patrizi, Francesco" by Jason L. Saudners, p. 59.

[93]Yates, Giordano, p. 345.

[94]Matthew Spinka, John Amos Comenius That Incomparable Moravian (New York: Russell & Russell, 1943; reissued 1967) p. 42.
Concerning the connection between Boehme and Comenius Spinka writes:

> "In fact, there exists a possibility that Comenius might have been considerably influenced by the teachings of Boehme, for upon his return from this trip [which took him to the village of Gorlitz in Lusatia where Boehme had lived before his death a year before the visit of Comenius there] he wrote ... his very remarkable treatises, Centrum Securitas and Renuntiatio mundi, which show traces of such influence." (Spinka, Ibid., p. 42).

[95]Concerning Boehme's views and their origins Spencer writes:

> "Over against the world of time and space, of materiality and separateness, there is for Boehme, as for the mystics who follow the Platonic tradition, an ideal universe, which he calls "eternal Nature"

> or "the uncreated Heaven" - the "body" or the "glory" of God. He sometimes personifies it as a maiden - the embodiment of the divine Wisdom. "Eternal Nature" is other than God, yet inseparable from Him...Boehme speaks in terms both of creation and of emanation. He laid great stress on the fact of evil and of man's actual separation from God, but he never lost sight of the divine Presence which dwells in our inmost being or of union with God which is our rightful goal." (Spencer, Mysticism pp. 271 & 2).

Spencer quotes from Boehme's First Epistle to substantiate his understanding of Boehme's doctrine of the nature of man:

> "The true man whom God created is still hidden within that which is fallen...The true holy self, that lies hidden within the other, is an much in Heaven as God Himself, and the Heart of God is born within it." (cited by Spencer, Mysticism, p. 272).

[96]Encyclopedia of Philosophy, vol. 2, s.v. "Boehme, Jakob" by Ninian Smart, p. 328.

[97]Spencer, Mysticism, p. 272.

[98]The understanding of "the heart" which Comenius could assume would be comprehensible to his seventeenth century readers needs some explanation for readers in the twentieth century. The best summary of this understanding of the heart is found in the following quotation from Evelyn Underhill:

> "By the word heart of course we here mean not merely 'the seat of the affections,' 'the organ of tender emotion,' and the like; but rather the inmost sanctuary of personal being, and deep root of its love and will, the very source of its energy and life." (Evelyn Underhill, Mysticism: A Study in the Nature and Development of Man's Spiritual Consciousness, New York: New American Library, 1974, pp. 71 & 72).

With respect to the doctrine of the heart as held by the Greek Fathers of the Church and which deeply influenced all subsequent Christian mysticism including that of Comenius, Hieromonk Kallistos tells us:

> "The term 'Heart' is of particular significance in the Orthodox doctrine of man [illegible] n the Bible, as in most ascetic texts of the Or[illegible]ox Church, the heart has a far wider connotation. It is the primary organ of man's being, whether physical or spiritual; it is the centre of life, the determining principle of all our activities and aspirations.

> As such, the heart obviously includes the affections and emotions, but it also includes much else besides: it embraces in effect everything that goes to comprise what we call a 'person'." (The Art of Prayer: An Orthodox Anthology, compiled by Igumen Chariton of Valamo, Chap. III, iii; cited by E.F. Schumacher, A Guide for the Perplexed, New York: Perennial Library Harper Row, 1977, p. 73).

With respect to Comenius's own usage of the symbolism of the heart in its deeper sense, let us term to the second portion of the Labyrinth called "The Paradise of the Heart" wherein is described the inner illumination of the spiritual pilgrim in the inner sanctuary of the heart. Comenius writes:

> "This counsel [of the 'mysterious voice' which tells the spiritual pilgrim to 'return!'] I obeyed as well as I would, and it was well with me that I thus obeyed God, who had counselled me; but this was yet a gift from Him. Then collecting my thoughts as best I could, I closed my eyes, ears, mouth, nostrils, and abandoned all contact with external things. Then I entered into the innermost of my heart, and behold! everything therein was darkness. But when, with blinking eyes, I gaze a little around me, I behold a weak light that penetrated through the crevices; and I see above me, in the vaulting of this my little chamber, what appeared to me a large, round, glassy window; but it had been so much soiled and bedaubed that scarce any light came through it...And behold, a clear light appeared on high, and raising my eyes towards it, I see the window above me full of brightness, and from out of that brightness the appeared One, in aspect, indeed, similar to a m but in His splendour truly God. [The man of Light addresses the pilgrim:] 'Where, then, has thou been, my son?...what hast thou sought in the world? Joy! where could thou seek it but in God; and where couldst thou seek God, but in His own temple; and what is the temple of the living God but the living temple that He Himself has fashioned - thine own heart? I saw, my son, that thou wentest astray, but would see it no longer. I have brought thee to thy own self... For here have I chosen my palace and my dwelling. If thou wishest here to dwell with me, thou wilt find here, what thou hast vainly sought on earth....This I promise thee, my son, that thou wilt not be deceived here as thou wert there in the world." (Comenius, Labyrinth, pp. 278, 280 & 281).

[99] Smart states that he is drawing his quotations from the Second Epistle:(6) of Boehme. (Smart, "Boehme, Jakob,:) p. 328.

[100]Ibid.

[101]Happold, Mysticism, p. 75.

[102]Carl Jung, Dreams, trans R.F.C. Hull (Bollingen Series - Collected Works of C.G. Jung, Princeton, New Jersey: Princeton University Press, 1974) p. 239.

[103]Ibid.

[104]Mircea Eliade, The Forge and the Crucible, 2d ed. tr. Stephen Corin, (Chicago: University of Chicago Press, 1978), pp. 226 & 227.

[105]J.W. Montgomery, "Cross, Constellation, and Crucible: Lutheran Astrology and Alchemy in the Age of the Reformation" cites Luther's Tischreden (Weimar edition, 1, 1149), citation quoted by Eliade, Forge, pp. 190 & 191.

[106]Burckhardt, Alchemy, p. 25.

[107]John Amos Comenius, De Rurum Humanarum Emendatione Consultatio Catholica, vol. one containing among other works the Panaugia (Prague: Czech Academy of Sciences, 1966), p. 143).

[108]To the best of this author's knowledge this passage has hitherto not been translated into English. The Panaugia which forms a part of Comenius's unpublished work, cited directly above in note 107, has as its English title General Consultation concerning the Reform of Human Relations. This work was to have been completed and published by Comenius's son, Daniel, but was not. Remaining in MSS form the work was believed to have been lost until it was discovered in Halle in 1935. The edition of the Czech Academy of Sciences is the work's first edition.

[109]To fully appreciate the significance of this passage from St. John one does well to look at the Latin Vulgate translation which Comenius used for this work. The verse in the Vulgate reads: "Erat lux vera, quae illuminat omnem hominem venientem in hunc mundo." When we compare this verse with Comenius's statement: "cum indita eidem Luce, quae illuminet omnem hominem venientem in hunc Mundo,..." it is clearly evident that Comenius is alluding to the statement of St. John's which he has merely lifted and put into what Latin grammarians call "oratio obliqua"; as is fitting for anyone wishing to cite a source without actually giving it in its direct form as a quotation.

[110]Comenius, Great Didactic, p. 42. The passage from which this quote is taken reads in context as follows:

> "So unlimited is the capacity of the mind that in the process of perception it resembles an abyss. The body is enclosed by small boundaries; the voice roams within wider limits; the sight is bounded only by the vault of heaven; but for the mind, neither in heaven nor anywhere outside heaven, can a boundary be fixed. It ascends as far over the heavens above as below the depths beneath, and would do so if they were even a thousand times more vast than they are; for it penetrates through space with incredible speed. Shall we then deny that it can fathom and grasp all things?"

[111]Kristeller tells us that this work was published after Pico's death in a work entitled Oration. Its theme is man's freedom and his capacity "of occupying, according to his choice, any degree of life from the lowest to the highest." (Encyclopedia of Philosophy, vol. 6, s.v. "Pico della Mirandola", by Paul Oskar Kristeller, p. 309).

[112]Ibid., s.v. "Patrizi, Francesco," by John L. Saudners, p. 59.

[113]Frances A. Yates, "The Rosicrucian Enlightenment, (London: Routledge and Paul, 1972), p. 168.

[114]Comenius, Schooles, p. 48.

[115]Comenius, Naturall Philosophie

[116]Rabbi Ben Zion Bokser, From the World of the Cabbalah: The Philosophy of Rabbi Judah Loew of Prague, (New York: Philosophical Library, 1954), p. 134.

[117]Comenius, Great Didactic, p. 42.

[118]Ibid., pp. 33-34.

[119]Yates, Giordano, p. 1.

[120]Comenius, Via Lucis translated by E.T. Campagnac, English title: The Way of Light, (Liverpoll and London: 1938), pp. 42-44, 202, 203, cited by Spinka, Comenius, p. 83.

CHAPTER THREE

THE UNITY OF CZECH BRETHREN AND ITS INFLUENCE ON COMENIUS

This chapter is concerned with the history of Comenius's church and how it influenced his thought. It is this author's contention that Comenius's religious concerns were of such a force that every aspect of his thought must be seen as an expression of his sense of the awesome reality of God in all natural and human affairs.

There are those who challenge this religious interpretation of Comenius's motivation. Nikolai K. Gontscharow, a Russian scholar, for example, cannot reconcile what he perceives to be the progressive educational, humanistic, and democratic views of Comenius with the belief in the Christian message. Gontscharow writes:

> Comenius is the founder of scientific pedagogy of our time. Some scholars, when analysing Comenius' pedagogical system, lay particular stress on its quasi religious basis. Of course, like many others of that period Comenius quotes biblical sources, but Comenius' pedagogy is not a pedagogy built up on Christian humility; it is a pedagogy challenging mankind to struggle for an essential change in human relations, for the establishing of a more perfect human society.[1]

Against Grantscharow's attempt to sever the religious from the secular dimensions of Comenius's thought may be set the view expressed by S.H. Steinberg:

> ...down to the middle of the seventeenth century members of every community considered life in all its aspects as one integrated whole. There was no division between their religious convictions, their political aspirations, their economic theory and practise: all of them flowed from the concept of human life as one undivided and indivisible universe.[2]

If Steinberg is correct it is evident that the religious affiliation

of Comenius played an important role in his thought and is therefore worthy of examination. Comenius's life was spent in the service of his church as a teacher, priest, and finally bishop. The church which Comenius served so faithfully served was the Unity of Czech Brethren.[3]

The Unity cannot be properly understood, nor can its influence on Comenius be correctly appreciated if one is unaware of the several phases that this organization passed through in its history.[4] As its last bishop Comenius, of course, stands historically at its final phase. Accordingly special attention to this period of the Unity will be paid as well as those later phases which were also especially influential on Comenius. Nevertheless this account will, in somewhat abbreviated fashion, discuss the Unity's history from its matrix in the Hussite Reformation through its formal organization as a separate ecclesiastical entity up to its last years under Comenius. What follows is a very personal selection of the important events which fulfil the following goals. (1) To provide the reader with an outline of the historical development of Comenius's church and thereby; (2) to show the Unity's influence on Comenius's thought in such a way as to indicate which phase of the Unity inspired what elements of Comenius's thought.

THE UNITY'S PREHISTORY IN THE HUSSITE REFORMATION

The Unity did not arise spontaneously in Bohemia. On the contrary it arose out of the matrix of the Hussite Reformation and its consequent ecclesiastical organization. It is therefore worthwhile to look briefly at the Hussite Reformation of the fifteenth century.[5]

John Huss (c. 1372-1415) was a Czech speaking preacher who (inspired in part by the works of John Wycliffe [c.1330-84] and in part by love for his native language and people) spoke up against the abuses of the Church and violated ecclesiastical law by preaching stirring sermons (based on Biblical passages) to the laity in the vernacular. He was thought to be a dangerous man and was summoned before the Council of Constance and was burned at the stake there in 1415. Peter Brock informs us that in the year of his martyrdom "Huss had been supported by a powerful section of the Czech nobility and gentry as well as by the townsmen and university of Prague."[6] Accordingly, his death at Constance enraged the Bohemians and they soon rose up in rebellion against the authorities of the Church. In this rebellion a leader emerged, Jan Zizka (mid fourteenth century - 1424) who incited the peasants to join with the other Bohemian estates against ecclesiastical domination. These peasants were also fighting for social reforms as well which they believed should accompany the imminent return of Christ. This army of "chiliast enthusiasts" of predominantly peasant origin soon ran into conflict with the moderate wing of the Hussite Reformation - the conservative Utraquists. These Utraquists, contrary to the interests of the radical Taborites (as the followers of Zizka were called after the Town of Tabor which they founded), accepted a peace settlement with the Council of Basle (1431-49) in 1437 wherein the Council conceded to the Utraquists certain minor concessions such as the right of the laity to receive communion in both kinds. This settlement though more conservative than the Compacta of Prague (1433) negotiated with the Council, was never accepted by the pope but notwithst[redacted]ave

quasi-official recognition to the Utraquist party of the Hussite Reformation (made up largely of the higher orders of Bohemian society). The peace between the Council of Basle and the upper classes of Bohemia did not include formal recognition of the interests of the radical peasantry, according to Jan Herben:

> As the desire for peace was universal, the delegates of the Basle Council succeeded in utilizing this mood to win over certain influential persons among the Bohemians, nobles as well as townspeople. But they insisted that the responsibility for the war lay with the Taborites and Horebites [the radical peasants] who were irreconcilable. Although Prokop the Great [the successor of Zizka] was among the fifteen Bohemian envoys who, on January 4th 1433, sailed by boat to Basle, he realized, unfortunately too late, that the Council acted in an insincere and deceitful way and that all that the Bohemian nobility and towns were doing only concealed the secret intrigue-to get rid of the Brotherhood armed. [i.e. the highly organized and very successful peasant armies which had so fiercely fought off a succession of "crusades" against them]. These conservative elements had formed the "League for the Restoration of Peace and Order in the Country", which the Catholics also joined, and the Brotherhoods were ordered to disperse.

Tension between the peasantry and the higher classes of Bohemian society continued to plague Bohemia throughout its history. The origins of the Unity are, in part, owing to the desire of a large number of earnest Christians in Bohemia to establish a community that transcended the violence and fantacism of the peasant armies. This community, however, would also be so organized as to transcend the class distinctions upheld by the Utraquists. The leading spirit behind this desire for a truly Christian community was Peter Chelcicky (c. 1390-1456).

PETER CHELCICKY AND THE FORMATION OF THE EARLY UNITY

Although Peter Chelcicky died a year before the first community of the Unity officially separated from the Utraquists and the Taborites, his thought was the chief inspiration of the early Unity. He was an influential layman who had been urged to express his religious and social teachings by concerned members of the Hussites. The principal expression of his thought is found in his book entitled The Net of the Faith.[8] In this work he vehemently attacked the life-style of the aristocracy and devoted chapters full of scorn and contempt for their life of luxury."[9] The towns and burghers within them were also despised by Chelcicky: "The town organization is nothing but robbery, violence, murder, venality, usury, adulteration of goods...And all this Antichrist covered with the mantle of Christianity."[10] The university and its learned men were other objects of Chelcicky's scorn. "The university magisters are not defenders of Christ's faith, but perverters of divine law."[11] According to Otakar Odlozilik:

> Chelcicky also vigorously opposed those of his contemporaries who advocated a forcible defense of the program of reform. He drew a sharp line between the church and the state, between the divine commandments and the demands that the secular rulers made on their subjects, between the principles revealed in the Sermon on the Mount, and the spirit of force and violence. From him the organizers of the Unity learned to distrust higher education, and he infused into their minds horror of war and an aversion to any participation in wordly affairs. He convinced them that it was inevitable to sever the connection not only with the Roman church, but also with the moderate Hussites, and to form an independent communion based on the primitive church and its organization.[12]

Chelcicky was not without powerful and influential supporters; the Utraquist archbishop-elect of Prague, Jan Rokycana, encouraged his

flock to follow Chelcicky's teachings and abandon worldliness. Rokycana, although duly elected archbishop of Prague, was rejected by Rome and his election was ignored.[13] This slight helped him to become free of restraining influences on his preaching and encouraged him to boldly follow the spirit of Chelcicky's works. Both Chelcicky (and Rokycana somewhat later) believed that the moderate Hussites (who had comprised with the Council of Basle) had lost the power to perform valid sacraments as a result of their wordly living. To have valid sacraments, in their view, a church must have priests whose lives conform to the most rigorous standards of the New Testament. In response to the teachings of Chelcicky and his uncle's preaching one "Brother Gregory" went forth into the world to search for a "good priest" to lead the followers of Chelcicky and Rokycana in a new community. Brother Gregory did not find his "good priest" nevertheless this new community "led by Gregory, a nephew of...Rokycana... removed, in 1458, to an insignificant village of Kunwald in the mountainous region of eastern Bohemia."[14] By 1467 they had "completed their schism from the Roman Utraquist Communion...by establishing their own independent ministry that year."[15] The Kunwald community was soon the object of persecution. Nevertheless the effect of the persecution had the positive result of attracting the attention and sympathy of the common people of Bohemia.

Since Comenius was a priest, and later the last bishop of the Unity, it is important to look into the concept of the priesthood and episcopacy in his church at its origins. Spinka tells us that the early Unity:

> ...demanded of their priesthood that they be "chosen

> of God" not merely consecrated by a bishop. When their search for priests so qualified proved unavailing, they decided in the end to set up their own priesthood, irrespective of the "apostolic succession".
>
> In 1467 over sixty delegates met...and chose three laymen as candidates for the priesthood. These were ordained by the laying on of hands by the assembled group. But the youngest of them, having been chosen by lot the chief among the three, later received an a-ditional ordination to the episcopal office;...this ordination was performed by the priest Michael, who possed Roman Catholic ordination to begin with but who secured another ordination from "a Waldensian elder". The latter, however, was not a bishop, as was held formerly. Thus originated the most truly national of the Bohemian religious communions - the Unity of Brethren.[16]

THE CHARACTER AND DEVELOPMENT OF THE EARLY UNITY

The Unity, after its separation from the other Hussite communions, continued to grow in popularity throughout the last half of the fifteenth century. Its successful attempt to build a sincere, morally upright, and intensely pious "communion of saints" attracted many members of Bohemian society excluded by Chelcicky's condemnation of their estates. Acting in the spirit of Chelcicky the early Unity "had repudiated war, rejected oaths, and had restricted membership to the tillers of the soil, regarding all other occupations as necessarily comprising and worldly."[17] Apparently if a knight, scholar, or burgher wished to join the early Unity he would be required to renounce his worldly occupation together with "the world, the flesh, and the devil". As the reputation of the sanctity of the Unity increased and more excluded persons asked to join there was a movement within the Unity itself to change its attitude toward "the world". Those in favor of allowing entrance into the Unity by members of the non-agrarian estates in society were called the "great party". They did not

believe that new members should have to abandon their worldly occupations if only they would abandon worldly attitudes and immoral practises. In 1490 this "great party" "forced through legislation breaking down the old barriers, [their] ... innovations led to an open break with the conservative party and resulted in schism."[18] The "conservative party", consisting of those who refused to abandon the literal understanding of Chelcicky and the New Testament, did not remain as a separate branch of the Unity but rather were reabsorbed in short time. Jan Herben tells us that after the victory of the "great party":

> ...the Brotherhood abandoned many of Chelcicky's principles and accepted a new and less rigid course, especially in regard to temporal power. They agreed that "lords or officials, councilmen or magistrates, who hold their positions for good reasons cannot give them up, when they use their authority correctly and in such manner as it was instituted for that end by God, such shall be given a place among us." It was also agreed that military service was not to be condemned unconditionally as conflicting with Christianity; a Brother could participate in a just war, waged in defense of the country or of the right...the principle of the advantage of education was also accepted.[19]

At this time a number of prominent noble families in Bohemia joined the Unity. Among these were the Zerotins whose progeny included the noble patron of Comenius -- Karel the Elder of Zerotin. The inclusion of the non-agrarian estates and the revision of the doctrines of Chelcicky ended the early phase of the Unity which is best remembered for its attempt to actualise a kind of Christian communism.

LUCAS OF PRAGUE (1458-1528)

It was also in the year 1490 that the brothers John (Cerny) and

Lucas entered the Unity.[20] Lucas, known as Lucas of Prague, became the leader of the "great party" in [illegible]y and "almost singlehandedly reorganized the extraordinary ecc[illegible] body and became its 'second founder'".[21] Under the le[illegible] of Lucas of Prague the character of the Unity significantly changed by virtue of the contacts which were made between the new Unity and the larger sphere of European churchmen and intellectuals deeply interested in Christian Humanism and the reform of Church and society. The years 1518-1524 witnessed an ever increasing amount of contact and correspondence between leading members of the Unity and such men as Erasmus and the [illegible] Luther.[22] At the same time the practices of the early Unity [illegible]ving way to a more easy-going interpretation of the Gospel. The [illegible]mitive communism of the Kunwald settlement was relaxed and the notion of class distinction slowly entered the Unity's thought. This trend began sixteen years after the admission of the nobles:

> According to a decree of 1506 concerning "measure in the taking of food and drink", "the requirements of one's class..." were among the factors which were to be taken into account in governing the standards of behaviour to be observed in this respect. A nobleman or rich burgher, therefore who was also a member of the Unity, was not now expected to conform to the same modest standard of living as his Brother from the peasantry or artisan class.[23]

Despite these changes in charac[illegible]rom the early Unity, the new Unity leader under Lucas of Prague did not take to "the new learning" of the Christian Humanists rapidly. Lucas of Prague, "a former bachelor of arts" himself, "did not look on higher education with any special favour,"[24] and tended to look to the Unity's own background as a source of inspiration for his ideas.[25] Nevertheless the Unity's

suspicion of higher education began to give way before the example of learning and piety fused in the persons of the Christian Humanists. Slowly but surely "university trained men were to come more and more to hold leading positions in [the Unity]."[26]

THE NEW UNITY AND THE EUROPEAN REFORMERS OF THE CHURCH

As mentioned earlier there had been contacts between certain members of the new Unity and Erasmus, Luther, and other European reformers of the Church. These exchanges took place mainly within the "intellectual class" of the Unity. " Apart from a growing number of educated Brethren from the ranks of the nobility or the richer burgher families, the priesthood of the Unity formed its main intellectual class."[27] Despite the changes in the social structure of the Unity, the priesthood maintained many of the old restrictions within its ranks.

> The obligation encumbent on every priest of working with his own hands still remained in force. "Those who are active and strong (says one of the decrees) should undertake manual work to avoid idleness and indifference or as a relaxation."...Trade and the medical profession were altogether forbidden to Unity priests.... They were in theory to hold all things in common after the model of the primitive Christian community, as they had done from the foundation of the Unity, and to limit their needs to the bare necessities of life.[28]

This evangelical life of "the intellectual class" of the Unity was admired by Erasmus who also noted with respect the new Unity's concern for the primary education of its members -- including girls![29] Erasmus, no doubt, also admired the zeal with which the new Unity began to print books. The Unity's press obtained in 1503, soon began to take over the majority of printing operations in Bohemia.[30] Since

the priests formed the intellectual class of the Unity it comes as no surprise to learn that the schools were almost entirely concerned with religious and moral education.

Despite the reforms of the new Unity, serious divisions continued to separate the Unity from the Utraquists (which had continued to exist as the principal church in Bohemia). Enjoying the protection of the Compacta (which they managed to have ratified from time to time by the rulers of the kingdom) the Utraquists were at one with the Catholics in their attempts to limit and suppress the Unity.[31] The movement of German reform led by Luther was to exacerbate the differences between Utraquists and the Unity even more so as the Utraquists in time came to identify their interests with those of the Lutherans while the Unity chose to maintain friendly relations with the rivals of Wittenberg -- the Calvinists. Nonetheless, as we will see, the initial contacts between the Unity and Luther were friendly and Lutheranism seemed to some of the Unity to be very attractive. The primary attraction of Lutheranism, for some important members of the Unity at least, was the hope that it would provide a means by which the Unity could transcend the narrow boundaries of Bohemia and gain a powerful ally in European church struggles. We are now somewhat ahead of ourselves and must backtrack and give the following exsursus on the origins of Luther's interest in Hussites - both of the Utraquist and the Unity persuasions.

THE UNITY AND LUTHER

During Lucas of Prague's leadership of the Unity the Augustinian friar, Martin Luther (1483-1546), was discovering that there were serious contradictions between the Roman Catholic Church of

his day and the primitive church of the apostles and the early church fathers. Not content to keep his views to himself, the young Luther soon found himself engaged in public disputation in July of 1519. His opponent, the wily Eck, accused him of holding views dangerously close to those of the "heretic" John Huss. This public disputation was held in Leipzig.

> Leipzig lay near the border of Bohemia. To its ruler and citizens the Bohemian John Huss...was the most notorious of heretics. It was natural for Luther's opponents to spatter him generously but vaguely with the abusive words "Bohemian" or "Hussite"...Faced by Eck's nimble manoeuvres and stung by his vituperation, Luther did what Eck had been hoping to make him do -- he admitted that Huss had sometimes been right and that the General Council of Constance which condemned him had been wrong. "Among the condemned beliefs of John Huss and his disciples, there are many which are truly Christian and evangelical and which the Catholic Church cannot condemn."...by February 1520 [Luther] had advanced far beyond the reluctant, extorted admission of Leipzig. "We are all Hussites without knowing it," he wrote, "St. Paul and St. Augustine are Hussites."[32]

This public admission of affinity with Huss endeared Luther to many in Bohemia at that time -- both Utraquist and Unity. Soon after Luther wrote the "Schreiben an die bohmischen Landstande" (or Letter to the Bohemian Estates) inviting the Bohemians to ally themselves with the German reform movement and warning them against cooperation with the "Roman Party" in the Bohemian Estates.[33] "Henceforth, the Utraquist Party entered upon a period of inner transformation which resulted in almost complete Lutheranization of the Utraquists."[34] The Unity was also initially in Luther's work for the cause of the reformation of the Church. In 1522 Lucas of Prague, now bishop of the Unity, initiated contact with Luther by sending him theological writings expressive of the Unity's doctrinal stance as well as the Unity's Cathechism.[35]

Luther was sympathetic toward the Unity's frequent persecutions by the Catholics but, with respect to matters of doctrine, could not agree with the Unity's theology of the Lord's Supper. In addition, he was contemptuous of the low level of the education of the Unity's clergy with respect to the Greek and Hebrew languages.[36] Lucas of Prague, on his part, had misgivings about Lutheranism.

> ...Lucas of Prague, watched the development of the Reformation in Germany with no less caution than interest. He soon discovered differences in some points, above all the doctrine of the Lord's Supper,...[37]

Reports concerning the Lutheran's easy-going application of "evangelical liberty" and "reports of the lack of discipline among the students in Wittenberg and elsewhere were to [the Unity and its leaders] the main source of apprehension and distrust."[38]

The doctrine of the Lord's Supper which caused disagreement between Lucas and Luther is worth looking at in that the interpretation of this sacrament as held by Lucas of Prague, while causing division between the Unity and the Lutherans, would later help foster concord between the Unity and the Calvinists.

> In the doctrine of the Lord's Supper the Brethren, under the leadership of br. Lucas, largely abandoned the teachings of the early Unitas and let themselves be strongly influenced by the Taborites and Wyclif.... Basically the teaching [which they adopted] maintained that Christ is present differently in heaven, in church, in the believer, and in the sacrament. His presence in the elements of the Eucharist is spiritual, sacramental, efficacious, and true. Lucas himself was convinced of a solid biblical basis for this teaching while he insisted that the only correct interpretation of John 6 is spiritual. Thus the Brethren rejected the Roman, Lutheran, and Zwinglian doctrine of the Eucharist alike, while aligning themselves unknowingly with the future teachings of Calvin.[39]

Despite the major differences between the Unity led by Lucas of Prague

and Luther, after the death of Lucas of Prague in 1528 it seemed for a time that the Unity would shift its theological orientation in the direction of Wittenberg. The Unity's bishop John Augusta (1500-1572) was the major proponent of this shift in the Unity.

JOHN AUGUSTA

According to Otakar Odlozilik "Bishop John Augusta exceeded all his colleagues in his zeal and admiration for Luther, whom he resembled in so many points that he was often called 'the Czech Luther'."[40] Augusta invited Luther to write the preface to the Apology of the Doctrine of the Unity and Luther consented to do so. In 1533 the book was published at Wittenberg. Augusta was not able, despite his episcopal status in the Unity, to remake the Unity into a movement which would be acceptable to the Lutherans abroad. Despite his best efforts, the way to union was blocked and the Unity maintained its ecclesiastical independence. The question arises as to how it was that a bishop of the Unity did not have the power to impose his will on his church. Odlozilik informs us that:

> ...the Unity never bestowed unrestricted power on any one person, even if he held the high rank of bishop. The Council was the supreme organ of the Unity and there important problems were discussed and decisions made. Augusta's views were not generally accepted. He had to modify his proposals, especially when it had become obvious that there were other ways out of the isolation than that which led from Bohemia to Wittenberg.[41]

JOHN BLAHOSLAV

The major opponent of John Augusta's position and the leader of the new intelligensia of the Unity was John Blahoslav (1523-1571). Blahoslav's birthplace was the town of Prerov in Moravia where, unlike

Augusta, he was brought up within the bosom of the Unity. His family were of the noble estate and sent their son to study abroad in Germany at Goldberg (in Silesia) and Wittenberg. Later he studied in Konigsberg and Basle. While studying abroad Blahoslav became a very competent classical scholar mastering not only Latin but also Greek. His mastery of Greek and love of his own Czech tongue enabled him to give the Czech people a beautiful and highly poetic translation of the New Testament.[43] Blahoslav wrote a Czech grammar and founded the Unity's archives. He wrote fifteen volumes of these archives as well as a short volume on the history of the Unity.[44] In this work entitled On the Origin of the Unity and Its Order, Blahoslav set forth his position on whether it was advisable for the Unity to remain in a separate entity from the Lutherans and the Utraquists (i.e. to follow Augusta's advice). His conclusion was that the Unity ought to retain its identity by keeping its own organization and that only by doing this could the Unity fulfill its God-ordained mission.[45]

> Blahoslav's adherence to the tenets of the Brethren was not [like Augusta's] weakened by his acquaintance with Lutheran doctrine. [He had, in fact, listened to Luther himself preach while in Wittenberg.] Fidelity to the heritage of his predecessors and a determination to safeguard the independence of his church were among the main traits of his character.[46]

Blahoslav's interests also extended to the Czech vernacular (as his New Testament translation illustrates). He was deeply concerned about the purity of the Czech language. He was well aware that many Czech writers were introducing "foreign elements" of structure and vocabulary into the Czech language.[47]

> [Blahoslav's] resolution to eliminate [these] foreign elements in Czech] and to stop the decline sprang from his love of symmetry and harmony in

> life as well as in thought, and from his admiration of the regularity of the ancient languages. In the Unity, the native language had always a dominant position and therefore much depended on its purity and precision.[48]

Interest in the vernacular had always been a part of the Unity's tradition. This was in part due to the intensely national character of the Unity which as a Czech-speaking church tended to be centralized in the Bohemian Kingdom (which included Moravia). After persecutions certain settlements of the Unity appeared in Hungary and Poland during the sixteenth century. Even in exile the Unity's members were ardently devoted to their Czech mother tongue. Just as the Reformation was preceded by Bohemia's own Hussite Reformation so too was the concern for the vernacular among the Czechs prior to the rise of national languages which the rest of Europe begam to experience in the sixteenth and seventeenth centuries. Robert Mandrou sees in the rise of the vernacular at this time a parallel to the renewal of serious intellectual activity following the Reformation.

> The second factor which contributed to a partial renewal of intellectual activity was the rise of national literatures which the Reformation, in its striving to bring the laity closer to the forms of worship and to a more immediate understanding of Scripture, had been preparing long since: everyone knows how important were the translations of the Bible into the vernaculars and the impulsion they gave to writers in every country....This rise of national literatures was certainly an all-European phenomenon, observable even in the central and eastern parts of the Continent, where it was encouraged by humanists who chose to deal even with traditional literary themes in their mother-tongue, as in the case of Jan Blahoslav, the Czech translator of the New Testament, who published in 1567 a work Against the Foes of the Muses in Bohemia, where many writings of religious polemic, satirical songs and evangelical texts were also published, notably by the Moravian Brethren [i.e. the Unity].[49]

Blahoslav's Against the Foes of the Muses (known also as the Philippic against the Enemies of Higher Education in the Brotherhood)[50] arose out of a conflict with the aging Augusta. Augusta had been in prison during the past fourteen years and had been able to exercise much authority from there. While in prison Augusta had changed his views on Lutheranism with respect to its encouragement of higher education. He had, in fact returned to the earlier stance of the Unity which viewed scholarship with deep suspicion. On his release from prison he used his reputation as a martyr for the Unity to attract attention to his negative position on higher education. Blahoslav was quick to react to this attack and wrote his Philippic in great haste to counter Augusta's charges. Urban summarizes Blahoslav's Philippic as follows:

> "Youth should learn!" said Blahoslav. "They should learn when and wherever they find anything good. For example. A precious stone or a pearl, artistically and skilfully cut and polished- ow it differs from one which is neither cut nor polished....He that despises learning and art resembled him that would make clothes for himself or others, but would know nothing of the tailoring trade, would refuse to learn and also abuse and vilify it..."[51]

This friend of the Muses prevailed over Augusta and the Unity came to respect the best of secular learning. Blahoslav had been ordained a bishop of the Unity in 1558 and served his church in that capacity until his death. More so than Lucas of Prague, Blahoslav marks the departure of the Unity from Chelcicky's mistrust of higher education.[52]

> ...unlike Chelcicky he was convinced that it was possible to transplant elements from secular culture into the sphere of religious life and to convert evil into benefit. For conflicts of science and religion there was no ground in his judicious mind. In his opinion a peaceful

> development of the Unity was not endangered by participation of its new members in various spheres of intellectual life.[53]

It comes as no surprise to learn that Philipp Melanchthon (1497-1560) was Blahoslav's closest contact among the reformers. Both men sought to establish Christian learning on a firm foundation. Both men desired above all to avoid the odium theologicum[54] -- that unique kind of hatred found among rival theologians. The real problems of the church were evident to these men; the unrestricted struggle for power and the resulting schisms which divided the Protestant movement. Blahoslav realized that cooperation between Christians was essential but he also knew that any premature attempts to override differences and to merge churches would be doomed to fail. It was one thing to reconcile the pursuit of higher education in a Christian context with the Unity's teachings, but for Blahoslav, to change the Unity's essential doctrines and merge with the Lutheran communion "aimed at the roots of its existence."[55]

THE INFLUENCE OF CALVINISM

The period of the Unity's leadership by Blahoslav "during the first two decades of the second half of the sixteenth century finally reconciled the Unity with the new Humanism."[56] This resulted in the "relaxation of the old tradition of simplicity, which had for long after the schism continued to carry weight among the Brethren..."[57] Blahoslav's leadership also saw an increase of theological writing in the Unity which shared a certain affinity with the views of the Calvinists.[58] For example, at this time the theological writing of the Unity demonstrated interest in such themes as the importance of the Old Testament, the unity of the Biblical message and the attempt to

articulate the doctrine of the Holy Trinity.[59] At this time also, the Unity's theologians grappled with that major preoccupation of the reformers -- the doctrines of free will and of predestination.[60] "With regard to the doctrine of the church...the place of order and discipline is prominently mentioned."[61] With respect to the theology of baptism the Unity's theologians indicated that the "practice of infant baptism is tied with the Old Testament rite of circumcision."[62] Concerning the magistracy the Unity's position showed "a trend away from the passive attitude of the older Unitas to a more responsible position."[63]

> This apparent inclination toward Calvinism became ever more pronounced during the period which followed (1574 or 75-1628). It has its roots not only in the painful disappointment of the Brethren with Gnesiolutheranism but, more positively, in their recognition that Calvinism tended to think through their own basic understanding of the gospel. Calvinism helped the Brethren to rid themselves of the last vestiges of scholasticism, while at the same time underscoring such motives as were especially dear to them: the supreme but gracious will of God, binding to obedience; trust in God's election; and Christian Koinonia fellowship or brotherly unity, subjected to discipline and order.[64]

In order to understand better the Unity's friendly relations with the followers of Calvin we should look at the period of the Unity's history around the year 1540. At this time, as I have mentioned earlier, Luther had decided that the Unity's differences with the German reform movement could not be circumvented and gave up on his attempt to attract the Unity into his flock. The Unity's leaders were, for their part, listening with interest to the reports of the work of other, non-Lutheran reformers. As a result in 1540 they sent some of their best students to study under Martin Bucer in Strassbourg.[65]

MARTIN BUCER'S INFLUENCE

Martin Bucer (1491-1551) was a Strassbourg reformer whose major goal as a theologian was the reconciliation of the Protestant movement. The major factions of the Protestant movement which concerned Bucer were the Swiss adherents of Zwingli (1484-1531) and the German Lutherans.[66] When Zwingli died in 1531 Bucer was called up to lead the non-Lutheran "reformed" churches of Switxerland and southern Germany.[67] Bucer's fame as a theologian (at least in the Unity's eyes) rested on his interpretation of the meaning of the Lord's Supper. His doctrine was an attempt to achieve consonance between Luther but Zwingli had convinced him "that a physical reception of a spiritual gift was impossible and that the channel of reception [of the sacrament's grace] was faith."[68] Notwithstanding:

> ...he also perceived the force in the Lutheran contention that the Scripture revealed a true communication of the Lord's humanity in the sacrament. He therefore proposed that the true statement of the matter should use the preposition with? The divine gift was not given in or under the forms of bread and wine -- thus far Zwingli was right. But it was given in an indisoluble conjunction with them -- as the bread is given to the body so the divine gift passes into the human soul. This divine gift was the humanity of the Lord, as the Catholic Church believed it to be. Therefore Luther was right in contending that an objective gift was offered to the communicant, and Zwingli was right in contending that the faithless man could receive nothing but bread.[69]

The importance of the doctrine outlined above was that it formed the core of the "Reformed" (or non-Lutheran and non-Anabaptist) doctrine of the Lord's Supper. Known as "receptionism" this doctrine came to play an important part in Calvin's theology.

> For Brucer's long sentences, were compressed into a clear and coherent explanation, impossible to misunderstand, by one of his lieutenants. From 1538

> to 1541 John Calvin 1509-64, banished from Geneva, was working under Bucer at Strasburg.[70]

The theologians of the Unity were excited about the work of Calvin on the Lord's Supper as it approximated that of Lucas of Prague with uncanny precision.

THE NOBILITY AND THE UNITY OF CZECH BRETHREN

At this point it is important to look at the development of the role of the noble members of the Unity. As we have seen, the earliest phase of the Unity (1457-1490) under the influence of Chelcicky's teachings had not admitted any but those willing to till the soil humbly and avoid dealings with "the world". However after 1490, under the leadership of Lucas of Prague, the new Unity opened its doors to members of all estates in Bohemian society. From that period the leaders of the Unity were continually striving to find the best policy for helping the nobility to remain as effective Christians "in the world" for the good of society but not "of the world"lest they lose their souls.[71] Already, as we have seen, in 1506 the Unity's leaders had allowed the nobles to have a different standard of living than that of their brethren in the humbler estates. Nevertheless they were still very much subject to church discipline "which was not merely a dead letter but enforced in practice."[72]

> A decree [issued by the Unity's Council] of 1555... states: "The subject of avaricious Lords and their oppression of their tenantry was discussed...They should be dealt with according to the findings of the Brethren; and, should they be unwilling to submit, disciplinary action must be taken against them." The Unity continued, too, to consider that the advantages of birth entailed equivalent obligations. When, therefore, it was found that "many Lords, on account of age or the lack of obedience among servants or because of debts or to avoid common

> burdens or because they had no heir, were anxious to sell their estates and lead a more comfortable life in the town, living off money invested at interest," a synod of 1591, held at Lipnik and composed of representatives from Poland as well as from Bohemia and Moravia, advised strongly against such a course of action. [The synod decreed that] "Lords should remain lords and on no account escape from their calling."[73]

As we see from the above quotation from Peter Brock, the noble members of the Unity were subject to the Unity's discipline. Nevertheless the power of the Unity's Council over the noble members declined after the death of Bishop Blahoslav in 1571. After Blahoslav and up until the leadership of Comenius "the Brethren were led by men who could bear no comparison with prominent theologians abroad. They were mostly timid and limited in outlook ...[as a result]...the leadership in many respects passed from the clergy to the nobility."[74] Chronologically the rise of the nobility in influence coincides with the growing inclination of the Unity towards Calvinism (c. 1574-1628). At this stage of the Unity's history it is interesting to note that for the most part its clergy were recruited from the ranks of the common people.[75] In order for the candidates for the Unity's priesthood to study abroad (and gain that kind of higher education so ardently advocated by Blahoslav) they were forced to find a rich burgher or noble to patronize their studies. The Unity had in Bohemia only certain Latin "prep schools" (such as the one which Comenius attended at Prerov) and no access to the University of Prague which was dominated by Utraquists and Catholics.[76] Candidates for the priesthood were thus in a position of dependence on the Unity's nobility - a situation which has no little bearing on the "timidity" and "limited outlook" of the Unity's clergy at that time. The noble

patrons of the Unity's ministerial candidates did not leave them unemployed abroad. Usually the cnadidates for the priesthood "accompanied young noblemen or sons of the wealthy middle-class families as famuli [i.e. servants or attendants] or tutors."[77]

It is important to emphasize the fact that at this phase of the Unity's development its nobles "were attracted by the fame of those universities where Calvinism became prominent and traveled there in pursuit of higher education."[78]

> Thus in forstering relations between the Brethren and the centers of Calvinistic teaching, the laymen, especially the nobility, became a more important factor than the clergy who had always been in the forefront in the earlier period. Especially when members of some powerful and wealthy noble families devoted their lives and efforts to the cause of the Unity, was the influence of the clergy in foreign relations restrained.[79]

The nobles came to belong to a wider circle of contact with Protestant princes throughout the Continent as they left their native land behind in search of higher learning.[80] In Heidelberg and elsewhere the Bohemian nobles and their clerical clients in the Unity came to form important political and cultural ties with Calvinist princes from across Europe. These contacts were to play an unfortunate role in Bohemian politics in the early seventeenth century. For in 1618 the Czech Protestant nobles revelled against their Catholic sovereign, Ferdinand II,[81] and trusted in this network of Protestant princes to support the Protestant Elector Palatine, Frederick, in his bid to hold Bohemia from the Catholic Habsburgs as King Frederick V of Bohemia.[82] The dismal failure of this attempt led to the defeat of the "Protestant cause" in Bohemia in 1620 and led in turn to the suppression and exile of the Unity (in the eight years following the disaster at

the White Mountain in 1620). It is interesting to note that Comenius's patron, Count Karel the Elder of Zerotin, kept his Moravian lands neutral in the conflict and so was able to remain unmolested for a number of years following the defeat of his Protestant peers. It was to his lands that the persecuted Protestants fled after the defeat in 1620.[83] Among these refugees was Comenius who had ardently supported the claims of Frederick V despite his patrons strict neutrality in that matter.[84]

Returning from the above political excursus, it is worth noting that despite the relatively small numbers of Calvinists in Europe:

> ...they [often] held prominent positions in social life and they could influence public opinion more strongly than their numbers warranted...Prominent representatives of Calvinism saw to it that not only candidates for the ministry but also future political leaders and statesmen received through education in religious as well as political matters, and were well prepared for their duties in their own countries and in international life.[85]

Educated in Calvinist universities and befriended by the most influential men of international Calvinism, it is not surprising that the Unity's nobles came to dominate the Unity in the years 1571-1628. Their cosmopolitan attitude and broad learning had no small influence on Comenius.

Having discussed at some length the development of the Unity, we now know that it was by no means a statis organization. We know now that it went through a series of distinctive phases which we may summarize as follows: (1) The Unity's pre-history in the Hussite Reformation (1415-1457). (2) The stimulus of Peter Chelcicky (1390-1456) which led to (3) the formation of the first community of the early Unity at Kunwald (1457). (4) The formation of the new Unity under Lucas of Prague (1458-1528) which led to (5) the era of

Lutheran influence under John Augusta (1500-1572) and (6) the coming of the influence of Christian Humanism under John Blahoslav (1523-1571). Finally (7) the inclination towards Calvinism which coincided with the domination of the Unity by the nobility (c. 1574-1628). What then of the influence of the Unity on Comenius's thought? From what phases did he draw inspiration?

COMENIUS'S PLACE IN THE INTELLECTUAL HISTORY OF THE UNITY

It is a common mistake to draw, uncritically, an unbroken line of societal vision between the radical peasants of early Hussite Bohemia and Comenius's sympathy for the humbler estates of European society. Comenius never advocated social "leveling" and believed that peasants should see in their estate the calling of God to live such a life of agrarian service to society. In his Letters to Heaven (1619) Comenius imaginatively brings together the complaints of the rich estates against the poorer ones and the accusations of the poor against the rich. "Jesus Christ" attempts to mediate their dispute and, in this manner, shows forth the understanding which Comenius had at that time of true social justice. Concerning the complaints of the poor Comenius puts the following words to them from Christ:

> "Know your place; do not try to elevate yourselves above your present present state; cease to frevently seek charity; stop your needless laments; be patient - knowing that everything happens under divine guidance. Should the accusations by the rich - laziness, squandering, gluttony and revolt - be proven true, you could not defend yourself in Court."[86]

From this "letter from Heaven" it is apparent that Comenius cannot be said to be an exponent of revolutionary doctrines among the peasants. Rather than look to the social revolutionary notions of the Hussites

of the first half of the fifteenth century, let us look to the thought of Chelcicky to find the roots of Comenius's concern for the humbler classes.

While Comenius could not share Chelcicky's social isolationism, there are other elements in Chelcicky's thought which do find their echo in that of Comenius. Chelcicky's influence on the social thought of Comenius is best illustrated in on of Comenius's early works, The Labyrinth of t' World and the Paradise of the Heart, which Comenius completed in 1623 and dedicated to his noble patron Count Karel the Elder of Zerotin (1564-1636). Here we find the themes, so dear to the heart of the early Unity and Chelcicky; of the aborrence of violence, the disdain for the arrogance of the bonility and, compassion for the humbler classes of society. In this work the "Pilgrim's" guide through the "Labyrinth of the world" gives him the following description of the "estate of the knights":

> "Look now," said the interpreter, "what honour he receives who demeans himself bravely, and fights his way through swords and spears, arrows and bullets..." And many came [to a palace] carrying with them skulls, crossbones [etc]...that they had hewn off the bodies of their enemies, and... purses that they had taken from them. They were praised for this and [given coats-of-arms].[87]

The Pilgrim notices that the knights "struck with their fists" all those below their estate who "did not bend their knees to them sufficiently, who knew not how to pronounce their titles sufficiently correctly."[88] Taking care to avoid their blows and abuse the Pilgrim notices the knight's manner of living:

> Then I see that their work (as they said because of the privileges of their estate) consisted in treading the pavement, sitting astride on the back of a horse, hunting greyhounds, hares and wolves,

> driving serfs to soccage, placing them in [prisons], and then again letting them out, sitting at long tables laden with divers dishes, and keeping their feet under them as long as possible, bowing daintly and...prattling without shame of all obscene and lewd matters....It was, they said, assured to them by their privileges that all they did should be called noble, and on one who was not a man of honour should assort with them....I saw much more that appeared to me wondrous and absurd, but I may not tell everything.[89]

That Comenius should be so outspoken in a book dedicated to his noble patron is most interesting. Comenius showed a remarkable independence from the views of his patron especially in the area of political involvements during the early phases of the Thirty Years War. It was however Comenius's patron Zerotin who showed the spirit of Chelcicky in this matter in that he declared Moravia to be neutral. Comenius, on his own part, advocated the most zealous defence of the "Protestant Cause" against what he believed to be the Antichrist's forces of the Habsburg Catholic House of Austria.[90]

The influence of Chelcicky is also apparent in Comenius's attitude toward the spiritual dangers of the intellectual life. Among the spiritual journies of the Pilgrim in the Labyrinth of the World was one which took him to behold "the fate of the men of learning."[91] In the following quotation the Pilgrim beholds as allegorical meal where worldly scholars consume the "food" of learning:

> And I gaze, and lo! some here bore themselves most greedily, cramming down constantly everything that came into their hands. Then looking at them more carefully, I see that their colour, their body, and their fat had by no means increased, and that their bellies only were swollen and puffed out. I see that what they crammed down again crept out of them undigested either above or below. Giddiness also befell some...or they maddened; others... died. Seeing this, others pointed at them and told each other how dangerous it was to deal with books ...[92]

The underlying message which Comenius hoped to convey in the chapter from which the above quotation was taken, was that knowledge apart from the love of God and man is utterly vain. This is a recurring theme throughout Comenius's writings and it plays no small part in his educational philosophy.[93] The influence of Chelcicky, as I have implied earlier, is certainly present in the condemnation of worldliness in the intellectual life.

Nevertheless, as I have mentioned, the Unity's thought was not limited to any one of its phases and, accordingly, often a number of influences combine themselves in Comenius's thought. With respect to the vanity of worldly learning, for example, Comenius was suspicious of the humanists' programme of classical education. To attribute this line of scepticism directly to the influence of Chelcicky and the early Unity is quite mistaken. Concerning the complex roots of Comenius's concern with the humanistic emphasis on a purely classical education we do well to refer to the following passage from R.J.W. Evans:

> Among the educational reformers we have returned to a central concern of the age of Rudolf [1576-1612]: the belief in a single universal authority and the total, all-embracing conception of society. It went with a faith in the moral power of ideas and a reaction, often avowedly retrospective, against vacuous late scholasticism and shallow Humanism. A line of anti-Renaissance thinking in the field of pedagogy can be traced from Melanchthon and Montaigne to Campanella, Alsted, and Comenius; it parallels the attack on existing standards in logic by Sturm, Ramus, and the Lullists, or the visual and verbal conceits of the Mannerists.[94]

Accordingly it is by no means easy to discover exactly where the origins of Comenius's condemnation of what he saw to be worldly learning. On the one hand, it seems to reflect aspects of Chelcicky's thought, and on the other it seems to reflect aspects of the intellectual

tradition which Comenius was exposed to at Herborn and Heidelberg (see the following chapter on Comenius's early life and education). In order to understand better Comenius's condemnation of a narrowly classical focus to education let us look at his own words on this subject in Chapter Twenty-five of the Great Didactic where Comenius addressed the question of the use of classical authors in the schools.

> Resistless necessity compels us to treat at length a subject which we have touched on...If we wish our schools to be truly Christian schools, the crowd of Pagan writers must be removed from them. First, therefore, we will set forth the reasons which underlie our views, and then the method of treating these ancient writers so that, in spite of our caution, their beautiful thoughts, sayings, and deeds may not be lost to us.95

Comenius goes on at some length to convince the reader of the dangers which are inherent in the influence of pagan thought upon the young. His advocacy of a solidly scriptural base to the literary education of the young seems to echo the spirit of Alsted's Triumphus Biblicus and Calvin's adage: "sola scriptura!" Comenius's advocacy of the censorship of the literature taught to the young seems to suggest the influence of Calvinism, which as we have seen was most influential on the Unity during the Unity's final phase.

One might wonder at this point whether Comenius should be regarded as one of Blahoslav's "foes of the Muses." This however is not so. Comenius's attachment to Blahoslav's understanding of Christian Humanism was not so lightly destroyed by Calvinist inspired rigour. In his discussion of Pagan books in Christian schools Comenius suggests the following modus vivendi with pagan literature:

> Finally, if any pagan writers are to be countenanced, let them be Seneca, Epictetus, Plato, and similar teachers of virtue and honesty; since in these

> comparatively little error and superstition are to be found. This was the opinion of the great Erasmus, who advised that the Christian youth be brought up on the Holy Scriptures, but added: "If they have anything to do with profane literature, let it be with those books that approximate most closely to the Scriptures"...But even these books should not be given to the young until their Christian faith is well assured;...[96]

That Comenius should quote Erasmus is not without significance. Erasmus was a friend of Blahoslav's and encouraged the Unity under Blahoslav's episcopacy to continue its attempts at educating its children and publishing books. It was seen that after Blahoslav's leadership of the Unity that the Unity's clergy lost their dominant role to the nobles. In Comenius we find again a bishop of the Unity who, like Blahoslav, was not afraid to exercise an independent spirit in his leadership. This is evident in his stern words about the abuses of the nobles in both his Letters to Heaven and the Labyrinth of the World. Again much like Blahoslav, Comenius sought the reformation of Christian education. With respect to the Unity's influence on Comenius's thought Odlozilik states:

> It is impossible to place the work of Comenius into the right setting and to trace the connection between his proposals of reforms in education and the religious movement in Bohemia without an adequate knowledge of Blahoslav;s work and his influence both on contemporaries and the subsequent generation. In the chain connecting Hus with Comenius, Blahoslav's work formed a prominent link. One might say that in him the past clasped hands with the future.[97]

The influence of Blahoslav on Comenius extended to his grammatical and philosophical works on the Czech vernacular as well as to his fusion of great learning with deepest piety. Blahoslav was indeed one of the most important of the Unity's influences on Comenius.

CONCLUSION OF CHAPTER THREE

At the outset of this chapter it was suggested that contrary to the claims of those who assert Comenius's thought to be merely "quasi-religious" it is in fact squarely built upon deeply held religious principles. The role of religion on Comenius's educational and, more generally, his pansophic thought is pivotal. We read in Comenius's Great Didactic that:

> The most useful thing that the Holy Scriptures teach us [concerning the renewal of the "Paradise of the Church" after the devastation of the Thirty Years War]...is this, that there is no more certain way under the sun for the raising of sunken humanity than the proper education of the young. Indeed Solomon, after he had gone through the whole labyrinth of human error and had mournfully recognized that perverseness could not be cured nor imperfections enumerated, turned at length to the young and adjured them to remember their Creator in the days of their youth, to fear Him, and to keep His commandments, for that is the whole duty of man (Eccles. xii,13).[98]

Here we find the essence of Comenius's understanding of the renewal of society - the return of mankind to the love and worship of God. It must always be remembered in any discussion of Comenius's thought that he was not first a philosopher or a pedagogue but rather was the last bishop of the Unity of Czech Brethren. As such he devoted all of his intellectual, pedagogic, and pastoral energies into the common goal of converting the world to God and His Kingdom. As Comenius himself states: "... this life, since its destination is elsewhere, is not (properly speaking) a life at all, but only the prelude to a real and everlasting existence..."[99]

Having established the intellectual background of Comenius's thought in Chapter Two and, in this chapter, having established the

background and character of the Unity and its influence on Comenius, let us now examine the early youth and education of Comenius in the following chapter.

NOTES

[1]Nikolai K. Gontscharow, "The Great Humanist John Amos Comenius," Acta Comeniana, vol. I, p. 20.

[2]S.H. Steinberg, The "Thirty Years War" and the Conflict for European Hegemony, 1600-1660. (London: E. Arnold, 1966), p. 96.

[3]"The Unity of Czech Brethern" is the usual translation of the Czech name of Comenius's church - Jedota Bratrska (literally "the Unity of the Brethren"). It is also sometimes called in the literature the "Moravian Brethren," the "Bohemian Brethren," the "Unity" as well as the "Unitas Fratrum." C.J. Wright tells us that:

> "There was nothing sectarian about the name they chose. Rather, by the name "Jedota Bratrska" they were at one and the same time claiming to be an organized "Church" and to set forth an essential quality of the Church Universal - namely, the quality of the Unity of the Spirit." (C.J. Wright, Comenius and the Church Universal; containing a translation of Comenius's work: The Bequest of the Unity of Brethren, London: Herbert Barber, 1941), p. 3.

[4]According to Milos Strupl:

> "There is a vast difference between the thinking of br. Gregory, the actual founder of the Unitas, and that of its last bishop, John Amos Comenius... the investigator...must survey critically the historical development of the Unitas Fratrum, the inner life of the church as well as its relationship to Catholicism, Utraquism at home and Protestantism outside the borders of Bohemia and Moravia." (Milos Strupl, "The Confessional Theology of the Unitas Fratrum," Church History 23 (1964): p. 279).

[5]It is important to note that the Czechs view the "Reformation" as starting with John Huss and the Hussites - long before the birth of Luther.

[6]Peter Brock, The Political and Social Doctrines of the Unity of the Unity of Czech Brethren in the Fifteenth and Early Sixteenth Centuries, (The Hague, The Netherlands: Mouton & Co., 1957), p. 12.

[7]Jan Herben, Huss and His Followers, (London, Geoffrey Bles, 1926) pp. 123 & 124.

[8]The title of this work refers to Chelcicky's conviction that the "net" or the structure of the true Christian faith was "torn" or

destroyed by two "whales". The two "whales" in question were the Emperor Constantine (c.288-337) and Pope Sylvester (bishop of Rome: 314-135). Chelcicky believed, like most men in Europe before the later Renaissance, in the legend of the "Donation of Constantine" wherein St. Sylfester the "Pope" received from his convert - the Emperor Constantine, the title to the temporal power of the Roman Empire. By accepting worldly power the papacy ceased, according to Chelcicky, to be the true guardian of the Christian faith and sacerdotal authority. (cf. Herben, op.cit., p. 132).

[9]Herben, op.cit., p. 133.

[10]Ibid.

[11]Ibid.

[12]Otakar Odlozilik, "Two Reformation Leaders of the Unitas Fratrum," Church History 9 (1940): p. 255.

[13]Herben, Huss, p. 137.

[14]Matthew Spinka, John Amos Comenius: That Incomparable Moravian, (New York: Russell & Russell, 1967), p. 9.

[15]Marianka S. Fousek, "The Perfectionism of the Early Unitas Fratrum," Church History 30 (1961): p. 410, note 4.

[16]Spinka, Comenius, p. 10. Also cf. Otakar Odlozilik, "Bohemian Protestants and the Calvinistic Churches," Church History, 8 (1939).

[17]Spinka, Comenius, p. 10.

[18]Ibid., p. 11.

[19]Herben, Huss, pp. 144-145.

[20]Ibid., p. 144.

[21]Strupl, "Confessional Theology," p. 283.

[22]Brock, Unity, p. 207.

[23]Ibid., pp. 235-236.

[24]Herben, Huss, pp. 144-145.

[25]Brock, Unity, p. 237.

[26]Ibid., p. 236.

[27]Ibid., p. 237.

[28]Ibid., p. 238.

[29]Ibid., p. 238.

[30]Ibid.

[31]Spinka, Comenius, p. 11.

[32]Owen Chadwick, The Reformation, The Pelican History of the Church edited by Owen Chadwick, vol. 3 (Baltimore, Maryland: Penguin Books, 1972), pp. 50-51.

[33]Spinka, Comenius, pp. 11 &12. Note that the letter of Martin Luther alluded to, is included in his Werke (Weimar, 1907), X, Part II, 169ff. v. note 6, page 12 supra.

[34]Ibid., p. 12. Note the members of the Utraquist sect who accepted Lutheran ideas became known as the "neo-Utraquists."

[35]Spinka, Comenius, p. 12.

[36]Brock, Unity, p. 237.

[37]Odlozilik, "Bohemian Protestants," pp. 345 & 346.

[38]Ibid., p. 346.

[39]Strupl, "Confessional Theology," p. 279. The position which Calvin took on the doctrine of the Lord's Supper is summarized by Van A. Harvey as follows:

> "Calvin's view is quite typical when he writes that the sacrament "is added as a deal, not to give efficacy to the promise of God, as if it wanted validity in itself, but only to confirm it to us"...Calvin's position is often regarded as the mediating one: Christ, he believed, is mysteriously present in power in the Eucharist but the elements are not miraculously changed nor is the notion of a priestly miracle appropriate." (Van A. Harvey, A Handbook of Theological Terms,

New York: Macmillan, 1964, pp. 88 & 89).

[40]Odlozilik, "Bohemian Protestants," p. 346.

[41]Ibid.

[42]Ibid., pp. 346 & 347.

[43]The translation of the New Testament made by Blahoslav was incorporated into the famous Czech "Bible of Kralice: (1588) which remains one of the most highly esteemed examples of the Czech language's beauty of expression. Together with the Labyrinth of Comenius, the Kralice Bible was the constant companion and consolation of the Unity's members when they were exiled from Bohemia and Moravia in the aftermath of the Czech phase of the Thirty Years War.

[44]Herben, Huss, p. 150.

[45]cf. Odlozilik's statement in "Reformation Leaders" page 260:

> "The difference between [Blahoslav] and Augusta was obvious and there was little hope of compromise on this point [i.e. unity with the Lutherans]. Studies abroad and contact with representatives of various currents of thought among the reformers had not the same influence on Blahoslav as on Augusta."

[46]Ibid.

[47]Ibid.

[48]Ibid.

[49]Mandrou, Humanism, pp. 127 & 128.

[50]Herben, Huss, p. 151.

[51]Ibid.

[52]Odlozilik, "Reformation Leaders," p. 262.

[53]Ibid.

[54]Literally "the hatred of the theologians" or "theologians hatred (of each other)".

[55]Odlozilik, "Reformation Leaders", p. 262.

[56]Brock, Unity, p. 260.

[57]Ibid.

[58]Strupl, "Confessional Theology," p. 287.

[59]Ibid.

[60]Ibid.

[61]Ibid., p. 288.

[62]Ibid.

[63]Ibid.

[64]Ibid.

[65]Odlozilik, "Bohemian Protestants," p. 346.

[66]Chadwick, Reformation, p. 80.

[67]The Concise Oxford Dictionary of the Christian Church, ed. Edlizabeth A. Livingston, (Oxford: Oxford University Press, 1977), s.v. "Reformed Churches" p. 432, and s.v. "Brucer, Martin (1491-1551) p. 77.

[68]Chadwick, Reformation, p. 81.

[69]Ibid.

[70]Ibid.

[71]c.f. the Gospel of St. John wherein Jesus prays:

> "I have given them thy word; and the world has hated them because they are not of the world. I do not pray that thou shouldst take them out of the world, but that thou shouldst keep them from the evil one. They are not of the world, even as I am not of the world." (John 17:14-16,RSV)

[72]Strupl, "Confessional Theology," p. 279.

[73]Brock, Unity, pp. 269 & 270

[74]Odlozilik, "Bohemian Protestants," p. 347.

[75]Ibid.

[76]cf. Count Lutzow's introduction to his translation of Comenius, Labyrinth, p. 33 note one, where Lutzow writes:

> "The old utrafuist [sic!] teaching, such as then [i.e. up to the Battle of the White Mountain in 1620] prevailed at the University of Prague, differed but little, except on this one point, [i.e. of receiving communion in both kinds] from the teaching of Rome; and the more advanced reformers therefore preferred to send their youth to foreign universities."

[77]Odlozilik, "Bohemian Protestants," p. 347.

[78]Ibid.

[79]Ibid.

[80]Ibid., p. 350.

[81]Note that Ferdinand II (1578-1637) had arranged to have himself made King of Bohemia in 1617 under the Gnate Treaty which also gave him the title of Holy Roman Emperor in 1619. Educated by the Jesuits, Ferdinand II had become infamous among Protestants for his persecutions of their brethren in Inner Austria. The Czech Protestant Estates had every reason to fear the same treatment in the Kingdom of Bohemia if Ferdinand should remain king. (v. The Penguin Dictionary of English and European History 1485-1789, E.N. Williams (New York: Penguing Books, 1980, s.v. "Ferdinand II (9 July 1578-15 Feb 1637)" p. 143.

[82]An excellent summary of the events which led to the Czech defeat is found in above cited Dictionary of English and European History by E.N. Williams, s.v. "Thirty Years War, The" pp. 427 & 428:

> "... Ferdinand's attempt to limit the application of the Letter of Majesty - the famous guarantee of Czech religious freedom won from Rudolf II on 9 July 1609 led to the first act of violence...on 23 May 1618 [i.e. the famous "defenestration of Prague"] ...The Bohemian Protestant leaders now expelled the JESUITS (9 June 1618), raised a militia, and made contact with the other Estates in the Monarchy, with other provinces in Germany, and other states in Europe.

> They deposed of Ferdinand, unfortunately electing as King in his place the frivolous Frederick V, Count Palatine of the Rhine (26 Aug 1619). He arrived in Prague on 31 Oct 1619, and involved Germany as a whole with the Bohemian Rebellion."

[83]Spinka, Comenius, p. 41.

[84]Yates, Rosicrucian, p. 158 et passim.

[85]Odlozilik, "Bohemian Protestants," p. 350.

[86]Comenius, Letters to Heaven, cited by Otakar Jaroslav Pollak in his article, "John Amos Comenius' Letters to Heaven," in Comenius, ed. Vratislav Busek, p. 83.

[87]Comenius, Labyrinth, p. 204.

[88]Ibid., p. 205.

[89]Ibid., pp. 205 & 206.

[90]Spinka in his work Comenius, provides an excellent summary of Comenius's attitude toward Roman Catholicism as Comenius had expressed them in his unpublished work, "Warnings Against the Seduction of the Antichrist." Spinka tells us that in this work of circa 1617 that:

> "The author's judgment of the Roman communion is severe: the Bible is not the only rule of faith and life in that church, and the bases upon which it is founded are insufficient. It appeals to man's sensuous rather than to his spiritual nature and seeks worldly glory and honor...In short, the pope is "the Antichrist, the man of sin, the son of perdition, and the most dangerous seducer of the world..." (Spinka, Comenius, pp. 34 & 35).

Note that the above cited work of Comenius was finally published in Prague in 1924 in Czech. Spinka's quotation is his own English translation of the Czech text which he made for this passage.

[91]Comenius, Labyrinth, p. 114.

[92]Ibid., p. 119.

[93]In the chapter on "the method of instilling piety" found in the Great Didactic, Comenius states:

> "Whatever is taught to the young in addition to the Scriptures (sciences, arts, languages, etc.) should be taught as purely subordinate subjects. In this

way it will be made evident to the pupils that all that does not relate to God and to the future life is nothing but vanity." (Comenius, Great Didactic, p. 226).

[94]Evans, Rudolf II, pp. 284-285.

[95]Comenius, Great Didactic, p. 231.

[96]Ibid., p. 245.

[97]Odlozilik, "Reformational Leaders," p. 263.

[98]Comenius, Great Didactic, p. 14.

[99]Ibid., p. 32.

CHAPTER FOUR

THE EARLY LIFE AND EDUCATION OF JOHN AMOS COMENIUS 1592-1614

THE CIRCUMSTANCES OF COMENIUS'S BIRTH AND EARLY LIFE

John Amos Comenius did not bequeath to posterity much in the way of biographical evidence. Nevertheless there is sufficient evidence to deduce where and when Comenius encountered those learned men and their ideas which did so much to inspire and shape his thought.

On 28 March 1592, Comenius came into the world as the only son of Anna and Martin Komenský. A number of Czech towns compete for the honour of being called the birthplace of Comenius but recent scholarship supports the claim of the town Uhersky Brod.[1] Although there is uncertainty about the exact location of this birthplace, the region is however quite certain. Comenius was born in southeastern Moravia which, at that time, was a part of the Kingdom of Bohemia and, more generally, of the Holy Roman Empire.

Originating in Hungary, the ancestors of the Komenský family had not always been Moravians.[2] Amidst the tremendous réligious and political turmoil of the Hussite wars of the fifteenth century, the Komenský family immigrated to the village of Komna. The name "Comenius" itself is simply the Latinized form of Komenský which Comenius used for his Latin and other non Czech writings and publications.

While the Komenský family lived ~~in~~ Komna the position of village bailiff was passed from father to son as an hereditary right until the middle of the sixteenth century.[4] ~~At that time~~ Comenius's grandfather, Jan Sekes, who had served the noble Tetour family in Zlin,[5] died and for reasons not known the position of bailiff was not passed on to the

future father of Comenius - Martin Komenský.

J.V. Polišenský, a Czech historian, describes Martin Komenský as a "burgher of Brod" that became "resonably prosperous in the service of the lords of Kunovic."[6] Although not a bailiff, the senior Komenský seems to have carried on the family tradition of service to the nobility. Among his fellow townsmen and brothers in religion Comenius's father was highly respected.[7] In his community and family life he brought together the qualities of "firm discipline" and "loving kindness"[8] which characterize the ideal Protestant pater familias.

As a member of the Unity of Czech Brethren, the early life of Comenius was steeped in Biblical piety and warm Christian fellowship. However the sober yet happy days of the lad's early childhood came to an abrupt end in the year 1604 when, in close succession, the lives of his parents and two of his sisters were taken by some kind of pestilence.[9]

The death of his parents resulted in the departure of Comenius from Uhersky Brod to the home of his aunt in Strážnice.[10] His aunt and her husband apparently took upon themselves the role of guardians not so much out of concern for the twelve year old orphan John but rather to make off with the better part of his inheritance.[11] Comenius's guardians did however send him to the local school which the Unity operated.[12]

What passed for elementary education at Strážnice combined most of the worst elements of the pedagogy of that age. The young Comenius and his classmates would be forced for hours at a time to sit upon hard backless benches memorizing the teacher's dictations of doctrines and scripture. Although an attempt was made to teach the rudiments of

literacy and reckoning (as John Blahoslav had recommended to the Unity years before) the core of the school's curriculum was narrowly religious. "The teacher...for the most part sang psalms with them."[13]

The young scholar was not content merely to suffer through this very negative experience of schooling but resolved in his heart to help bring about a change in educational practices. Later in life Comenius himself described these years as his "lost years"[14] which inspired him to seek the betterment of learning not only for himself but ",..for the good of others too."[15] In his own words:

> Losing both my parents while I was yet a child, I began...but at sixteen years of age to taste the Latin tongue. Yet by the goodness of God, that taste bred such a thirst in me, that I ceased not from that time, by all means and endeavours, to labour for the repairing of my lost years;... Thereupon I was continually full of thoughts for the finding out of some means whereby more might be inflamed with the love of learning, and whereby learning itself might be made more compendious, both in matter of the charge and cost, and of the labour belonging thereto, that so the youth might be brought by a more easy method, unto some notable proficiency in learning.[16]

Unsatisfactory as school life in Stážnice was for the young scholar, the spring of 1605 brought an end to what little schooling was available in the village. At that time Strážnice was burned to the ground in one of Stephen Bocskai's terrifying raids on Moravia.[17] Concerning the fate of Comenius's guardians nothing is known, nor is anything known of Comenius's life from the period of the Hungarian invasion of 1605 to 1608.

COMENIUS AT THE PŘEROV LATIN SCHOOL

In 1608 Comenius's promise as a student was recognized, Kožík tells us that:

> ...as the talent of the orphan from Nivnice did not escape the notice of the clergy and the leaders of the community - whose patron in Moravia was the powerful Chalres the elder, of Zerotin - his future was decided. He passed from the hands of the village trustees into the Latin school at Prerov.[18]

The Přerov Latin school, situated in the middle of Moravia, south of the Becva River, was the Unity's most famous centre of learning. The origins of this school may be traced to the end of the fifteenth century. Přerov had been the home of John Blahoslav the Unity's foremost "friend of the Muses." True to the ideals of Christian scholarship fostered by his friend Melanchthon, Blahoslav had seen to the establishment of schools for the sons of the Unity who showed promise of spiritual and intellectual ability.[19] It was at Přerov that Comenius "...began at sixteen years of age to taste the Latin tongue."[20] Despite this late start to his Latin studies the enthusiasm and diligence of the young Comenius soon came to the attention of the school's rector, John Lanecius.[21] Lanecius befriended the grave young scholar and greatly encouraged him in his academic pursuits and spiritual aspirations.[82] Later in life both men would hold the office of bishop among the Unity of Czech Brethren.

The great progress which Comenius made in his Latin studies at Přerov is all the more to be admired when one considers the state of the art of pedagogy as it existed at that school. Keatinge tells us that "The Latin school at Prerau [sic] appears to have been even less efficient than the other secondary schools of the age."[23] With reference to the teaching at Přerov, Sadler illustrates the faults of the school by means of a collection of references which Comenius had made to Přerov throughout his works:

> Even at Přerov [Comenius] found teaching very

> defective. Teachers were "for the most part ignorant of their art." They "exhausted their strength in laborious efforts, trying first one plan and then another." They detained their pupils "for five, ten or more years over matters that could be mastered in one" and, he says, "I remember well that, when we began to learn dialectic, rhetoric and metaphysics, we were, at the very beginning, overburdened with long-winded rules." Comenius says that he was only one of thousands who had "miserly lost the sweetest spring-time of life...on scholastic trifles."[24]

The friendship and support of Lanecius must have been truly inspiring to have so encouraged Comenius in spite of the shortcomings of his school! It was Lanecius that gave the young Comenius the name "Amos" in recognition of the youth's love for learning.[25] Lanecius's interest in Comenius went so far as to recommend Comenius to the lord of the city of Přerov and the surrounding region. The lord in question was Count Karel the Elder of Žerotín who came to play an important part in Comenius's life and education.

THE PATRONAGE OF COMENIUS BY COUNT KAREL THE ELDER OF ŽEROTÍN

Since it was Žerotín's patronage which enabled Comenius to study abroad, let us now examine the character of Comenius's patronage by the count. Karel Žerotín (1564-1636) had in 1608 become the supreme vice-regent of Moravia.[26] This was important for the Unity and Comenius in that Žerotín was also the principal patron of the Unity itself during the early seventeenth century. His schoolmate and friend, the nobleman Václav Budovec of Budov was also very influential at the time as well. Their forefathers had been among the first noblemen to join the Unity.[27] As we have seen in Chapter Three the nobles had come to dominate the Unity during its final phase in the early seventeenth century. Žerotín and Budovec had immense influence

on the Unity and desired to expand its intellectual and cultural horizons.[28] It is in this context that we must understand Žerotín's patronage of Comenius.

Žerotín himself had studied and travelled abroad for many years among the Protestant regions of Europe and in England. Odlozilik tells us that:

> The circle of his friends was very wide. On his journeys in western Europe he visited all the famous centers of the reformed [i.e. Calvinist] faith: Strasbourg, Basel, Geneva, Orleans, Heidelberg, Leyden, etc. He was fascinated by Henry IV, King of Navarre and later of France, and he never forgot the reception at the court of...Elizabeth of England. For many years he was in contact with the Electors Frederick IV and Frederick V of the Palatinate...His letter of introduction was the best recommendation both to his relatives and to the sons of his friends when they went abroad.[29]

The international character of Žerotín's friendships had no little effect on Comenius's own educational contacts. In this Comenius was not alone for Odložilík tells us that:

> Registers of Protestant universities contain names of many students from Bohemia and Moravia who visited them in the last quarter of the sixteenth and in the first two decades of the seventeenth centuries. Not all of them went there on Zerotin's advice. But a detailed study would show that the majority of those at least who were members of the Unity, were in some way or another connected with him, and visited places that were dear to him.[30]

By helping young Bohemians and Moravians to study abroad Žerotín and other noble members of the Unity helped to make the Unity more cosmopolitan in its outlook. The Unity's clergy which were supported abroad at Protestant universities and colleges came to become increasingly under the influence of not only of new theological views but indeed of new cultural innovations. The Czech historian Polišenský,

in his analysis of the cultural background of the Protestant nobles in Bohemia, tells us that:

> It is not difficult to demonstrate that the last Smirickys, kinskys, lords of Roupov, and Karel of Zerotin the Elder, were all strongly under the influence of a western type of culture whose impulses came from the Netherlands, from Hugenot France, and partly even from Elizabethan England and from Switzerland.[31]

In the matter of educating the clergy, the Unity in its final phase came to rely upon the advice and support of Zerotin. His experience abroad was of great value to the Unity's leaders in that "he knew better than any of his countrymen where the doctrine and way of life corresponded with the standards of the Unity."[32] Accordingly by recommending Comenius to Žerotín Lanecius had followed the common practice of the Unity with their candidates for the priesthood.

COMENIUS AT THE HERBORN GYMNASIUM (1611-1613)

By the intercession and support of Žerotín, Comenius took leave of his Moravian homeland and made the journey to the town of Herborn. Herborn was located in the Duchy of Nassau in a German speaking region of the Holy Roman Empire. It was under the jurisdiction of the great Protestant House of Orange[33] and its gymnasium was a famous centre of Calvinist learning.

The question arises as to why Žerotín, a Czech nobleman, sent his proteges out of the Bohemian kingdom to study when Bohemia itself could boast of the illustrious University of Prague where John Huss himself had taught and preached. In Comenius's time it was the practice of the Unity's leaders and patrons to send their most promising scholars to Calvinist institutions of higher learning. Žerotín himself

had, as a youth studied abroad in Geneva - the greatest centre of Calvinism of that time.[34] In Geneva Žerotín had studied under Beza, Calvin's successor, and there began to dream ot improving the state of learning of his own church's clergy.[35] Žerotín's preference for Calvinist institutions also stemmed from a division within the ranks of Czech Protestantism at that time. Spinka informs us that:

> The doctrinal position of the Brethren [i.e. the Unity] was closer to Calvinism than to Lutheranism, particularly as regards the dogma of the Lord's Supper and the strictness of church discipline. The University of Prague...was dominated by the Neo-Utraquists who were practically Lutheran in their theological views.[36]

It was at the Herborn Gymnasium that Comenius began his life-long involvement with the organization of all available knowledge as well as its dissemination by means of a reformed system of education. The Gymnasium itself had been founded in 1584 and soon became highly reputed among Protestant scholars.[37] It had close connections with Cambridge and other schools of similar convictions among both the English and Dutch Protestants.[38] According to Leroy E. Loemker the Herborn Gymnasium reached its highest point as an intellectual centre in the early seventeenth century.[39] It was during this period that Comenius studied there. In Loemker's article "Leibniz and the Herborn Encyclopedists" we learn that the Gymnasium reached its peak in the early seventeenth century largely because of:

> ...the prodigious labor, in teaching and writing, of a half-dozen men who varied greatly in originality and influence but shared a common theological perspective: a moderate Calvinism, the convenant theology and interpretation of history, an ethical causuistry which borrowed much from the Jesuit casuists, a passion for eclecticism, a curiosity for current discoveries and intellectual movements, and a strong millenarian hope.[40]

Anna Heyberger in her classic work on Comenius entitled, Jean Amos Comenius Sa vie et son oeuvre d'éducateur,[41] gives us much detailed information concerning Comenius at Herborn. In Herborn whole new horizons opened up for the young John Amos. Its library provided the means by which Comenius could enter into serious study with the very best of texts and materials available at the period.[42] The result of such exposure to the fruits of Calvinist scholarship was to provide Comenius with a life time of research interests. The combination of strong biblical piety with intense scholarly enthusiasm which characterized the Herborn Encyclopedists influenced the entire course of Comenius's work throughout his life. Heyberger tells us that:

> A Herborn, Comenius subit l'influence de la Renaissance: Platon, Cicéron, Sénèque devinrent ses guides, à l'exclusion des philosophes "païens", dont la doctrine ne s'accordait pas avec l'enseignement de l'Église - il va sans dire qu'à Herborn toutes les questions philosophiques étaient traitées du point de vue biblique.[43]

Despite the desire of the Herborn Encyclopedists to treat all philosophy from the biblical point of view, they managed to achieve a most open-minded attitude toward the mystical philosophies of the medieval and Renaissance periods. Loemker tells us that the Herborn Encyclopedists were very important in:

> ...[the] transmission of a philosophical tradition which had moved beyond the XVI century emphasis on erudition and rhetoric to a new Platonistic metaphysics of universal harmony governing a multitude of interrelated vitalistically conceived individuals. Through this metaphysics and a corresponding theory of knowledge they transmitted obvious influences from Raymondus Lullus, Campanella, and Bruno.[44]

JOHN HENRY ALSTED (1588-1638)

Foremost among Comenius's professors at Herborn was the renowned

John Henry Alsted. According to John T. McNeill's The History and Character of Calvinism:

> The theologian, educator, and encyclopedist...Alsted ...a native of Herborn and a professor there, from whom John Amos Comenius gained suggestions towards his educational theories, was the most distinguished of Nassau Calvinists. His Encyclopedia of All Knowledge (1630), a celebrated reference work which Cotton Mather called "a shortcut of Northwest Passage to all sciences," was the product of his own research.[45]

Alsted himself was a discipline of one of Zerotin's friends, Amandus Polanus of Polansdorf[46] and was therefore a member of the same circle of noble patronage as was Comenius. Keatinge refers to him as "one of the most remarkable men of his time"[47] and gives the following summary of his achievements:

> ...As an etymologist he took a high place, as a writer on Didactic he ranks historically with Ratke as the immediate forerunner of Comenius, and his Encyclopedia ...proves him to have been a master in every branch of learning...a glance through the pages of this Encyclopedia shows that its author obtained a marvellous grip of every subject that he studied, and had a very unusual power of co-ordinating the mass of erudition that he possessed. Nor did his many-sidedness end here. His Triumphus Biblicus, in which he attempts to lay the foundations of all positive knowledge in the literal [sic] interpretation of Scripture, displays an aspect of his character that we do not meet in his Encyclopedia, and gives evidence of a mind imbued with the most intense mysticism.[48]

THE EDUCATIONAL THEORIES OF ALSTED

Among Alsted's many interests was pedagogical reform. His Encyclopedia "reveals his genuine interest and skill in the actual practice of teaching, as well as his sound scholarship and progressive theoretical concepts."[49] The influence of Alsted is seen throughout Comenius's works; his stress on education in the mother tongue,[50] the

use of play in teaching, and the belief that "grammar...[is] the cornerstone of all learning since learning comes by the mediation of language."[51] Keatinge tells us that:

> ...Alsted was in the habit of maintaining the closest relations with his pupils and is afterwards found in correspondence with Comenius, we may take it for granted that the great similarity of views held by the two men should not be attributed to accident...a large number of the most striking precepts that figure in the Great Didactic might have been taken direct from Alsted's Encyclopedia. The man...who proclaimed, almost in Baconian language, the doctrine of "Experience," and who believed in method to such an extent that he drew up time tables of the most intricate description...assuredly played the part of a kindly foster-father to the callow educational zeal of the Herborn student.[52]

At Herborn Alsted also instituted a "department of education" where pedagogical theory was disseminated to aspiring school-masters.[53] According to Will S. Munroe during the late sixteenth and early seventeenth century:

> ...Herborn had enjoyed unprecedented academic prosperity. Opportunities for the study of education were unexcelled; for, connected with the college, there was a preparatory department which served as a laboratory for the study of pedagogic problems, in which, for example, the lower classes were instructed in the mother-tongue - a procedure that was regarded as ultra heterodox at this time.[54]

Alsted's concern with educational reform and theory was not peculiar to him. Loemker tells us that in Herborn (and indeed among a substantial number of systematic philosophers of the seventeenth century) there was a growing concern for pedagogy having its roots in the Christian Humanism of the sixteenth century. Loemker states:

> ...the pedagogical motive [together with "a growing impatience with the philosophical 'sectarianism' resulting from the revival of ancient learning"] ... characterized philosophy in the XVIth and early XVIIth centuries. The mission of teaching provided the

> goal or final cause for philosophy both in the Protestant circles inspired by Melancthon and in the circles of the Counter-Reformation. This pedagogical role must, however, be broadened to include not merely the education of the young and inexperienced "tyros" but also the persuasion of atheists and the conversion of the Jews and other non-believers. Thus philosophy as education included the aims of Christian apologetics and natural theology.[55]

It is in this context of pedagogy for the reformation of society, by the systematic instruction of all levels of society in the principles of the Christian faith, that Comenius's own educational theories must be viewed.

THE INFLUENCE OF ALSTED ON COMENIUS

It is now quite evident that Alsted was an important figure in the Protestant intellectual circles of his time. Although his efforts at systematic educational reform have been eclipsed by the fame of his pupil Comenius, it is nevertheless true that much of what Comenius accomplished was a reflection of Alsted's carefully laid philosophical foundations of a Christian pedagogy. Comenius indicates his debt to Alsted's influence throughout his works and the following passage is but one illustration of Comenius's regard for Alsted's teachings:

> For whatsoever matter is to be handled, the Scripture affords always, either a rule, or some sayings or examples: as John Henrie Alsted (sometimes my honoured Master) shews in his Triumphus Bibicus, and much more might be discovered by a very accurate diligence: which that so it is, for a good part of it, shall appear also in these our Physicall meditations. [i.e. Comenius is referring to the title of his book from which this passage is taken; viz. Naturall Philosophie Reformed by Divine Light][56]

In examining the influence of Alsted on Comenius we must look beyond the rather narrow scope of the historians of education. What

they tend to overlook in their attempts to trace the genesis of their own "progressive" notions of education is the wider intellectual context of such men as Alsted and Comenius. In an attempt to rectify this common oversight some further discussion of Alsted's intellectual background will be provided. This is of great interest to the purposes of this work in that in Alsted we find the most important single link between the intellectual history of Europe and Comenius's thought. If Comenius was inspired by Alsted, Alsted, in turn, owed much to the thought of Paul Skalich (c. 1534-1575) who according to R.J.W. Evans:

> Stood in the tradition of Renaissance pansophy - the search for encyclopedic knowledge of the world through a manipulation of intellectual systems, especially the "arts" of the Cabala and Lullism. His works...thus form a link between Italian and German speculations; between Pico della Mirandola and J.H. Alsted.[57]

From this we see that Comenius's interest in Pico della Mirandola's thought may well have been personally mediated by Alsted himself. According to Evans, Alsted was involved with the attempt "to make the mysteries of Bruno and Lull more accesible." Evans goes on to tell us that Alsted's:

> ...Clavis Artis Lullianae of 1609 represented an attempt to reconcile the "sects of logicians," Aristotelians and reformers, whose differing approaches did violence to the true harmony of knowledge. Alsted too had drunk deep at the sources of occult wisdom and his next work, the Systema Mnemonicum Duplex of 1610, was a monument to what he saw as the genuine tradition of memory theory, championed most recently by Bruno and Schenckel. He was also well known in Bohemia.[58]

It is interesting to note that the interest which Alsted showed in "the art of memory" was shared by Comenius and that Comenius's innovation of an illustrated children's word and phrase book was

perhaps an application of the theory of memory to the practical uses of pedagogy.[59] The book in question - the Orbis Sensualium Pictus[60] - also suggests Alsted's concern for comprehensive learning in a Christian context.

Alsted was deeply involved in the publication of "esoteri texts on alchemical and occult works."[61] Among these works were the writings of Roger Bacon, Bruno, Paracelsus, Maier, Fludd and Lullist works. Accordingly it is not difficult to believe that Comenius had access to these volumes and was influenced by these men whose thought his mentor took such pains to publist. With reference to the Lullist works Evans tells us that Alsted found them especially important in that "...he saw the 'Art' as a possible key to the pansophic striving which informs all his teaching and appears most clearly in his seven-volume Encyclopedia of human knowledge."[62] The question remains to be asked as to just what Alsted and Comenius understood by "Pansophy." Evans tells us that:

> Pansophy presupposed, for him [i.e. Alsted] and his contemporaries, the belief that the heterogeneous objects of appearance, the Labyrinth of the World, could be understood through a higher faculty of the intellect as a complete and unitary system. At the same time it was a framework for reform, since the revelation of this system, the real nature of the universe, was a principle which could liberate mankind from its present toils and raise it to participation in the divine order. Alsted was a chiliast no less than Comenius. Thus the a priori truths known to the pansophic initiate needed to be communicated through education, and the reform plan of Alsted was a plea for a new universal education, to be guided by an erudite academy.[63]

Here we find the true context and meaning of Alsted's and Comenius's desire for the reformation of education and society. We see now that instead of anticipating modern methodology and educational principles,

the educational reform envisaged by Alsted and Comenius was intimately connected with the world-picture of the Christian Neoplatonic tradition of the Medieval and Renaissance periods.[64] It was, as it were, esoteric and not "scientific" in character.[65]

OTHER INFLUENCES AT HERBORN

Among the other intellectual luminaries at Herborn were Hermannus[66] and Heinrich Gutberleth (1572-1635).[67] Hermannus, a theologian, was interested in the practical application of theology to the life of the ordinary Christian. This concern must have been of deep interest to Comenius who had been brought up among the Unity of Czech Brethren where he had been exposed to the life of a zealous Christian community. The concern for practical piety led Hermannus to see in education a means whereby the common people of God could grow in wisdom and virtue by understanding the Scriptures. He too was interested in educational reform and no doubt also encouraged the pedagogical zeal of the young John Amos. In his interest in educational reform for the spiritual welfare of the general Christian populace, Hermannus was following a venerable tradition among the Herborn theologians which dated back to 1530.[68]

Gutberleth was professor of philosophy at Herborn, he too was concerned with educational reform.[69] In his lectures he supported the study of Natural Philosophy and may have encouraged Comenius in his own interest in physical science.[70] It was Gutberleth that introduced Comenius to the thought of Aristotle. Sadler tells us that:

> Despite occasional criticisms Comenius gained from his Herborn teacher, Henry Gutberleth, a high regard for Aristotle. No one at that time could disregard the one who had "formed the European mind," and had

> "like a Colossus bestode the centuries." What he rejected was the scholastic tradition arising from Aristotle.[71]

Comenius must have listened well to Gutberleth for much of Comenius's work in the area of natural philosophy shows the influence of Aristotle. It is interesting to note that Lynn Thorndike in A History of Magic and Experimental Science states that Comenius's Naturall Philosophie "...sounds a good deal like a thick chunk of Aristotle sandwiched between two thin slices of the Bible..."[72] Nevertheless Comenius "was convinced that the Peripatetic philosophy must be abandoned and philosophy reformed on the basis of the senses, reason and the Bible."[73] In this we see the influence of Campanella[74] and Francis Bacon (1561-1626).

It was indeed Bacon's influence, in part, which inspired Comenius to advocate that "the Peripatetic philosophy be abandoned." While he was yet at Herborn it was not unlikely that Comenius would have heard of the reputation of Francis Bacon. For as Loemker states:

> ...by the turn of the century [1600] this Ramist tendency toward the reduction of logic to rhetoric was checked by a Baconian (and a renewed Aristotelian) interest in nature and the unity of knowledge ...Bacon was early known at Herborn.[75]

Alsted himself seems to have made use of certain Baconian principles in his Encyclopedia. Concerning those principles which Alsted believed would enable man to gain true encyclopedic knowledge, Loemker writes:

> Metaphysics imparts certitude to them, logic imparts order. Thus our soul moves downward from the most general principles of "first philosophy" to the particular conclusions of the several disciplines. Then it ascends from sense and singular things to universals; the resulting circular motion is perfection. The combination of Baconian and Lullist viewpoints here becomes apparent in these overlapping a prior and a posteriori perspectives within the unity of the Encyclopaedia.[76]

Though Comenius may well have been indirectly influenced by Bacon via Alsted, Comenius at last came into direct contact with Bacon's works some years later when he was hiding from the Habsburgs on Zerotin's estates. Sadler tells us that Comenius "came to know Bacon's work while ... hiding at Brandy's, for the Novum Organon was published in 1620 and the Advancement of Learning was translated into Latin in in 1623..."[77] It is often suggested in the history of education that much of Comenius's greatness rests upon his application of the "sense-realism" and empiricism of Bacon to the emerging "science" of education. With respect to such assertions, it is important to remember that whatever Comenius accepted from Bacon was mediated through the Christian Platonism of the Herborn Encyclopedists and was therefore somewhat removed from Bacon himself. Another factor which we should bear in mind that there are elements of Bacon's thought which contradict his famous "modernity" and that these very elements might well have proved the most attractive to Comenius. This is especially likely in the light of our previous discussion of the intellectual background of Comenius's thought; with this in mind we do well to consider the following passage from Yates:

> The emerging modern science is still clothed in what might be described as a Hermetic atmosphere. Francis Bacon's New Atlantis...is ruled over by an Order or Society called "Saloman's House" dedicated to the study of the Works and Creatures of God. The Father of Salomon's House rides in the great procession on a chariot on which there is "a sun of gold, radiant upon the top, in the midst". Whether or not there is any real connection between the New Atlantis and the City of the Sun, those two Utopias come out of the same stream, and the stream is the Hermetic, or the Hermetic-Cabalist.[78]

Whatever may have been the attractive force of Bacon's thought for Comenius, Comenius's thought itself cannot be said to be "Baconian"

without many qualifications of that assertion. Comenius's own conclusion with respect to Bacon's utility for Pansophy is found in the following passage from Comenius's Reformation of Schooles:

> Therefore herein it will be requisite to be furnished with some Rules, by application whereof unto things themselves, and to all opinions, and decrees concerning them, we may be able to discern necessary things, from such as are not necessary, profitable things from unprofitable, and truth from flashood. Such a kind of rule, for the searching out of nature, seemth to have beene found out by the famous Lord VERULAM: A certaine artificall induction, which indeed is the onely way to pierce through into the most abstruse secrets of Nature. But because this requireth the continuall industry of many men, and ages, and so it not onely laborious, but hence it comes to passe, that though it be a most excellent invention, yet the most part of men neglect it as unprofitable. Yet notwithstanding it is of no great use, or advantage towards our designe of Pansophy, because (as I said before) it is onely intended for the discovery of the secrets of Nature, but wee drive and aime at the whole universality of things.[79]

In the passage above it is clearly evident that Comenius did not see his Pansophy as a "Baconian" system. True to his mentors at Herborn, Comenius never gave up his hope to achieve "the whole universality of things" and to achieve such a goal he could not surrender the very "theological impedimenta" rejected by Bacon.

COMENIUS'S WORK AT HERBORN

While tasting the heady wine of so many branches of higher learning at Herborn, Comenius did not forget his homeland and his desire to improve the spiritual and intellectual welfare of the Unity. His three years at Herborn saw the young Comenius engaged in the writing of his lexicon - The Treasure of the Czech Language.[80] According to Jan Jakubec this work "...was intended to show the lexicological, grammatical and phraseological wealth of the Czech language and to

serve at the same time as a safe and convenient bridge to the wide field of the Latin language."[81] The Linguae Bohemicae thesaurus, as his Czech-Latin dictionary was formally titled, was constantly being expanded by Comenius over the following decades. It grew in scope to include a section on "sayings and idioms, fine clasps of terms and dextrous phrases,"[82] as well as a grammatical treatise.[83] After fourty four years of dedicated scholarship this magnum opus of Comenius was never published - it perished in the great fire of Leszno in 1656 with the rest of Comenius's library.[84] Part of Comenius's concern for the Czech language arose from his legitimate concern that it was "...being lost beneath the flood of German and Latin" and that without Czech books "those who could not get into the Latin schools had small chance indeed ot getting to know about the world."[85] Therefore "Comenius sought to master both Latin and Czech, to help the Czechs to express the depths of human wisdom in their own tongue...His work of the Czech-Latin dictionary was the practical application of these yearnings."[86]

The great lexicon was not the only scholarly work which Comenius embarked upon at Herborn. The diligent young candidate for the priesthood also commenced his Theatrum universitatis rerum[87] which was partly destroyed in the same fire at Leszno which claimed his lexicon.

WOLFGANG RATKE (1571-1635)

While Comenius was deeply engaged in his studies and compiliations of information for his lexicon and encyclopedia at Herborn, a major event in the history of education took place - the presentation of Wolfgang Ratke's educational reform proposal to the Imperial Diet at Frankfort 12 May, 1612.[88] Ratke's Memorial (as his proposal was

called) called for a new king of education for the young students of the Holy Roman Empire. Monroe summarizes its main points as follows:

> (1) To teach Latin, Greek, or Hebrew, or any other language, to young or old in a very short time; (2) to establish schools in which the arts and sciences could be taught and extended; (3) to introduce a uniform speech throughout the empire, and, at the same time, uniform government and religion. He proposed to follow the order and course of nature, and teach first the mother tongue, after this Hebrew and Greek, as being the tongues of the original text of the Bible, and, lastly Latin.[89]

To the pedagogically minded professors at Herborn, this proposal must have been of great interest and, no doubt, must have been of keen interest for Comenius as well.[90] Comenius mentions Ratke among those whose educational thought had begun to usher in a new age of reformed pedagogy, Comenius informs the reader of his Great Didactic that:

> But recently it has pleased God to let this morning glow of a newly-rising age appear, in which He has inspired some sturdy men in Germany, who, weary of the errors of the present method of instruction, began to think out an easier and shorter way of teaching languages. This they did, the one after the other ...I here allude to men like Ratke...and ...John Valentine Andreae...[91]

COMENIUS'S LAST MONTHS AT HERBORN

During his last months at Herborn, Comenius was engaged in two formal disputations in Latin - these were the Problemata haec miscellanea and Sylloge quaestionum controversarum,[92] as they were called in their published form.[93] We should not assume that these disputations are evidence of a contentious spirit in Comenius as the practise of holding a Latin disputation was a time-honoured custom in colleges at that time.[94] Nevertheless Comenius did not gain the status of holding an academic degree in that, for obscure political

reasons, Herborn had not the right to confer them.[95] Spinka summarzies the experience gained by Comenius at Herborn as follows:

> Nevertheless, he appears to have acquired a through training in the subjects available at the school and, what is more, to have received an impulse toward an intellectual type of life which is more valuable than all else a student learns in college.[96]

THE INTELLECTUAL AND SPIRITUAL CLIMATE AT HEIDELBERG c. 1613

Following his studies at Herborn, the young graduate without a degree went on a student's vacation to the great centre of Protestant culture; Amsterdam in the Netherlands.[97] Along his way to that city Comenius, no doubt, must have stopped off at other great centres of learning. On returning from his travels Comenius, once again on the advice and support of Žerotín, entered the University of Heidelberg. Heidelberg - "the seat of the Muses on the Neckar,"[98] like Herborn was also at that time a major centre of moderate Calvinist thought and as such was quite acceptable to Žerotín, the Unity, and above all to Comenius who had heard great things of that institution while yet at Herborn.

Prior to the Thirty Years War Calvinist intellectual circles were much broader and inclusive than the intolerant ones which later came to dominate that communion. According to Yates: "...Calvinism in the Palatinate was the carrier of mystical traditions, of the Renaissance Hermetic-Cabalist tradition which had moved to that side."[99] Trevor-Roper believes that at that period of ever increasing tension between the various Christian sects, many of those whose thought was inspired by Erasmian ideals had been forced to choose Calvinism as a lesser of evils. With respect to this Trevor-Roper tells us that:

> ...Calvin, far more than is generally admitted, was the heir of Erasmus: the heir in a more intolerant age, it is true, the heir who has to fight for his legacy, and whose character is changed by the struggle, but still, in essentials, the heir. If we follow his career, or read his works, we are constantly reminded of Erasmus. Calvin was nurtured on Erasmian teachings.[100]

Calvinism became, as it were, a shelter from the general persecution of Erasmian scholars whom the Catholic Church condemned as "Lutheran." Yates claims that the question as to which kind of Protestantism was held by a scholar was not as important as whether that type of religion allowed for the influence of the Hermetic-Cabalist tradition, for the way to the most creative thought of the age led by it.[101] Concerning the importance of the details of Calvinist dogma Yates writes:

> The Palatinate was a Calvinist country, yet what evidence is there of influence of Calvinist theological doctrines on the movement [i.e. of free, creative thought] we have attempted to describe? It was the effort to avoid doctrinal differences, to turn from them to exploration of nature in a religious spirit, which constituted the atmosphere in which science could advance, and would no doubt have advanced in the Palatinate if war had not intervened.[102]

The attitude of the Calvinists toward the Old Testament was, at that time, most conducive for Cabalistic speculation. Yates writes of "the strong Hebraic, Old Testament-inspired type of piety" which arose out of the Calvinist concern with reading <u>both</u> Testaments, and moreover that this type of piety "was conducive to amalgamation with Cabala, with the mystical side of Judaism."[103] After the Council of Trent (1545-1563) hardened the Church's attitude toward Cabala, and indeed "magic" of any type, those who were inspired by the writings of Ficino, Pico and others of that philosophy were

inclined also to take refuge within the fold of Calvinism. Heidelberg therefore was a centre of what little remained of the spirit of the Renaissance and of tolerance and free enquiry. It was, in Comenius's time, a great centre of intellectual exchange and political excitement (for the scholars of Heidelberg had great hopes for the Elector Palatine - Frederick V!).

R.J.W. Evans in his article "The Wechel Presses: Humanism and Calvinism in Central Europe 1572-1627"[104] also helps us to glimpse the peculiar quality of Heidelberg and its university. Evans tells us that:

> The Calvinist literati at work in Heidelberg around the year 1600 formed a distinct circle, high in professional repute....What were the characteristics of this cultivated Calvinism? As the refuge of many sophisticated spirits it remained fundamentally erudite and non-dogmatic, critical and non-emotional. Its restraint was not a mantle for confessional indifference, still less toleration, but rather a genuine search for religious harmony. Some of the last representatives of Renaissance reconciliation theology worked under the Palatine aegis in the early seventeenth century, notably the school of David Pareus.[105]

COMENIUS AT HEIDELBERG

While at Heidelberg Comenius studied under a number of the most famous and influential of the professors there. Among them were Johannes Henricius Altingius, Abraham Scultetus, Bartholomaeus Scopenius, and David Pareus himself.[106] The most important of these men for our understanding of Comenius is David Pareus (1548-1622). Pareus, who taught Comenius theology, was devoted to interconfessional peace and may have encouraged Comenius's own irenical tendencies. He himself was the successor to Zacharias Ursinus who earlier held the

chair of theology at Heidelberg and had co-authored the Heidelberg Catechism (1563).[107] Concerning Pareus and his friendship with Comenius at Heidelberg Yates tells us that:

> Paraeus was interested in uniting Lutherans and Calvinists; both he and the other professors who lectured to Comenius were closely associated with the Elector Frederick. Sculteus was Frederick's chaplain and accompanied him to Prague;... The young Comenius was thus in a position to learn at first hand about spiritual and intellectual movements at Heidelberg.[108]

Comenius was deeply moved by Pareus's teachings and, according to Spinka, "...later in life Comenius spoke of him with genuine appreciation and held his memory in great honor."[109]

In addition to his study of theology Comenius may also have had some interest in astronomy. With reference to his astronomical studies, we know that at the end of his year of study at Heidelberg Comenius purchased the manuscript of Nicholas Copernicus's De revolutionibus orbium coelestium from the widow of one of the professors at Heidelberg.[110] It is interesting to note some of the conflicting interpretations which have been made of this incident. In Kozik's biography of Comenius we read:

> A true son of his epoch [Comenius] was attracted by the discoveries of science. Before leaving Heidelberg he bought...with his last remaining funds Nicholas Copernicus' manuscript...and set out for home...proud to have acquired the manuscript of a work then under an interdict, which attacked the time honoured geocentric teaching.[111]

From this account one might infer that Comenius was moved to enquire for himself into the truth of the Copernican theory. However when we read Spinka's interpretation a very different view of Comenius's relation to Copernicus comes into focus. Spinka tells us that:

> [Copernicus's] arguments failed to convince him. He retained these anti-Copernican views throughout his life and later even wrote a refutation of them. But the manuscript, perhaps fortunately, was burned in the Leszno fire.[112]

Spinka proceeds to note that the strong biblical teaching which Comenius had received had a more formative influence on his thought than any theory which seemed to contradict the Word of God could displace. Comenius, later in life, taught the geocentric cosmography in his textbooks. We read in his Orbis Sensualium Pictus under the heading "the Celestial Sphere" that: "the Glode of Heaven is turned upon an Axle-tree, about the Globe of the Earth."[113]

At Heidelberg Comenius made some important contacts that were to play an important role in his later life and thought. Among his friends at the university was "George Hartlib, brother of Samuel Hartlib, who in later years was to collaborate with Comenius in his work in England."[114] Another friend of Comenius made at Heidelberg was the Lutheran mystic Andreae.

JOHANN VALENTINE ANDREAE AND TOMMASO CAMPANELLA

According to Yates, Johann Valentine Andreae (1586-1654):

> ...was a native of Wurttemberg, the Lutheran state which closely adjoined the Palatinate...[He] became a Lutheran pastor, but with a liberal interest in Calvinism. In spite of endless disasters, Johann Valentin was supported all his life by hopes of some far reaching solution of the religious situation. All his activities, whether as a devout Lutheran pastor with socialist interests, or as the propagator of "Rosicrucian" fantasies, were directed towards such a hope.[115]

It was Andreae who inspired Comenius to read the works of Campanella (1568-1639) which, in turn, were of great influence on Comenius's thought. Andreae was therefore the link between Comenius and the

contemporary Italian esoteric philosophy. Yates tells us that: "Andreae and his circle were deeply concerned with the contemporary Italisn situation [this is]...evident from their interest in the works of Tommaso Campanella."[116]

Comenius made many references to Campanella throughout his works and accordingly it is worthwhile to make the following excursus wherein we will look at a summary of an aspect of his thought which influenced Comenius.[117] According to Bernardine M. Bonansea:

> [Campanella] conceived of philosophy as an all-embracing science to which all other sciences must be referred as their ultimate source and foundation. No subsidiary science deals with all things as they are, but only as they appear, whereas philosophy, and especially metaphysics, deals with all things as they are and insofar as they are. Philosophy is an inquiry after the truth of both human and divine things, based on the testimony of God, who reveals himself either through the world of created things or by direct teaching. Consequently, nature and the Scriptures are the two codes on which philosophy must be built.[118]

In this we find the themes common to Comenius of the need for a unified approach to truth which is rooted in God's revelation of Himself in "experience, reason and revelation."[119] Politically, a look at Campanella's thought can enable us to better understand Comenius's own societal vision. Evans tells us that:

> The culmination of Italian Renaissance tolalitarianism was ...Campanella...a Utopian but deeply political th ker, perhaps the first to draw the full conclusions from Machiavelli, while at the same time rejecting out of hand the latter's irreligious cast of mind. For Campanella the basis of all political power is nature, but nature in the sense of a unitary animated totality, and thus his theology is natural in that it is potentially common to all men. The essence of all his political action is a millenarianism and sense of impending renewal of the world, which was a lifelong conviction with him...His significance here is as a focal point for the late-Renaissance interaction of metaphysics and politics.[120]

Campanella was imprisoned in 1600 for revolutionary activities and passed the rest of his life in a castle prison at Naples. According to Yates:

> Whilst in prison he wrote his City of the Sun, the description of an ideal city ruled over by Hermetic priests who keep the city in happiness and virtue through their benevolent scientific magic. The City of the Sun is in the line of great Utopias, the fantasies of ideal societies which are characteristic of a Rosicrucian atmosphere. It profoundly influenced Andreae who was himself to be the author of one of the most important of the Utopias [i.e. his Christianopolis].[121]

Andreae's Rosicrucian ideals were an epitomization of the collected wisdom of the Hermetic-Cabalist tradition culminating in the writings of Campanella.[122] His hopes for a universal restoration of true Christianity and enlightened government were intimately connected with his world view which was based on the macro-microcosmic philosophy.[123] Yates summarizes the common goals of the mystical scholars of the late-Renaissance who, although of different confessional stances, sought for a higher synthesis of Christian truth:

> The common basis would be a common Christianity, interpreted mystically, and a philosophy of Nature which sought the divine meaning of the hierglyphic characters written by God in the universe, and interpreted macrocosm and microcosm through mathematical-magical systems of universal harmony.[124]

This goal of a new, reunified Christianity stood behind Andreae's and later Comenius's attempts at church reconciliation. This goal was articulated in Andreae's Fama Fraternitatis. This manifesto, according to Yates:

> ...calls for a general reformation because other reformations have failed. The Protestant Reformation is losing strength and is divided. The Catholic Counter Reformation has taken a wrong turning. A new general reformation of the whole wide world is

> called for, and this third reformation is to find its strength in Evangelical Christianity with its emphasis on brotherly love, in the esoteric Hermetic-Cablist tradition, and in an accompanying turning towards the works of God in nature in a scientific spirit of exploration, using science or magic, magical science or scientific magic, in the service of man.[125]

For the rest of Comenius's long life he was to be inspired by this hope of a "general reformation" and united by this common dream Comenius and Andreae remained in close contact by corresponding until Andreae's death.

CONCLUSION OF CHAPTER FOUR

Comenius graduated from Heidelberg University in 1613 and "...in the following years he [continued to acquire]...a vast encyclopaedic culture" and developed "a system of 'Pansophia' or universal knowledge."[126] He was able to do this because of the exceptional level of inspired teaching which he acquired at Herborn and Heidelberg. To summarize Comenius's harvest of formal education it is to be remembered that Comenius's thought had been enriched by an incredible variety of scholars. From Alsted he acquired the spirit of educational research based on a mystical conception of the nature of man and of man's infinite potential as the image of God. From Hermannus he learned the subtle art of applying the loftiest teachings of theology to the ordinary affairs of the world. From Gutberleth he came to see the wonder of the world as visible to the senses (cf. the Orbis Sensualium Pictus) which forms the starting point of the soul's ascent of "the scale of existence". From Ratke he acquired the notion that much could be taught in a short time if great attention is placed on correct methods. Finally from Andreae and

Campanella's writings Comenius acquired the vision of a general reformation of Church, Society and Learning which might be brought about by the proper dissemination of knowledge by an elite corps of mystical Christian scholars.

NOTES

[1]Spinka, Comenius, "Foreword to the Second Edition," no page number.

[2]J.V. Polišenský, The Thirty Years War, tr. Robert Evans, (London: New English Library, 1974), p. 62.

[3]Spinka, Comenius, p. 24.

[4]Polišenský, Thirty Years War, p. 62.

[5]Ibid.

[6]Ibid., p. 65.

[7]František Kožík, The Sorrowful and Heroic Life of John Amos Comenius (Prague: State Educational Publishing House, 1958), p. 6.

[8]Ibid.

[9]Spinka, Comenius, p. 25.

[10]Will S. Monroe, Comenius and the Beginnings of Education Reform, (New York: Charles Scribner's Sons, 1900; Reprint Edition - New York: Arno Press & New York Times, 1971), p. 39.

[11]M.W. Keatinge, "Introduction - Biographical" p. 2 in Comenius, Great Didactic, tr. Keatinge.

[12]Spinka, Comenius, p. 25.

[13]Kožík, Sorrowful, p. 7.

[14]Sadler, Comenius, p. 5.

[15]Ibid.

[16]Robert Herbert Quick, Essays on Educational Reformers (New York: D. Appelton and Co., 1908), quotation from the Preface of Comenius's Prodromus.

[17]Polišenský, Thirty Years War, p. 74.

[18]Kožík, Sorrowful, p. 9.

[19]Herben, Huss, p. 145.

[20]Sadler, Comenius, p. 5; quotation from the Prodromus of Comenius.

[21]Sadler, Comenius, p. 5.

[22]Spinka, Comenius, p. 26.

[23]Keatinge, "Introduction - Biographical" p. 3 in Comenius, Great Didactic, tr. Keatinge.

[24]Sadler, Comenius, citing passages taken from the Great Didactic of Comenius, p. 6.

[25]Spinka, Comenius, p. 27.

[26]Ibid., p. 26.

[27]Brock, Unity. On page 269 Brock tells us that:
"Already at the beginning of the sixteenth century members of several powerful families...Zerotin... had joined the Unity....Some of the most outstanding Brethren of the last years of the Unity's existence - Karel of Xerotin, for example, or Vaclav Budovec of Budov - were at the same time typical representatives of the Cz-ch nobility and the spokesmen of their class in Bohemia or Moravia."

[28]Odložilik, "Bohemian Protestants," p. 344 et. passim.

[29]Ibid., p. 349.

[30]Ibid.

[31]Polišenský, Thirty Years War, p. 29.

[32]Odložilik, "Bohemian Protestants," p. 349.

[33]Kožík, Sorrowful, p. 10.

[34]Spinka, Comenius, p. 26.

[35]Ibid.

[36]Ibid., p. 28.

[37]Leroy E. Loemker, "Leibniz and the Herborn Encyclopedists," Journal of the History of Ideas, 22 (1961) p. 323.

[38]Ibid.

[39]Ibid.

[40]Ibid.

[41]Anna Heyberger, Jean Amos Comenius (Komenský): Sa vie et son oeuvre d'éducateur, (Paris, Librairie Ancienne Honore Champion, 1928).

[42]Ibid., p. 22.

[43]Ibid., p. 23.

[44]Loemker, "Herborn," p. 324.

[45]McNeill, Calvinism, p. 276.

[46]Spinka, Comenius, p. 28.

[47]Keatinge, "Introduction - Biographical," p. 4 in Comenius, Great Didactic, tr. Keatinge.

[48]Ibid.

[49]S.J. Curtis and M.E.A. Boultwood, A Short History of Educational Ideas (London: University Tutorial Press, second edition, 1956), p. 172.

[50]Ibid.

[51]Ibid.

[52]Keatinge, "Introduction - Biographical," p. 5 in Comenius, Great Didactic, tr. Keatinge.

[53]Curtis and Boultwood, Educational Ideas, p. 174.

[54]Monroe, Comenius, p. 42.

[55]Leomker, "Herborn," pp. 325 & 326.

[56]Comenius, Naturall Philosophie, no page numbers.

[57]Evans, Rudolf II, p. 118.

[58]Ibid., pp. 233 & 234.

[59]cf. Yates statement:

> "Another interesting example of a more rational method from Renaissance occultism is afforded by the Orbis Pictus of Comenius (first edition in 1658). This was a primer for teaching children languages...by means of pictures. The pictures are arranged in the order of the world, pictures of the heavens, the stars and celestial phenomena, of animals, birds, stones and so on, of man and all his activities. Looking at the picture of the sun, the child learned the word for sun in all the different languages;... it was an astonishingly original pedagogic method in those times....It is said that the boys of Leipzig in the time of Leibniz were brought up on "the picture book of Comenius' and Luther's catechism." Francis Yates, The Art of Memory (London: Routledge and Kegan Paul, 1966), p. 377.

[60]Note that a "Facsimile Reprint" of the 1659 edition of the Orbis Sensualium Pictus of Comenius, exists, having been translated by Charles Hoole (Menston, England: Scholar Press; Facsimile edition, 1970).

[61]Evans, Rudolf II, p. 283.

[62]Ibid.

[63]Ibid.

[64]cf. Yates statement:

> "In the transference of Renaissance modes of thinking and procedures to the seventeenth century a considerable part was played by the German, Johann-Henrich Alsted..., encyclopedist, Lullist, Cabalist, Ramist, and author of the Systema mnemonicum..." (Yates, Memory, pp. 375 & 376)

[65]Note that although Alsted's interests were "esoteric" he himself was deeply concerned with the purity of his sources. With respect to this Yates tells us that Alsted:

> "...too, is affected by the reaction against Renaissance occultism. He wished to free Lullism from the idle dreams and fancies with which it had been contaminated and to return to the purer doctrine as taught by Lavinheta." (Yates, Memory. p. 376)

[66]Note that Hermannus's dates are most difficult to obtain. There is nothing to be found on him in either the Neue Deutsche Biographie or the Allgemeine Deutsche Biographie.

[67]Further information on Heinrich Gutberleth may be found in vol. X, Allgemeine Deutsche Biographie (Leipzig: Verlag von Dunder & Humbolt: 1879), p. 213.

[68]Monroe, Comenius, p. 44.

[69]Ibid., p. 43.

[70]Ibid., p. 44.

[71]Sadler, Universal Education, p. 69.

[72]Lynn Thorndike, A History of Magic and Experimental Science, vol. VII, (New York: Columbia University Press, 1958), p. 411.

[73]Ibid.

[74]The influence of Campanella will be discussed later in this chapter in conjunction with that of Andreae.

[75]Loemker, "Herborn," p. 326.

[76]Ibid.

[77]Sadler, Universal Education, p. 70.

[78]Yates, Giordano, p. 450.

[79]Comenius, Schooles, p. 35.

[80]This work which was begun in 1612 was entitled in Latin: Linguae Bohemicae Thesaurus, hoc est Lexicon plenisimum, Grammatica accurata, idiotismororum elegantiae emphases adagiaque.

[81]Jan Jakubec, Johannes Amos Comenius (Prague, 1928 - Reprint

Edition; New York: Arno Press & New York Times, 1971), p. 14.

[82]Kožík, Sorrowful, p. 16.

[83]Spinka, Comenius, p. 29.

[84]Ibid.

[85]Kožík, Sorrowful, p. 17.

[86]Ibid., pp. 15 & 16.

[87]The significance of this work to our understanding of Comenius is summarized by Jakubec:

> "Here is manifested...the endeavour of Komensky to compass as far as possible the entirety of human knowledge, and particularly to take the Bible as the basis for all knowledge and to demonstrate the vanity of human knowledge. All these works breathe the great love of Komensky for his native language. The young scholar had a lively interest in all branches of knowledge; ...with his systematic, clear thinking mind he strove to form a harmonious whole from them all." (Jakubec, Johannes, p. 15)

Note also that my assertion that Comenius commenced his Theatrum while still at Herborn is based on the following statement by Jakubec:

> "At Herborn Komensky gathered together material for a kind of encyclopedia of natural sciences, mainly in the spheres of astronomy and geometry. In addition to this he collected material in the field of history..." (Jakubec, Johannes, p. 15).

Spinka, on the other hand, believes that Comenius set out to compile the Theatrum at a later date:

> "Either now [i.e. 1614] or later after he had received his ordination, he plunged into an astonishing program of literary activity...he undertook the colossal task of writing, single-handed, a sixteen-volume encyclopedia, comprising all things from the Creation to his day!...[it was] written in Czech - the first encyclopedia of its kind in the literature of his country." (Spinka, Comenius, p. 31)

It is my contention that, although the general idea of the Theatrum and the initial research began at Herborn, Comenius actually commenced his final draft of this work in 1614. cf. Robert Young,

Comenius in England (London: Oxford University Press, 1932) p. 10 - Young writes:

> "1614-27. Comenius composed his Theatrum universitatis Rerum in MS. It contains the germ of his pansophic ideas."

[88]Monroe, Comenius, p. 29.

[89]Ibid.

[9]id., p. 44; Note also Monroe's statement: "...at Herborn...Comenius became acquainted with Ratke's plan of instruction, then much discussed at university centres, and especially at Jena, Giessen, and Herborn. However, much he may have been stimulated to educational reform by his own belated classical training and by the pedagogic character of the work at Herborn, the writings of Ratke, as he himself tells us, played the largest part in making him an educational reformer." (Ibid.)

With respect to the relation between the pedagogical works of Alsted, Ratke, and Comenius, Evans maintains that they are to be seen as "a framework for reform" in that by means of universal education mankind could be freed from its "present toils" and raised "to participation in the divine order." Evans goes on to state that:

> "In this formulation [i.e. of salvation through education] we should recognize not only the programme of Comenius...but that of...Wolfgang Ratke (Ratichius), who presented a scheme for universal reform to the Emperor in 1612." (Evans, Rudolf II, p. 283)

[91]Comenius, Great Didactic, p. 7.

[92]Spinka, Comenius, p. 29, note 8.

[93]Spinka tells us that: "Comenius held two Latin disputations, which were printed at the school press." (Spinka, Comenius, p. 29)

[94]Ibid.

[95]Ibid.

[96]Ibid.

[97]Jakubec, Johannes, p. 15.

[98]Kozik, Sorrowful, p. 17.

[99]Yates, Rosicrucian, p. 172.

[100]H.R. Trevor-Roper, Religion Reformation and Social Change, second edition (London: Macmillan, 1972) p. 26. With respect to the social composition of those who cherished Erasmian ideals but who entered the Calvinist fold Trevor-Roper tells us that:

> "...everywhere the Erasmian bourgeoisie, if it did not renounce its Erasmian views altogether, turned to Calvinism as the only form in which it could defend them. The mercantile aristocracy of Venice, preserving inviolate their republican constitution, were able to keep their old character, neither Papist nor Protestant. But their colleagues in Milan, Como, Lucca were not. So the most independent of them slid gradually into Calvinism, or at least, as they slipped over the Alps into Switzerland, accepted (with whatever private reservations) the public leadership of the Calvinists, the only International which could give protection and coherence to a group of urban minorities whose own strength lay not in numbers but in their moral and intellectual quality." (Ibid.)

Note that the Unity's alliance with the Calvinists is in like manner a way in which a small religious communion could gain international contacts and support. Zerotin, although a close friend of many Calvinists, was in most respects Erasmian in his beliefs and politics. This might well explain his neutral position vis a vis the desire of the Czech Protestant Estates to call in the Calvinist Frederick V of the Palatinate.

[101]Yates, Rosicrucian, p. 227.

[102]Ibid.

[103]Ibid.

[104]R.J.W. Evans, "The Wechel Presses: Humanism and Calvinism in Central Europe 1572-1627," Past and Present; Supplement 2, 1975.

[105]Ibid., pp. 42 & 43.

[106]Yates, Rosicrucian, p. 156.

[107]Spinka, Comenius, p. 30.

[108]Yates, Rosicrucian, pp. 156 & 157.

[109]Spinka, Comenius, p. 30.

[110]František Kožík, Johan Amos Comenius: 1592-1670, tr. Sylvia Fink-Myhre (Prague: Sntl Publishers of Technical Literature, 1958) no page numbers.

[111]Ibid.

[112]Spinka, Comenius, p. 31.

[113]Comenius, Orbis Pictus, p. 127. Note also the interesting statement with which Comenius opens his lesson on the "Celestial Sphere": "Astronomy considereth the motion of Stars, Astrology the Effects of them." (Ibid.)

[114]Yates, Rosicrucian, p. 157. For a good source on Comenius's relations with Harlib V.G.H. Turnbull, Hartlib, Dury and Comenius: Gleanings from Hartlib's Papers (London: Hadder & Stoughton, 1947).

[115]Ibid., pp. 30 & 31

[116]Ibid., p. 137.

[117]In Comenius's work, Naturall Philosophie, Comenius recounts his initial reading of Campanella in these words:

> "...Prodromus philosophia instaurandae by Thomas Campanella an Italian: which I read over with incredible joy, and being inflamed with an exceeding great hope of new Light, I greedily turn'd through his Realis philosophia epilogistica (for so hee calls it) set forth in foure Books, as also the Books de rerum sensu, where ever I could get them. Whereby I found my desire, in some sort satisfied, but not throughout. For this very foundation, that all things were made out of two contrary principles onely, offended me." (Comenius Naturall Philosophie, no page numbers)

Concerning Campanella's influence on Comenius, Yates maintains that:

> "...there can be no doubt that the Orbis Pictus came straight out of Campanella's City of the Sun, that Utopia of astral magic in which the round central Sun temple, painted with the images of the stars, was surrounded by the concentric circles of the walls of the city on which the whole world of the creation and of man and his

> activities was represented in images dependent on the central causal images. As has been said earlier, the City of the Sun could be used as an occult memory system through which everything could be quickly learned, using the world "as a book" and as "local memory". The children of the Sun City were instructed by the Solarian priests who took them round the City to look at the pictures, whereby they learned...through the images on the walls. The pedagogic method of the highly occult Solarians, and the whole plan of their City and its images, was a form of local memory....Translated into the Orbis Pictus, the Solarian magic memory system becomes a perfectly rational, and extremely original and valuable, language primer." (Yates, Memory, pp. 377 & 378)

[118]Encyclopedia of Philosophy, vol. 2, s.v. "Campanella, Tommaso," by Berardine M. Bonansea, p. 11.

[119]Loemker in his article on the Herborn Encyclopedists provides an interesting link between Campanella and Comenius by way of Alsted. He informs the reader that the Platonic understanding of the theory of knowledge held by Alsted and others at Herborn:

> "...is drawn from Campanella's conviction that the three sources of knowledge - experience, reason, and revelation - are within limits "proportional" and mutually confirmatory. Thus they can follow Bacon in his doctrine of the natural light..." (Loemker, "Herborn", p. 331).

With respect to Comenius's own usage of Campanella we read in Comenius's Naturall Philosophie:

> "...we make three principles of Philosophy with Campanella, and his happy Interpretoer Tobie Adams, Sense, Reason and Scripture:..But then because many things are remote both from sense and reason...we are indebted to the grace of God, that he hath by his Word revealed unto us even some secrets which concern us to know. Therfore if any one desire the true knowledge of things these three principles of knowing must be of force be conjoyned...So then the principles of knowing, must conjoyned, that divine Revelation may afford us belief; Reason understanding, Sense, certainty..." (Comenius, Naturall Philosophie, no page number)

[120]Evans, Rudolf II, p. 20.

[121]Yates, Rosicrucian, p. 137.

[122]Yates, in the following passage helps to clarify the relationship between Campanella nad Andreae:

> "It will be remembered that Campanella's German disciple, Tobias Adami, took some of Campanella's manuscripts to Germany and eventually published them there. It was to Tubingen that he took them, between about 1611 and about 1613, where lived Johann Valentin Andreae, who, whether or not actually the author of the Rosicrucian manifestoes, was certainly connected with the group whence they emanated. It seems undoubted that Campanella's ideas reached Andreae in this way." (Yates, Giordano, p. 413).

[123]With respect to the macro-microcosmic theory as it was understood in the Renaissance, Donald Levy writes:

> "Renaissance speculation on the microcosm centered on the idea that human nature partakes of bodily, intellectual, and divine existence, uniting in itself the whole of the sublunary, celestial, and supercelestial realms. Human consciousness, by which man can know all things, connects him with all things; consciousness is itself a link between thought and its objects. Through consciousness man can know and become all that he wills. A similar doctrine of connections drawn from the Cabala underlies the varous magical theories of language which asserted that quasi-physical influences join names and things, beyond the conventions of the varoius natural language." (Encyclopedia of Philosophy, vol. 5, "Macrocosm and Microcosm," by Donald Levy, p. 124)

[124]Yates, Rosicrucian, p. 98.

[125]Ibid., p. 139.

[126]Ibid., p. 157.

CHAPTER FIVE

CONCLUSION

In the preceding chapters on the historiographic, philosophical, religious, and educational background of Comenius we came to appreciate the wide scope of his interests and affiliations. In this attempt the author of this thesis has wished to follow Mandrou in affirming that:

> There is no pioneer, however great a genius he may be, who can flatter himself that he has completely broken with the heritage inculcated in him since childhood through the environment of his family, his school and the community in which he works... the diffusion of new ideas is not to be understood, any more than the maintenance of traditions, without reference to a general climate which involves the main social relations, the institutions concerned with promoting or disciplining intellectual life, the intervention of political or religious authorities and the technical means available both to those who had something to say and to those who listened to them.[1]

Although this thesis falls well short of Mandrou's ideal of the establishment of the "general climate" of an intellectual pioneers's thought, this thesis has shown that the background of Comenius's thought is not to be ignored in any assessment of Comenius's contribution either to intellectual history in general or educational history itself. In the light of our analysis it is hoped that it is now clear that, in the failure to establish even the general intellectual context of Comenius's thought, the history of education has greatly distorted the contours of Comenius's educational theory and its social and historical significance. We have seen that Comenius was very much imbued with the spirit of late sixteenth century mysticism. We have also seen how Comenius came into contact with the esoteric philosophical traditions via his professors at Herborn and Heidelberg

and how Comenius received from them his enthusiasm for new discoveries and new methods of enquiry.

At this point it is important to consider why it was that Comenius's thought had to wait until the nineteenth century before it became considered important enough to merit serious consideration by scholars. It is this author's belief that, owing to the great influence of Pierre Bayle, at the very dawn of the Enlightenment Comenius's reputation was destroyed.

Although Pierre Bayle (1647-1706) had access to all the published writings of Comenius, he did not see in Comenius those "seeds of the Enlightenment" so often alluded to by so many historians of education. This is especially important when we consider that Bayle's writings were of greatest influence on those philosophes and savants whose intellectual culture in the eighteenth century is honoured by its historical label - the Enlightenment. Accordingly it is important to look at his treatment of Comenius in order to understand a major factor in the decline of Comenius's reputation as a philosopher and educational theorist in the eighteenth century (outside the borders of Comenius's native Bohemia where his name was still on the lips of patriots). Pierre Bayle, like Comenius, was an intellectual in exile residing in Amsterdam for a large portion of his life. Like that of Comenius, Bayle's exile was the result of his rejection of Catholic intellectual and political hegemony.

Unlike Comenius, who took the possibility of the attainment of certain knowledge as axiomatic, Bayle was a sceptic and was therefore bitterly opposed to all claims of certain knowledge or even of its possibility.[2] The famous scepticism of Bayle is evident in his great

Dicionnaire historique et critique (1697)[3] which was reprinted and revised for many years throughout the eighteenth century. The following passage from his article "Comenius" in the Dictionnaire will help to illustrate this author's contention that Bayle was of pivotal importance in the destruction of Comenius's reputation in eighteenth century intellectual circles.

> La réformation des Ecoles ne fut pas son principal entêtement; il se coiffa encore plus de Prophéties, de Révolutions, de ruines de l'Antechrist, de Regne de mille ans, & de semblables morceaux d'un dangereux Fanatisme: je dis dangereux, non seulement par rapport à l'Orthodoxie, mais aussi par rapport aux Princes & aux Etats...Ces Visions promettoient monts & merveilles a ceux qui voudroient entreprendre d'exterminer la Maison d'Autriche & le Pape.[4]

From this emerges a characterization of Comenius in which his school reforms, now considered so modern, are seen to be but one instance of his "pig-headedness." Mention is also made in the above passage to Comenius's unfortunate tendency to believe in prophecy. Yates gives us a fascinating glimpse of the political significance of Comenius's acceptance of the vaticinatory ravings of such Protestant prophets as Drabik and Kotter.[5] In their visions of guardian angels protecting the emblems of such Protestant heroes as Frederick V and Gustavus Adolphus of Sweden, Comenius saw the hope of "light out of the darkness" of the Thirty Years War.[6] It was his fond belief that God would raise up a Christian Philosopher-King to pacify the earth, to encourage universal learning, and unify Christendom under a common Protestant mystical reformed Church which would command the assent of all men of good will.[7] In all this Bayle only saw colossal folly. By the later portion of the seventeenth century the prophesies which Comenius took such pains to publish had all come to nought. Indeed, one of Comenius's

most trusted sources of prophetic truth recanted his prophetic vocation shortly after Comenius's death and converted to Roman Catholicism! Accordingly by the time Bayle came to read the works of Comenius the hopes and dreams of Comenius's political vision seemed insanity. In Bayle's sceptical mind the whole notion of mystical kingship which coloured Comenius's political imagination seemed a terrible threat to the establishment of a rational political settlement to the ills of Europe. With respect to Comenius's educational theories in the Great Didactic, Bayle considered that from it "the Republic of Letters has drawn no profit" and that he even maintains that "there is nothing of practical utility in the ideas of this author."[8] Having rejected Comenius as a philosopher and theorist Bayle praises Comenius for his efforts in text-book writing. Concerning the famous Janua linguarum reserata of Comenius, Bayle wrote in his Dictionnaire:

> Le livre qu'il publia...sous le titre de Janua Linguarum reserata lui acquit une merveilleuse réputation. Quand Comenius n'auroit publié que ce Livre-là, il se seroit immortalise.[9]

It is interesting to note that Comenius's reputation did survive in the eighteenth century as a writer of school books. What is more interesting is Bayle's contention that there is nothing of "practical utility" in the philosophical and theoretical writing of Comenius. It is the contention of this author that Bayle had in fact clearly seen the tremendous gulf that exists between the world-picture of Comenius and that of the most "progressive" thinkers of the late seventeenth century. To explicate this contention let us now turn to briefly examine the shift of world-view which separated Comenius

from Bayle and most of the thinkers of the Enlightenment. In so doing it is interesting to note Maritan's interpretation of that shift which I hope to demonstrate contributed to the rejection of Comenius by the thinkers whose thought has formed the basis of what has come to be seen as the modern world-picture. Maritan writes:

> In the sixteenth century, and more particularly in the age of Descartes, the interior hierarchies of the virtue of reason were shattered. Philosophy abandoned theology to assert its own claims to be considered the supreme science, and the mathematical science of the sensible world and its phenomena taking precedence at the same time over metaphysics, the human mind began to profess independence of God and Being. Independence of God: that is to say, of the supreme Object of all intelligence, Whom it accepted only half-heartedly until it finally rejected the intimate knowledge of Him suprenally procurred by grace and revelation. Independent of being: that is to say, of the con-natural object of the mind as such, against which it ceased to measure itself humbly, until it finally undertook to deduce it entirely from the seeds of geometrical clarity which it conceived to be innate in itself.[10]

As has been indicated in this thesis, Comenius's thought is clearly based on a notion of knowledge which takes itself to be unitary. For Comenius there is no essential conflict between reason and revelation and the sensible world. What has been emphasized earlier in this thesis and must be emphasized again, is that Comenius held that revelation must always be the normative principle of all positive knowledge. In this contention Comenius is closer to St. Thomas Aquinas than to Descartes or John Locke despite the protestations of educational historians and Czech patriots.

The thought of Descartes is often taken to be illustrative of the shift in philosophy from its status as the handmaiden of theology to a discipline separate and even logically prior to theology. Given

this assessment of Descartes it is interesting to discover that Comenius and Descartes were acquaintances and had discussed the merits of their respective approaches to truth. The meeting between Comenius and Descartes took place in Holland in 1642 after Comenius had departed England. Spinka tells us that:

> They had a friendly enough talk lasting four hours, but, as could be expected, it got them nowhere. Descartes explained ..."the secrets of his philosophy," while Comenius defended his views...The nature of their disagreement is very succintly stated in the parting shot of Descartes. He told Comenius: "I will not go beyond the realm of philosophy; accordingly, I shall deal with only a part of that which you will treat in entirety."[11]

In this we see one aspect of the fundamental separation which exists between Comenius's thought and the leading edge of philosophical thought in Comenius's own time. "Confounding matters human and divine," Comenius was attacked by both Bayle and Descartes as one who insisted on clinging to the very world-picture which "enlightened" philosophers aimed at supplanting.

We are now in a position to assess the alleged modernity of Comenius. To do this properly one must appreciate the cosmological understanding of Comenius which undergirded all his thought. The following quotation from Arnold Hauser is of great use in briefly outlining the deeper implications of the Renaissance world-picture as Comenius received it. Hauser writes:

> To men of the Renaissance every aspect of life and thought - theology, philosophy, and astronomy as well economics and politics - seemed to be dominated by a system of concentric circles revolving around a fixed and motionless centre. The universe was thought of as being organized on the same hierarchical pattern as feudal society...The seat of God was the centre round which the heavenly spheres revolved, the earth was the centre of the material universe, and man himself a self-contained microcosm round which, as it were,

> there revolved the whole of nature, just as the celestial bodies revolved round that fixed star the earth.[12]

Firmly rooted in this cosmology Comenius confidently wrote of the total coherence of reality. Sadler presents us with an interesting summary of Comenius's own statement of this understanding as follows:

> Everything in the universe could be thought of as being arranged in parallel strata. He developed this idea in the Third Part of the Consultation (the Pansophia) and described the following "worlds" which together formed a kind of ladder between God and man:
> 1. The thoughts and ideas produced by the human mind.
> 2. The spiritual Beings presumed to exist apart from man.
> 3. The material world of nature.
> 4. The arts and crafts by which man expresses himself.
> 5. The world of social relationships and moral values.
> 6. The spiritual relationships of man with God.
> 7. The world of eternity in which God is fully realised.
>
> ...Thus the universe is in some way implied by each particular case, and every case is a concrete universal... Since according to this argument, all particular cases would eventually lead to ultimate truth it seemed obvious to Comenius that any inconsistency, anomaly or confusion must be apparent only. In fact it was simply a challenge to discover the harmony obscured for the moment by inevitably present.[13]

For Comenius (and all who stand in the Christian Neoplatonic tradition with him) the world as it appears to the senses is but an image of a higher, more real world which man may regain, as Comenius would say, "by grace and education." Comenius writes in the Panaugia that: "Omnes igitur Creaturae, nihil nisi aeternae Lucis umbrae ac simulachra quaedam sunt"[14] which in Jan Blahoslav Čapek's translation reads: "All creatures are nothing more than shadows and some portraits of the eternal light," (Panaugia, V:5).[15] On this basis Comenius writes with confidence in the Great Didactic that:

> All things have been harmoniously arranged by God in such a manner that the higher in the scale of existence can be represented by the lower, the

> absent by the present, and the invisible by the visible.[16]

With reference to Comenius's educational theory we should now be able to see the essential problem of the "sense-realist" interpretation of Comenius. The world of the senses stands first in the experience of a young child, for this reason Comenius takes it to be the logical point of departure for the child's study of "all things". The world as visible to the senses is never the primary focus of Comenian education - only the first rung of the ladder of existences which extends from the material world to the divine Mind. The universe as Comenius understood it was not the world of appearances with its continual bloodshed and ignorance of God's majesty, instead Comenius's optimism was fed by his belief that there was indeed a "great chain of being" which extended from the humblest level of creation to God himself.

Comenius's social and political thought is merely a corollary to his cosmological thought (which as we have seen owes so much to his Christianized Platonism and to the esoteric philosophies which he studied at Herborn and Heidelberg). This is especially important to realize when we encounter the claims made by those historians who speak of his "modernity". As we remember from the first chapter, Comenius has been frequently hailed both as a hero of democracy and as a fore-runner of secular socialism. The reasoning behind these assertions is for the most part based upon Comenius's belief that everybody should be educated and that education in turn should follow nature. However we have learned in this study that, with reference to Comenius's understanding, Nature is an outward and visible reflection of God's creative word and as such is arranged in hierarchical fashion

(together with the rest of creation). Accordingly, in Comenius's understanding of political harmony it is "natural" to assume that God ordains "degrees among men" just as there are degrees of excellence among angels, heavenly bodies, or minerals.[17] Trevor-Roper helps us to understand the spirit of Comenian socio-political reform in the following passage:

> Soon after his arrival in England he wrote...three drafts for the reform of English education, filled with mystical, millenary language. "I presume we all agree", he wrote, "that the last age of the world is drawing near, in which Christ and his Church shall triumph"; and this age was to be "an age of Enlightenment, in which the earth shall be filled with the knowledge of God, as the waters cover the sea". But let us not suppose, he added, that this great cosmic revolution entails any political revolution. Scripture warrants no such assumption. Tyrants will disappear, but just kings will remain, and under them the new reformation, the reign of Light, will be brought about.[18]

Reform for Comenius, then, turns out to be of a fairly "conservative" nature with respect to radical shifts of political power. As in Plato, as in the Christian Middle Ages, the problem is not so much one of altering the political structure of society so much as restoring it to its "proper" cosmological position in the Great Scheme of Things. In this notion of reform, Comenius is also at one with the reforming spirit of the late sixteenth century which Evans so clearly illustrates in the following passage:

> The widespread commitment to a magical universe in the later sixteenth century was an acceptance of practical limitations; it sought rather to reveal the facts in their true nature than to change them ...the task of the reformer was still primarily to alter men's notions. He was a propagator, a communicator, a mediator of a prior and superior knowledge. Just as ... pansophy looked for some intellectual framework with which to apperceive the real, taking the individual datum to be incoherent

> without that framework, so the reformer was instilling a new mental discipline. His weapons too were symbols, his ultimate panacea education and self-knowledge.[19]

The nature of Comenian societal reform is such that is cannot be separated from his notions of religious truth (as revealed in Scripture) or of philosophical truths (brought about by the agency of the "Image of God shining within us - our Rational Soul"). Indeed the only "revolution" which Comenius condones is thatwhich brings man around to a knowledge of the unchanging truths upon which he can properly order himself and his society on the eternal patterns of the mind of God. In a society organized on the principles advocated by Comenius, a single universal conception of truth had to inform the minds of every citizen.

It may be said of Comenius (as Eric A. Havelock asserts of Plato and Aristotle) that the answer to the problem of the nature of man in society "was theoretically simple". As Havelock puts it:

> They denied that there had been any significant deveopment at all. To understand man, you fix your gaze on what he should be. For in a sense this is what he has always been - a species apart from the brutes, rational and moral, intelligent and just. If man's practice did not fit this theory, then man was to be corrected and educated till it did. For the norms by which his behaviour is governed, while they lie within the cosmos, lie outside history and process.[20]

As with Plato and Aristotle so it was with Comenius's understanding of man. Man's nature was fixed in that it has existed for eternity in the mind of God as an immutable Idea. Just as their is only one pattern of man's nature in God's mind, so too was there but one model of society, and that model was to be the earthly realization of the celestial hierarchy. From this it may be concluded that Comenius's

understanding of societal reform, based as it is on his cosmological system, is radically at varience with the more recent political theories of social equality and democracy which have been attributed to Comenius.

We have established that Comenius's thought was at varience with the leading edge of philosophy and polity in the seventeenth century. It has also been established that, seen in its proper context, one cannot talk of Comenius's educational theories as ones which promote an ideal of democratic or socialistic societal reform. What then can be said of Comenius's contribution to educational history? The answer to this question may well lie in the process of creative misinterpretation of Comenius which has occured from the late seventeenth century until the present day. Each generation of scholars and educators has seen a facet - real or imaginary - in Comenius's work which has somehow either met a need in the education of that day or has been found useful in justifying a given educational policy. In this regard we should note the following passage from Sadler:

> In the eighteenth century Comenius was thought of as a writer of textbooks, in the nineteenth as a forerunner of pedagogy. The tacit assumption was that he was interesting in the history of education but that the application of scientific psychology had made him out of date...[Nevertheless] emphasis has [recently] moved from methodology to sociology and from the school to the whole of life. Historical research can now be motivated by social purpose rather than by antiquarian interest.[21]

Accordingly Comenius's contribution to educational history has been differently perceived from age and age in accordance with the shifts of academic interest and ideological perspective. In any event it is to be hoped that this study has pointed the way to a more honest interpretation of Comenius. One perhaps based not so much on a

genuine desire to strive to learn from the experience of the past (no matter how much its world picture differs from that current today). This has been the formative ideal of this author and from this perspective many hitherto neglected aspects of Comenius's thought have been found to be not only of interest but of enduring value.

Throughout his life Comenius never lo faith in the world as an essentially meaningful place. It was his religious vision which gave him the faith which he had in man's ability to better himself "by grace and education." It is to be considered that, whereas the political and social elements of Comenius's thought were firmly tied to static conceptions of the nature of society, the theology of Comenius has yet to be understood or appropriated by Christians to this day. At a time when religious thought was being subjected to increasingly dogmatic analysis, Comenius was attempting to place theology on a broader, more tolerant basis. Although Comenius hated the institutional structure of the Roman Catholic Church of his day, he maintained intellectual contacts with a number of Catholics who shared with him his vision of a world made meaningful by the love of God. In his thought he made use of anything which seemed to carry the fragrance of wisdom despite its origins in systems of thought or belief alien to his own. Of greatest interest in his view of man's essential goodness and educability. Unlike the Calvinists of the Synod of Dort (1618-1619), Comenius remained faithful to the spiritual traditions of his professors at the centres of "mystical" Calvinism at Herborn and Heidelberg. He kept alive in his writings the spirit of free theological investigation which had characterized Herborn and Heidelberg in their golden age (before they fell victim to the general destruction

of the Thirty Years War). We see this especially in Comenius's insistence that man can indeed cooperate in the salvation of himself, his society, and the whole material creation. Comenius wrote in the Great Didactic that:

> It is base, wicked, and an evident sign of ingratitude, that we continually complain of our corrupt state, but make no effort to reform it;...We see, then, that it is more natural, and, through the grace of the Holy Spirit, easier for a man to become wise, honest, and righteous, than for his progress to be hindered by incidental depravity. For everything returns easily to its own nature, and this is what the Scriptures say:...[22]

The theological basis for this optimistic doctrine of man's nature is found in Comenius's interpretation of the imago Dei or "the image of God" in man which is found in the Bible in the Book of Genesis:

> ...Then God said, "Let us make man in our image, after our likeness; and let him have dominion over the fish of the sea,..." So God created man in his own image, in the image of God he created him; male and female he created them. (Gen. 1:26-27, RSV)

For Comenius, this passage confirmed his deeply felt intuition that man was a being of limitless possibilities. He expressed this belief in the following statement:

> It is evident that man is naturally capable of acquiring a knowledge of all things, since in the first place, he is the image of God. For an image, if it is to be accurate, necessarily reproduces the outlines of its archetype, as otherwise it will not be an image. Now omniscience is chief among the properties of God, and it follows that the image of this must be reflected in man. And why not? Man in truth, stands in the centre of the works of God and possesses a lucid mind, which, like a spherical mirror suspended in a room, reflects images of all things that are around it...our mind ...masters difficulties, hunts out what is concealed, uncovers what is veiled, and wears itself out in examining what is inscrutable; so infinite and unbounded is its power.[23]

Arising from such a vision of the infinite possibilities available to man as God's very image, Comenius was able to set an example of scholarly optimism and integrity which time cannot tarnish. Despite the shifts which have occured in philosophical and scientific perspective which separate the tought of Comenius from that of our own age, despite the coming of the new, more inclusive ideologies of democracy and socialism, there is much in Comenius's philosophical, religious, and educational background that is of enduring value.[24] This is so because the traditional, prescientific cosmology espoused by Comenius, while a poor representation of physical, quantifiable reality, offered man a place of significance and meaning in a Cosmos wherein everything was linked and interrelated by the communion of each with all. In defense of the traditional cosmology Burckhardt writes:

> The man of antiquity, who pictures the earth as an island surrounded by the primordial ocean and covered by the celestial dome, or medieval man, who saw the heavens as concentric spheres starting out from the earthly center as far as the limitless sphere of the divine spirit, doubtless was misled concerning the true disposition and proportions of the sensible universe. On the other hand, both of them were fully conscious of an infinitely more important fact, namely that this corporeal world was not the whole of reality and that it is surrounded and pervaded by a reality both greater and more subtle, which in its turn is contained in the spirit; and they knew, indirectly or directly, that the world in all its extension disappears in the face of the infinite.[25]

We now can begin to appreciate the role of Comenius's vision of universal coherence which stems from his personal attempt at a synthesis of Christian faith, esoteric philo[illegible]ical gnosis, and concern for the amelioration of human affairs. It is now evident that any future analysis of Comenius's thought in the history of education must

take into account its deep roots in Christian esoteric philosophies, the Hermetic and Cabalist mysteries, and all that contributed to that stream of "mystical" Calvinism which he imbibed abroad as a student. For to reexamine Comenius in this light would restore the life and inner meaning to his esoteric philosophy of education and societal renewal through knowledge and piety. In so doing we would come to appreciate Comenius's attempt to apply the deepest insights of the mystical tradition of his church, and the professors of Herborn and Heidelberg, to the provision of a truly Christian education -- a Christian education wherein the students not only hear about the doctrines of the faith but would be led anagogically into their own true selves in the "Paradise of the Heart" and become, for their age, the living embodiments of the person of Christ.

NOTES

[1]Mandour, Humanism, pp. 9-10.

[2]Encyclopedia of Philosophy, vol. 1, s.v. "Bayle, Pierre" by Richard H. Popkin, pp. 257-262.

[3]Pierre Bayle, Dictionaire Historique et Critique (Amsterdam: P. Brunel et al., 1740). Note that this edition is to be found in the rare book collection of the University of Alberta.

[4]Ibid., s.v. "Comenius", p. 203.

[5]Note Yate's evidence in "Comenius and the Rosicrucian Rumour in Bohemia", pp. 156-170 in Yates, Rosicrucian.

[6]Ibid., p. 159.

[7]Trevor-Roper, Social Change, p. 286.

[8]Bayle, Dictionaire, p. 203.

[9]Ibid., footnote "A".

[10]J. Maritain, St. Thomas Aquinas, English translation p. 91; cited by Basil Willey, The Seventeenth-Century Background: Studies in the Thought of the Age in Relation to Poetry and Religion (London: Penguin Books, 1964), p. 15.

[11]Spinia, Comenius, pp. 92 & 93.

[12]Arnold Hauser, Mannerism: The Crisis of the Renaissance and the Origin of Modern Art, vol. 1, (London: Routeledge & Kegan Paul, 1965), p. 44.

[13]Sadler, Comenius, pp. 24-25.

[14]Comenius, Emendatione; Panaugia, Caput V:5, p. 140.

[15]Jan Blahoslav Čapek, "Comenius as a Predecessor of the Enlightenment and of Classicism with Particular Regard to Panaudia" in Acta Comeniana, vol. I, p. 38.

[16]Comenius, Great Didactic, p. 167.

[17]cf. Evans, Rudolf II, p. 273.

[18]Trevor-Roper, Social Change, p. 271.

[19]Evans, Rudolf II, p. 274.

[20]Eric A. Havelock, The Liberal Temper in Greek Politics (London: Jonathan Cape, 1957), p. 26.

[21]Sadler, Universal Education, p. 33.

[22]Comenius, Great Didactic, pp. 50-51.

[23]Ibid., p. 41.

[24]Note that the reference to "shifts" is based on Dr. Harry Garfinkle's theory of the shifts or revolutions in knowledge. This theory, initially inspired by Thomas Kuhn's seminal work, The Structure of Scientific Revolutions, is unfortunately not to be found in published form (to the best of this author's knowledge). It is, however, one of the most stimulating and inclusive theories which this author has ever encountered and is worthy of deepest consideration by all those concerned with the advancement of learning and education in a global context. It is therefore interesting to consider the many implications of his theory for one's respective area of inquiry. This author can only regret that it has only been recently that he has been able to see the more deeper insights of this theory vis à vis his study of Comenius. For the benefit of the reader the following description of Dr. Garfinkle's graduate course given at the University of Alberta entitled, "Anthropological Theory and Education" will be provided below as it appears in 1984-85 Graduate Courses Guide put out by the Department of Educational Foundations:

> "Beginning with the question "What social interests do different kinds of knowledge serve?", this course will deal with "knowledge" in the form of anthropological theory...Six kinds of knowledge will be dealt with in terms of the different social interests that they were designed to serve, viz:
> 1. "Kerygems" formulated in the service of a clerical establishment.
> 2. "erastegms" formulated in the service of a political establishment.
> 3. "algoregms" formulated in the service of an industrial establishment.
> 4. "paradigms" formulated in the service of a scientific establishment.
> 5. "apothegms" formulated in the service of a democratic society.

6. "hasidegms" formulated in the service of a projected ecumenical comity

Depending on the nature of our primary socialization and enculturation, we all grow up with a mix of these axial orientations as our guiding value perspective. Taking the philosophical maxim "the unexamined life is not worth living" to heart, this course will begin with the attempt to make these tacitly held convictions explicit and then go on to reflectively examine the phenomenologically held syntheses that are to be found among class members. These personally held cognitive formulations will then be situated in terms of the sociohistorical norms that anthropology in its successive theoretical shifts has been characterized by.

The relationship between personality, society, civilization and education will consequently be examined utilizing anthropology as the historically changing vehicle for this exploration. Each student will then be asked to apply the culture-inclusive methods of analysis developed in the class in an area of personal interest: education, sociology, history, linguistics, philosophy, etc. Evaluation will be based on a paper with some depth exemplifying the student's ability to apply critical anthropological theory in his or her field of cultural praxis."

[25] Titus Burckhardt, "Cosmology and Modern Science", in The Sword of Gnosis, ed. Jacob Needleman (Baltimore, Maryland: Penguin Books, 1974), pp. 137 & 138.

BIBLIOGRAPHY

Bailyn, Bernard. Education in the Forming of American Society. New York: W.W. Norton and Company, 1960.

Bantock, G.H. Studies in the History of Educational Theory: Volume One; Artiface and Nature 1350-1765. London: George Allen & Unwin, 1980.

Bokser, Rabbi Ben Zion. From the World of the Cabbalah: The Philosophy of Ranni Judah Loew of Prague. New York: Philosophical Library, 1954.

Brock, Peter. The Political and Social Doctrines of the Unity of Czech Brethren in the Fifteenth and Early Sixteenth Centuries. The Hague, The Netherlands: Mouton & Co., 1957.

Brown, Peter. The World of Late Antiquity: From Marcus Aurelius to Muhammad. Library of European Civilization, General Editor: Georfrey Barraclough. London: Thames and Hudson, 1971.

Burckhardt, Titus. Alchemy: Science of the Cosmos, Science of the Soul. Originally published as Alchemie. Walter-Verlay Olten and Freiburg im Breisgau, 1960; this English translation by William Stoddart published first Vincent Stuart & John M. Watkins, London, 1967. This edition published for: The Penguin Metaphysical Library, General Editor: Jacob Needleman. Baltimore, Maryland: Penguin Books, 1971.

Bušek, Vratislav (ed.) Comenius. Translated by Káča Poláčková. New York: Czechoslovak Society of Arts and Sciences in America, 1972. "Jan Amos Komenský" by O. Odložilík.

Butts, Freeman R. The Education of the West. New York: McGraw-Hill, 1947; revised edition 1973.

Chadwick, Owen. The Reformation. The Pelican History of the Church:3, ed. Owen Chadwick. Baltimore: Penguin Books, 1972.

Comenius, John Amos. A Reformation of Schooles. Translated by Samuel Hartlib. Greene Arbor, England: Samuel Hartlib, 1642; facsimilie reprint edition, Menston, England: The Scholar Press, 1969.

Comenius, John Amos. De Rerum Humanarum Emendatione Consultatio Catholica. Prague: Czechoslovakian Academy of the Sciences, 1966.

Comenius, John Amos. Opera Didactica Omnia. Prague: Czechoslavakian Academy of the Sciences, 1957.

Comenius, John Amos. Naturall Philosophie Reformed by Divine Light. Translated by Robert and William Leybourn. London: Thomas Pierrepont, 1651; modern microfilm copy, Ann Arbor, Michigan: University Microfilm, n.d.

Comenius, John Amos. The Great Didactic of John Amos Comenius. Translated by M.W. Keatinge. Reprinted from The Second Revise [sic] Edition of 1910; reissued, New York: Russell & Russell, 1967.

Comenius, John Amos. The Orbis Pictus of John Amos Comenius. Syracuse, New York: C.W. Bardeen Publisher, 1887; reissued, Detroit: Singing Tree Press, 1968.

Concise Oxford Dictionary of the Christian Church, The. Edited by Elizabeth A. Livingstone. Oxford: Oxford University Press, 1977.

Copleston, Frederick. A History of Philosophy Vol. 2. "Mediaeval Philosophy Part 1: Augustine to Bonaventure." Westminster, Maryland: Newman Press, 1950; New York: Image Books, 1962.

Curtis, S.J. and Boultwood, M.E.A. A Short History of Educational Ideas. London: University Tutorial Press, second edition, 1956.

Czechoslavakian Academy of the Sciences. Acta Comeniana. Prague: Academia, 1971.

Davidson, Thomas. A History of Education. New York: Charles Scribner's Sons, 1911.

Dillon, John. The Middle Platonists: 80 B.C. to A.D. 220. Ithaca, New York: Cornell University Press, 1977.

Eliade, Mircea. The Forge and the Crucible 2d ed. Translated by Stephen Corin. Chicago: University of Chicago Press, 1978.

Encyclopedia of Philosophy, The. 8 volumes. Editor in Chief Paul Edwards. New York: Macmillan & Free Press, 1967; Reprint Edition, 1972.

Evans, R.J.W. The Making of the Habsburg Monarchy 1550-1700: An Interpretation. Oxford: Clarendon Press, 1979.

Evans, R.J.W. Rudolf II and His World: A study in intellectual history 1576-1612. Oxford: Oxford University Press, 1973.

Fousek, Marianka S. "The Perfectionism of the Early Unitas Fratrum." Church History 30 (1961).

Godwin, Joscelyn. Robert Fludd: Hermetic Philosopher and Surveyor of Two Worlds. London: Thames and Hudson, 1979.

Happold, F.G. Mysticism: A Study and an Anthology. New York: Penguin Books, revised edition, 1970.

Harvey, Van A. A Handbook of Theological Terms. New York: Macmillan, 1964.

Herben, Jan. Huss and His Followers. London: Geoffrey B[illegible]

Heyberger, Anna. Jean Amos Comenius (Komensky): Sa vie et son oeuvre d'educateur. Paris: Librairie Ancienne Honore Champion, 1928.

Illich, Ivan. "An Alternative to Schooling," Saturday Review, June 19, 1971.

Jakubec, Jan. Johannes Amos Comenius. Prague, 1928 - Reprint Edition; New York: Arno Press & New York Times, 1971.

Johnson, Paul. A History of Christianity. New York: Penguin Books, 1976.

Jung, C. . Dreams. Translated by R.F.C. Hull. Bollingen Series Princeton, New Jersey: Princeton University Press, 1974.

Jung, C.G. The Psychology of Transference. Translated by R.F.C. Hull, Bollingen Series. Princeton, New Jersey: Princeton University Press, 1969.

Kerner, Robert J. (Ed.). Czechoslovakia. Berkeley: University of California Press, 1949.

King, Francis. Magic: The Western Tradition. London: Thames and Hudson, 1975.

Komenský, John Amos. The Labyrinth of the World and the Paradise of the Heart. Translated and edited by Count Lützow, New York: E.P. Dutton & Co., 1901; reprint edition, New York: Arno Press & New York Times, 1971.

Kožík, František. The Sorrowful and Heroic Life of John Amos Comenius. Prague: State Educational Publishing House, 1958.

Kožík, František. Johan Amos Comenius: 1592-1670. Translated by Sylvia Fink-Myhre. Prague: Sntl Publishers of Technical Literature, 1958.

Kristeller, Paul Oskar. Renaissance Thought and its Sources. Edited by Michael Mooney. New York: Columbia University Press, 1979.

Laurie, S.S. John Amos Comenius: Bishop of the Moravians: His Life and Educational Work. Cambridge: Cambridge University Press, 1884: reprint edition, 1904.

Laurie, S.S. Studies in the History of Educational Opinion from the Renaissance. Cambridge: Cambridge University Press, 1903.

Loemker, Leroy E. "Leibniz and the Herborn Encyclopedists." Journal of the History of Ideas 22 (1961).

Long, A.A. Hellenistic Philosophy: Stoics, Epicureans, Sceptics.

London: Duckworth & Co., 1974.

Lovejoy, Arthur O. The Great Chain of Being: A Study in the History of an Idea. Cambridge, Massachusetts: Harvard University Press, 1966.

Mandrou, Robert. From Humanism to Science: 1480-1700. Translated by Brian Pearce. The Pelican History of European Thought. Vol. III. New York: Penguin Books, 1978.

McNeill, John T. The History and Character of Calvinism. Oxford: Oxford University Press, 1954; paperback edition, 1967.

Mead, G.R.S. Thrice-Greatest Hermes: Studies in Hellenistic Theology and Gnosis -- being a translation of the extant sermons and fragments of the Trismegistic literature with prolegomena commentaries and notes. 3 vols. London: John M. Watkins, 1964. Vol. I: Prologomena, Vol. 2: Sermons, Vol 3: Excerpts and Fragments.

Meyer, Adolphe, E. Grandmasters of Educational Thought. New York: McGraw-Hill, 1975.

Monroe, Will S. Comenius and the Beginnings of Educational Reform. New York: Charles Scribner's Sons, 1900; Reprint Edition - New York: Arno Press & New York Times, 1971.

Needleman, Jacob (Ed.). The Sword of Gnosis. Baltimore, Maryland: Penguin Books, 1974.

Odložilík, Otakar. "Bohemian Protestants and the Calvinist Churches." Church History 8 (1939).

Odložilík, Otakar. "Two Reformation Leaders of the Unitas Fratrum." Church History 9 (1940).

Polišensky, J.V. The Thirty Years War. Translated by Robert Evans. London: New English Library, 1974.

Quick, Robert Herbert. Essays on Educational Reformers. International Education Series. Ed. William T. Harris, Vol. XVII. New York: D. Appleton and Co., 1908.

Read, John. Prelude to Chemistry: An Outline of Alchemy. London: G. Bell and Sons, 1936; Reprinted in Cambridge, Mass.: M.I.T. Press, 1966.

Royal Academy of Sciences. Allgemeine Deutsche Biographie. Leipzig: Verlag von Dunder & Humbolt, 1879.

Sadler, John E. (Ed.). Comenius. Educational Thinkers Series. London: Collier-Macmillan, 1969.

Sadler, John E. J.A. Comenius and the Concept of Universal Education. London: George Allen & Unwin, 1966.

Schumacher, E.F. A Guide for the Perplexed. Perennial Library edition; New York: Harper & Row, 1979.

Spencer, Sidney. Mysticism in World Religion. Baltimore, Maryland: Penguin Books, 1963.

Spinka, Matthew. John Amos Comenius: That Incomparable Moravian. New Yorj: Russell & Russell, 1967.

Steinberg, S.H. The "Thirty Years War" and the Conflict for European Hegemony, 1600-1660. London: E. Arnold, 1966.

Strupl, Milos. "Confessional Theology of the Unitas Fratrum." Church History 33 (1964)

Thorndike, Lynn. A History of Magic and Experimental Sciences Vols. VII & VIII: The Seventeenth Century. New York: Columbia University Press, 1958.

Trevor-Roper, H.R. Religion, the Reformation and Social Change. 2nd ed. London: Macmillan, 1972.

Turnbull, G.H. Hartlib, Dury and Comenius: Gleanings from Hartlib's Papers. London: University Press of Liverpool-Hodder & Stoughton, 1947.

Ulich, Robert. History of Educational Thought. New York: American Book Company, 1950.

Underhill, Evelyn. Mysticism: A Study in the Nature and Development of Man's Spiritual Consciousness. New York: New American Library 1974.

Williams, E.N. The Penguin Dictionary of English and European History - 1485-1789. London: Penguin Books, 1980.

Wright, C.J. Comenius and the Church Universal containing a translation of "The Bequest of the Unity of Brethren" by J.A. Comenius; London: Herbert Barber, 1941.

Yates, Frances A. Giordano Bruno and the Hermetic Tradition. London: Routledge and Kegan Paul, 1964; Reprinted Chicago: University of Chicago Press, 1977.

Yates, Frances A. Lull & Bruno: Collected Essays Vol. I. London: Routledge & Paul, 1982.

Yates, Frances A. The Art of Memory. London: Routledge and Kegan Paul, 1966.

Yates, Frances A. The Rosicrucian Enlightenment. London: Routledge and Kegan Paul, 1972.

Waite, A.E. The Holy Kabbalah: A Study of the Secret Tradition in Israel as Unfolded by Sons of the Doctrine for the Benefit and Consolation of the Elect dispersed through the Lands and Ages of the Greater Exile. Secaucus, New Jersey: University Books, 1975.

Wilds, Elmer H. and Lottich, Kenneth V. The Foundations of Modern Education 2rd ed. New York: Holt, Rinehart and Winston, 1961.

National Library of Canada
Bibliothèque nationale du Canada

Canadian Theses Service
Services des thèses canadiennes

Ottawa, Canada
K1A 0N4

CANADIAN THESES

THÈSES CANADIENNES

NOTICE

The quality of this microfiche is heavily dependent upon the quality of the original thesis submitted for microfilming. Every effort has been made to ensure the highest quality of reproduction possible.

If pages are missing, contact the university which granted the degree.

Some pages may have indistinct print especially if the original pages were typed with a poor typewriter ribbon or if the university sent us an inferior photocopy.

Previously copyrighted materials (journal articles, published tests, etc.) are not filmed.

Reproduction in full or in part of this film is governed by the Canadian Copyright Act, R.S.C. 1970, c. C-30. Please read the authorization forms which accompany this thesis.

AVIS

La qualité de cette microfiche dépend grandement de la qualité de la thèse soumise au microfilmage. Nous avons tout fait pour assurer une qualité supérieure de reproduction.

S'il manque des pages, veuillez communiquer avec l'université qui a conféré le grade.

La qualité d'impression de certaines pages peut laisser à désirer, surtout si les pages originales ont été dactylographiées à l'aide d'un ruban usé ou si l'université nous a fait parvenir une photocopie de qualité inférieure.

Les documents qui font déjà l'objet d'un droit d'auteur (articles de revue, examens publiés, etc.) ne sont pas microfilmés.

La reproduction, même partielle, de ce microfilm est soumise à la Loi canadienne sur le droit d'auteur, SRC 1970, c. C-30. Veuillez prendre connaissance des formules d'autorisation qui accompagnent cette thèse.

THIS DISSERTATION
HAS BEEN MICROFILMED
EXACTLY AS RECEIVED

LA THÈSE A ÉTÉ
MICROFILMÉE TELLE QUE
NOUS L'AVONS REÇUE

NL 339 (r. 86/01)

Canada

National Library of Canada
Canadian Theses Division
Ottawa, Canada
K1A 0N4

Bibliothèque nationale du Canada
Division des thèses canadiennes

0-315-24842-4

PERMISSION TO MICROFILM — AUTORISATION DE MICROFILMER

• Please print or type — Écrire en lettres moulées ou dactylographier

Full Name of Author — Nom complet de l'auteur

Caroline Joan Riches

Date of Birth — Date de naissance	Country of Birth — Lieu de naissance
July 21, 1959	Canada

Permanent Address — Résidence fixe

c/o Peter or Joan Riches
118-1045 Haro St.
Vancouver, B.C. V6E 3Z8

Title of Thesis — Titre de la thèse

Native English Speaker Reactions to ESL Learner Errors

University — Université

University of Alberta

Degree for which thesis was presented — Grade pour lequel cette thèse fut présentée

M.Sc.

Year this degree conferred — Année d'obtention de ce grade	Name of Supervisor — Nom du directeur de thèse
1984	Dr. Lois Marckwardt Stanford

Permission is hereby granted to the NATIONAL LIBRARY OF CANADA to microfilm this thesis and to lend or sell copies of the film.

The author reserves other publication rights, and neither the thesis nor extensive extracts from it may be printed or otherwise reproduced without the author's written permission.

L'autorisation est, par la présente, accordée à la BIBLIOTHÈQUE NATIONALE DU CANADA de microfilmer cette thèse et de prêter ou de vendre des exemplaires du film.

L'auteur se réserve les autres droits de publication; ni la thèse ni de longs extraits de celle-ci ne doivent être imprimés ou autrement reproduits sans l'autorisation écrite de l'auteur.

Date	Signature
12 October 1984	Caroline Riches

THE UNIVERSITY OF ALBERTA

NATIVE ENGLISH SPEAKER REACTIONS TO ESL LEARNER ERRORS

by

CAROLINE J. RICHES

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE

OF MASTER OF SCIENCE

IN

PSYCHOLINGUISTICS

LINGUISTICS

EDMONTON, ALBERTA

FALL 1984

THE UNIVERSITY OF ALBERTA

RELEASE FORM

NAME OF AUTHOR CAROLINE J. RICHES

TITLE OF THESIS NATIVE ENGLISH SPEAKER REACTIONS TO ESL LEARNER ERRORS

DEGREE FOR WHICH THESIS WAS PRESENTED MASTER OF SCIENCE

YEAR THIS DEGREE GRANTED FALL 1984

Permission is hereby granted to THE UNIVERSITY OF ALBERTA LIBRARY to reproduce single copies of this thesis and to lend or sell such copies for private, scholarly or scientific research purposes only.

The author reserves other publication rights, and neither the thesis nor extensive extracts from it may be printed or otherwise reproduced without the author's written permission.

(SIGNED) Caroline Riches

PERMANENT ADDRESS:

c/o Jos P. Riches

#118 1045 Haro St.

Vancouver, B.C. V6E 3Z8

DATED 12 October 1984

THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled NATIVE ENGLISH SPEAKER REACTIONS TO ESL LEARNER ERRORS submitted by CAROLINE J. RICHES in partial fulfilment of the requirements for the degree of MASTER OF SCIENCE in PSYCHOLINGUISTICS.

Lois Wallace Stanford
.....

Supervisor

John T. Hogan
.....

Banks
.....

Date 3 October 1984
.....

ABSTRACT

The primary purpose of learning a second language is to enable the learner to communicate with speakers of that language. Any hinderance to this purpose, then deserves attention. When learning a second language error making is unavoidable; in fact, it is integral to the learning process. However, errors can disrupt communication.

It is the purpose of this thesis to investigate the effect of various sorts of errors on communication. Certain errors may hinder communication directly by obscuring the meaning of a message. Other errors, while not affecting comprehensibility directly, may influence communication in other ways. If an error is noticeable to the receiver for reasons apart from comprehension, e.g., unacceptability, grammatical severity, irritation-provoking, it may disrupt the communication flow.

This study examines the reactions of ninety-two native English speakers to errors made by native Spanish speaking learners of English. To determine the different effects errors may have, two separate measures were used. The degree to which different errors affect *comprehension* was determined by means of an objective measure. The *affective reaction* which subjects had to errors was measured subjectively. The effect which the foreignness of an accent had on comprehensibility and affective reaction was also examined.

Eighty-four stimulus sentences were used to obtain the reactions. The sentences were made up from a corpus of natural language data. Two native speakers of Spanish with different degrees of foreign accent in their English pronunciation were contrasted to determine the effect of accent. The stimulus sentences each contained one of seven error types, (including errorfree and multiple error types) and were contextualized in an interview with a native English speaker. Thus, a natural language situation was simulated, which allows the results to be practically applied in the teaching of English as a Second Language.

ACKNOWLEDGEMENTS

First and foremost I would like to thank my supervisor Dr. Lois Marckworth Stanford for her confidence in my abilities. Her advice, suggestions and constructive criticism throughout the research, experimental work and writing of this thesis were invaluable.

I would also like to thank Dr. John Hogan for his assistance in the statistical analysis aspect of this thesis. His patience was an absolute necessity as my abilities in this area were limited. Rosalie Banko's careful perusal and consequent suggestions, especially in regards to the practical applications were a great help.

Apart from my committee members, there are numerous other people whose support was an encouragement. I would specifically like to thank Emilia Rivas-Arraiz, whose research in a similar area made her a very valuable source of information, not to mention her general support. Gustavo Arraiz, Diego Echeverri, Cynthia McCormac and Patricia Echeverri also deserve special thanks for giving their time, talent and accents to make up the stimulus tapes. Last, but not least by any means, I thank my husband John whose great faith and belief in me, often undeserved, gave me the strength and assurance in myself that I needed to start and complete this degree.

Table of Contents

LIST OF TABLES

LIST OF FIGURES

1. INTRODUCTION

1.1 The Role of Communication in the Second Language Classroom

In the learning of English as a second language (ESL), as with any non-native language acquisition, error making is unavoidable; it is expected. In a grammar-oriented approach, dealing with errors is more or less straightforward; errors are corrected. However, with the present emphasis on the communicative and functional aspects of language in the ESL classroom, just how to deal with learners' errors is not as clear as it was in more grammar-oriented approaches.

In the communicative approach the emphasis is on teaching the students how to communicate effectively rather than on the ability to produce grammatically correct utterances (Johnson, 1982). The goal of this approach is for students to achieve communicative competence. This implies a sociolinguistic competence; the ability to produce and understand language appropriately in terms of contextual factors (Canale, 1983). In essence this approach holds that grammatical competence - the ability to accurately understand and express meaning in language structure - is not sufficient to attain proficiency in a language. Although grammatical competence is part of communicative competence, sociolinguistic competence is important in attaining this goal (Canale, 1983). In the ESL classroom, then, students

are taught how to use language appropriately in a variety of realistic settings. They are provided with the tools necessary to understand and produce language in actual communication. The emphasis is more on meaning than on form.

Error correction, for the most part focuses on form. Thus, in the communicative approach error correction does not play a large role. The primary concerns are transference of meaning and appropriateness. So as to not impede the communication flow and inhibit the learner, his every error is not corrected. However, a technique of no correction cannot be used either; a certain amount of constructive error correction is needed to achieve the communicative goal. The instructor, then, must create a balance between allowing the student to communicate freely and exercise his language skills in a correction-free environment, and correcting those errors which are most important. Flexibility in error correction on the part of the teacher is needed in terms of when to focus on form and when to focus on meaning.

To determine which errors should be corrected, some distinctions need to be made among errors. Certain errors appear not to interfere with communication; in fact, due to the redundancy of the language system, certain errors can be made without obscuring comprehensibility. Thus, in terms of communicative goals, correction of these errors is unnecessary. Some errors, however, do block communication and, obviously, it is these errors which deserve correction.

Correction in these cases, in fact, is the byproduct of the need to understand, the need to aid communication. Other errors, while not impeding comprehensibility may still provoke some sort of negative reaction in the listener, and stigmatize the learner; these, also, deserve correction. The non-committal phrase *negative reaction* is used above to encompass a variety of responses possible when listening to an ESL learner, e.g., a reaction to the degree to which an error deviates from the standard grammar of the language, the effect which an error has on comprehension or irritation for other reasons. Presumably errors which fall into neither of the categories of irritators nor that of hinders of comprehension do not need correction in terms of communicative goals. Dividing errors into three categories-those which impede comprehension, those which provoke a more negative reaction, and others is perhaps overly simplified; however, in further research and experimentation, perhaps more refined divisions can be made.

1.2 Focus on the Dilemma

When to correct a student's errors may well be influenced by the individual student's motivation and personality; however, it is the hypothesis of this thesis that generalizations can be made as to which errors are more severe in terms of communication; as to which errors need to be corrected, and which errors do not.

Since a language learner's goal is to communicate with speakers of that language, i.e., native speakers, it should be the native speakers' concept of proficiency that the learners aspire to. To determine exactly what errors, or what types of errors need to be corrected and what errors do not, native speakers' judgements are the ultimate authority. The main purpose of discovering which errors made by English language learners obscure comprehensibility and which errors provoke a more negative reaction, perhaps regardless of their affect comprehensibility, is a practical one. It will provide the ESL instructor (and the student) with a hierarchy of error importance, that is, a guide to which errors deserve correction and which aspects of language need more emphasis in teaching. In addition, it may provide insight into the process of communication and into language as an information code. In essence, it may suggest an explanation of why different errors have varying effects.

If we assume that language is, at least in terms of its functional value, a communication tool, those aspects which the language user attends to should be those which carry a higher information load. Errors which occur in those parts of language which do carry more information can be expected to interfere with the message more than those which affect less essential parts of an utterance.

Determining which parts of language carry a high information load is not straightforward, though. Given a sentence, it is easy to see that the content words, e.g.,

nouns and verbs, generally hold the essential message to a greater extent than do function words, e.g., prepositions. However, language cannot be viewed in such simplistic terms. Redundancy, complexity, and predictability, which are present in all languages, play a valid role in the transmission of information. The redundancy in language means that more information than is actually needed is represented. For example, articles are often redundant in English as the definiteness of a noun can be interpreted from the surrounding context. The role redundancy plays in language is that it protects the message from ambiguity and makes the utterance more noise resistant; that is, if anything interferes with the transmission of the message the receiver has more than one opportunity to receive the information (Beckmann, 1972). Redundancy also serves as a type of comprehension check. If a listener is uncertain of what he heard, a redundant element can serve to confirm the listeners assumption.

The complexity of language serves a similar but separate function. Essential, while perhaps rudimentary, information can be conveyed with the simplest and barest of language forms. A second language learner can in many instances communicate with a very small percentage of a native speaker's proficiency. The percentage of language the foreign speaker is missing, however, completes the language; that is, it provides comprehensive cues on a variety of levels. Subtleties of expression, emotions and the point of

view of the sender and/or receiver are often achieved by the complexity of language.

Thus, certain parts of a language that appear to have no practical significance at all may play an important role in information transmission. The 's' of the third person singular in the simple present tense in English does not offer any further subtlety of expression, neither does it carry anything more than redundant information. However, it has remained in the language. An error in this part of language could result in a hinderance of communication. If the subject of a sentence is *he*, *she* or *it*, an omission of the 's' would perhaps result in uncertainty as to the subject, i.e., the listener could assume the error rests in the choice of subject pronoun rather than in the verb form. In addition the information carried by a word or part of a sentence may not only pertain to that word or part. Language structure provides the hearer with a predictability capacity, so that a certain word or part of a sentence may dictate what will follow. Thus, the information load is higher on the predicting word or part and consequently lower on the predicted word or part.

Thus, the distribution of information in a sentence is dependent on many things. The redundant components in an utterance will play a role in information transmission if there is some interference. In English spoken with a foreign accent, which could be a type of interference, redundancy may play a large role in information ca[illegible]ing. A part of a

sentence may or may not carry much information depending on its predictive value. In addition to this, not all messages are of equal importance. They do not carry the same amount of information or have the same penalty if misunderstanding occurs. For example, the information content increases with the unexpectedness of an event (Beckmann, 1972).

By eliciting comprehension judgements on sentences uttered by foreign speakers that contain errors, perhaps a clearing understanding of how information is coded in language and what functions different parts of language play in communication will result. The effect that errors in different parts of language have in terms of communication may provide clues.

In view of the different roles that segments of language play, and the essentialness of most parts of language, the reasons behind comprehension or lack of comprehension become more complex than perhaps first thought. Determining just what the native speaker attends to in comprehending his own language as spoken by ESL speakers is one of the purposes of the study comprising this thesis.

Language ,however, is more than simply an information code. Judgements on language cannot be restricted only to whether an utterance is comprehensible or not. An utterance can transmit the desired message with no loss of information even of it is grammatically incorrect. Native speakers have an acquired knowledge of all aspects of their language; inherent in the acquisition process is a subsequent ability

to accurately judge the linguistic acceptability of instances of that language. The acceptability of an utterance must be separated from its comprehensibility. Although a sentence which is partially or totally incomprehensible is also unacceptable, the converse is not necessarily true. Acceptability depends on the structure or grammar, lexical choice and possibly style in addition to information transmission. More often than not the linguistic reasoning behind the acceptability judgement is subconscious. A native speaker of a language is rarely even aware of his own language's idiosyncracies. The native speaker's intuitive knowledge of degrees of acceptability must be considered and explained as well. The native speaker's intuitive knowledge of his language enables him to act as a competent judge of acceptable sentences in his language. These intuitions are, in fact, the ultimate judge when dealing with both descriptive and prescriptive grammars. Acceptability judgements are also included in this study, with the supposition that utterances judged to be less acceptable may have a negative effect on the hearer, resulting in irritation and less attentiveness and thus creating the possibility of a higher degree of miscomprehension. Such judgements could also stigmatize the learner. This study examines acceptability indirectly. Subjects are asked for affective reaction judgements. These judgements may be based on the acceptability of an utterance and/or a host of other possibilities, some of which have

been mentioned previously.

When in the position of interacting with a non-native speaker, a native speaker has the ability to judge the degrees of acceptability of the learner's utterances. How this ability is exercised is one of the primary topics to be discussed and examined in this thesis. In native/non-native interaction the emphasis is usually on comprehension, and this emphasis is often more pronounced than in native/native interaction. Thus, a certain amount of blindness or ignoring of language errors is both expected and necessary on the part of the native speaker: expected because a native speaker's command of the language entails that he is able to understand even if the entire message is not transmitted; necessary because attention to the errors and consequently less attention to the remainder of the utterance would result in loss of information. Anecdotally, the writer's own experience as an ESL instructor attests to this, as even in the midst of this research, a comprehensive list of errors made by current ESL students could not be given. Lack of comprehension certainly is evident, however, even though precisely what error caused the miscomprehension may not be clear. Attention cannot be given to the errors since it is the remainder of the utterance which will carry the message. In the tasks comprising the experimental component of this thesis the native speakers' judgements will be restricted to one sentence at a time. With this restriction of speech whether or not the subjects' natural blindness to errors

will persist remains to be seen.

1.3 Brief Outline of the Course of the Study

What is of concern, to refocus our attention on the study at hand, is finding out which errors obscure the meaning of an utterance, and which errors provoke some kind of negative reaction in the listener. The writer's hypothesis is that the criteria used in determining affective reaction judgements will vary interpersonally. Reasons may range from the degree to which the speaker's message can be understood (a direct correlation to the comprehensibility effect of the error), to the occurrence of minor errors which are not necessary for comprehensibility but are simplistic in their usage (i.e., that it is considered the learner *should* know).

The study will elicit judgements on comprehensibility and affective reaction separately. The two separate judgements will, however, be made on the same set of sentences. The resulting two sets of judgements on one set of stimuli will allow a comparison of the degree of comprehensibility and the affective reaction judgement. Such a comparison will determine whether listeners consider the degree of comprehensibility to be a factor in their affective reaction judgements or whether other factors are of more primary consideration.

2. LITERATURE REVIEW

2.1 An Introduction to Errors

Until recently errors made by language learners were seen as something to be avoided. Their presence signaled that the teaching process had somehow fallen short of its goal. Errors were avoided when at all possible by practice of the correct models a sufficient number of times (Brooks, 1960). Currently, in the field of second language acquisition and teaching errors are viewed much more favourably (Hendrickson, 1978). They are viewed as an integral part of the learning process. Errors are not welcomed or encouraged; however, their existence is accepted as unavoidable. Although the ultimate goal is nativelike, errorfree language, the errors made by second language learners offer insight into the language learning process. Errors, then, can be analysed for a number of purposes. In this study, errors are analysed for the purpose of discovering how native English speakers react to various types of errors made in their language by learners of ESL. Thus, the effect of different errors is examined rather than the errors themselves. Analyses of the errors themselves has been the approach more frequently taken. For the purpose of providing a more complete background to the study of errors, a brief summary of the primary historical approaches to error analysis follows.

2.2 Error Analysis

One of the early goals of the analysis of errors in second language acquisition was to discover the errors' sources. Contrastive analysis has dominated the field in this respect. In the strong version of this hypothesis it is stated that difficulties experienced by learners of a second language can be predicted from a systematic comparison of the phonological, grammatical and lexical components of the native language and the target language. This comparison provides a knowledge of the similarities and differences between the two languages, thus, teaching materials and techniques can be comprehensibly tailored to the students' specific needs. The weaker version of contrastive analysis, while holding to the same tenets, explains errors produced or difficulties experienced by students on the basis of a comparison between the native and the target languages rather than predicting what problems the learners will have. In both versions of the hypothesis, the assumption made is that the primary source of errors is interference from the native language.

Although interference is definitely a contributing factor, particularily in phonology (Hendrickson, 1978), it has been found that it is only one of a number of contributing factors and is not the dominating one. Although the learner certainly relates aspects of the target language to the frame of reference developed by his native language, a great number of errors are the result of assumptions made

on the basis of the target language system alone. It is suggested by some (Bailey, Madden and Krashen, (1974), and many others) that second language acquisition parallels first language acquisition in this respect. The child learns his mother tongue by techniques of trial and error and hypothesis testing based on generalizations made from other constructions in the target language. A learner's errors, then, are evidence that learning is taking place and they provide a window into the process of acquisition up to that point and highlight his specific areas of difficulty. Assuming that a main source of error stems from the learner's strategies of testing hypotheses about the language system, feedback on the correctness of those hypotheses is essential to the learning process. Correction of every error, however, even with an explanation attached, is unwise for reasons apart from learning strategies; psychology and personality factors play a role here. Extensive use of a language is essential to its acquisition, and use in a natural, that is communicative, situation is vital. Constant correction creates an unnatural setting and may undermine a student's confidence, hindering his desire to use the language (Cohen, 1975). Thus, when, how, and what to correct are issues in this dichotomy of purpose, that is, providing correction when needed yet not hindering the student from using the language as much as possible.

2.3 Errors from the Native Speaker Perspective

Contrastive analysis and error analysis comprise the more traditional realm of the study of errors. With these methods, the yardstick to which language samples are compared is the standard grammars of languages. A small body of literature approaches errors from another perspective. These are the studies which examine native speakers' judgements and intuitions about errors made by foreign learners of their language. They are reviewed below.

While the more traditional approaches to error study deal with the dilemma on a somewhat theoretical level (although the findings can be practically applied), the judgement studies approach the problem on a practical level to begin with. How native speakers react to foreign learners of their language is not merely an experimental situation, it is an everyday reality. In exploring such situations it can be discovered what the functional qualities of language are, that is, what aspects are necessary for communication, and what the ramifications of various sorts of errors are. The body of literature dealing with the functional aspects of language, although not extensive, is not impoverished as it encompasses a number of different fields, e.g., sociology, linguistics, and psychology. The literature and experimentation dealing specifically with native speakers' reactions to foreign learners' errors is, however, limited. As there is not (yet) a tried and tested body of literature to draw upon, the approaches and methodologies are quite

diverse. Although the general goal of discovering which errors affect comprehensibility more and what other effects errors have is, for the most part, constant throughout all the studies, the specific aspect of language focused on and the way in which it is viewed varies. This results in the findings being, while not contradictory, fragmented. With all the findings grouped together, there is a good amount of confirmation of results and thus a basis to which additional results can be compared. Language can be examined on different levels, e.g., phonological, syntactic, and can be viewed from different perspectives (grammar versus vocabulary, noun phrase versus verb phrase, etc.); thus, the possibilities are numerous. Interestingly enough, thus far the findings reported in the literature, although derived from a number of different approaches and perspectives, are not contradictory, and in fact, for the most part, support one another. This suggests that, although native speakers' judgements are individual and intuitive, there is a definite measure of conformity and consistency in these judgements.

Johansson (1978, 1975) discusses subjective versus objective measures of errors. His discussion is based on Greenbaum and Quirk's (1972) discussion. Because of the nature of studies dealing with native speakers' judgements, the possibility of personal bias seems quite evident. An objective measure of error gravity consists of an indirect method of obtaining the judgement, while a subjective measure consists basically of requesting the actual

judgement. The methods used by Guntermann (1978) and Piazza (1977), illustrate the two approaches. In Guntermann's study the subjects were required to listen to samples of foreign language learners' speech and restate the sentences according to what they thought the speaker was trying to say. In this objective type of measure, the subject may not even have been aware of what errors were present or which had been corrected in the restatement. Piazza obtained judgements more directly by simply asking for a rating (0%, 25%, 50%, 75%, 100%) of the intelligibility/irritation of the utterances containing errors. In this case, the subject made a conscious judgement of a specific error. All the studies which objectively measured error gravity used a technique similar to the one described above. Margret Olsson (1977) lists the four types of responses received in her study of this type: (1) repeating the utterance heard; (2) changing it to a reproduction of the intended sentence; (3) omitting to respond; (4) imposing a non-intended interpretation on the utterance. The problems associated with an objective measure are evident. In a sense the subject error is increased in attempting to obtain an objective or unbiased judgement of a specific error or group of errors by indirectly tapping the subject's intuition. However, since the subjects were not specifically asked to correct the error, alternative responses, i.e., unwanted responses, are unavoidable. The writer's preliminary experimentation revealed this exact dilemma. Some of

Johansson's studies (1975, 1978) state much more specific instructions, directing the subjects to correct any errors a sentence may contain. He makes no reference to invalid subject responses; however, the explicitness of his instructions most likely preclude the variation of response received by Olsson. In a sense this method of objective measure is an attempt to simulate a native speaker's natural response when exposed to an erroneous utterance. It is assumed that while the native speaker comprehends the intended message, a mental note, perhaps even subconscious, is made of the error. In view of this, the subjective measures used by Chastain (1980, 1981), Piazza (1980), Politzer (1978) and Johansson in a number of his studies (1975) are decidedly unnatural. The premise is not the same, however. In making subjective judgements the subjects are asked to overtly state their intuitive judgements. In asking the subjects to rate sentences containing errors on a continuous scale (Piazza, 1980; Johansson, 1975), to make discrete judgements such as in Chastain's studies(comprehensible and acceptable, comprehensible but unacceptable, incomprehensible), or to rank order sentences according to the amount of deviance (Politzer, 1978; Johansson, 1975), the subjects intuitions about his language's grammatical rules are tapped. Johansson (1975) contrasted these two types of measure. He administered both subjective and objective measures of error gravity using the same corpus of errors. The results in these studies indicate

a consistent relationship between subjective and objective meaasures of error severity. Johansson suggests that this could be taken as an indication that the native speaker, in the course of using his language, has developed a consistent intuitive sense of communicative efficiency. It then seems highly likely that, given the confirmation of a consistent intuitive ability to judge errors, the choice of testing technique to elicit judgements is arbitrary (Johansson, 1975). In reviewing the literature pertaining to native speakers' judgements, the finding that the testing technique does not bias the results allows the results to be viewed as a whole.

In terms of the different measures used to elicit judgements, the results from various studies can be combined. However, there is not a great deal of conformity as to how the language data, either stimuli or responses, are segmented. Politzer (1978), for instance contrasts errors of word and form in verb phrases and noun phrases. Other authors simply concentrated on errors most frequently made by learners. Johansson (1975), for example, contrasts word order, concord and verb complementation errors made by Swedish learners of English. Thus, in terms of drawing conclusions about what specific errors hinder communication or provoke a negative reaction in the listener, the results are not comparable. Because of the different ways in which the data are analysed it is difficult to discern general tendencies.

In the parts of these studies which deal with comprehension, phonology is either controlled for, as in Piazza's study (1980) involving French as a second language, where the same speaker read all the stimuli, or it is irrelavant as in studies involving only written stimuli and responses (Chastain, 1980, 1981). Other studies included pronunciation as a variable (Galloway, 1970; Politzer, 1978). Johansson has specifically looked at pronunciation or accent in a number of his studies (1975). Galloway found that subjects were not greatly disturbed by a non-native speaker's pronunciation or accent in terms of a subjective reaction. In Politzer's study pronunciation ranked in less severe end of scale. Johansson, contrasting native and non-native speakers, found that the comprehensibility gap between these two groups was rather small.

The effect of errors on comprehensibility is the main focus of most of the studies done. The degree to which different errors irritate the hearer or the hearer's judgements of the acceptability of errors, are also main areas of investigation. What is considered to constitute irritation varies from study to study, however, which leaves on even greater area for further research. Johansson and Piazza consider the level of irritation with an error to correspond to its severity in terms of communication. This assumption is certainly valid, although possibly not a sufficient explanation. In many cases if a language learner's errors interfere with communication there is

frustration on the part of the speaker and the listener which can result in the listener becoming irritated. However, the learner's difficulties could also make the listener more sympathetic. A number of other researchers have added a further dimension to this aspect of the studies. Chastain (1980) suggests that native speakers may become irritated by errors, even if they do not interfere with communication, depending on the subjects' linguistic tolerance, insight, interest and patience. Piazza also proposes that an error that does not interfere with communication may still irritate the listener. In their studies involving native speakers of Spanish, both Galloway (1978) and Guntermann (1978) stressed the separateness of errors causing incomprehensibility and errors which may irritate the listener. Guntermann suggests that errors which do not impede communication may still bar the learner from acceptance into social and personal relationships with members of the foreign language community as his/her errors may result in stereotyped negative judgements (also Galloway, 1978).

It is interesting to look at these different presuppositions as to what constitutes errors causing irritation in terms of the native language groups being examined. The four studies involving native Spanish speakers (Chastain, 1980, 1981; Galloway, 1978; Guntermann, 1978) suggest that there are errors which may produce negative reactions in listeners even though these errors may not

hinder comprehension. Piazza (1977) in her study of native French speakers alludes to the existance of errors which may irritate the listener while not impeding communication. In Politzer's study (1978) involving native speakers of German, no mention is made of an irritation factor. Finally, in Johansson's studies involving native speakers of English irritation is equated with the errors' bearing on comprehension.

2.4 Studies Pertaining Specifically to Native English Speaker Reactions

The majority of studies concerned with English, that is, studies which involve judgements made by native English speakers have been done in Sweden, and thus involve Swedish learners of English. Johansson's work (1975, 1978) consists of numerous studies focusing on different areas, e.g., phonology or grammar. Olsson's study (1977) is very specific in topic in that it deals only with the passive construction in English; however, its results can perhaps have quite general applications.

Perhaps the most widespread finding, a result of both Johansson's and Olsson's studies, is that lexical errors seem to hinder comprehension more than grammatical errors. These results further confirm the same finding in Engh's earlier study (1971, in Johansson, 1978). In Johansson's discussion of this result he suggests that this is due to lexical items belonging to an open class and thus comprising

the idiosyncratic, unpredictable aspect of language. Since grammatical choices belong to a closed class, it is rule-governed and predictable; a grammatical error is easier to interprete correctly since the choices of what might have been intended are fewer. An error involving a lexical item, however, is not as likely to be interpreted correctly since the possible or plausible choices are more numerous. Olsson's working definition of intelligibility is the extent to which the intended interpretation is preferred to an alternative interpretation. Thus, the more serious the error, the less likely the intended interpretation will be arrived at. Olsson's findings do not explicitly support the previously mentioned researchers' findings that lexical errors are more severe than grammatical errors. However, her findings certainly support this implicitly. She found that in rewording an utterance, subjects preferred to keep the grammatical subject phrase intact, that is, they adopted an interpretation which retained the subject of the stimulus sentence. They preferred reinterpretation of an utterance to deleting words in an utterance. In determining the intention of the sentence the noun, and more specifically the subject noun, was of primary importance. Thus, it appears the choice of lexical items determines the interpretation of an utterance more than the grammar. Therefore, if an erroneous choice is made by the speaker, it is likely to be accepted as the intended interpretation. Hence, it is more possible for a lexical error to be simply accepted as the intended

choice, rather than relying on the grammar to supply the intended interpretation. A lexical error is thus more likely to result in an impedance of communication. Olsson also found that the most marked member of the noun phrase-verb phrase relationship in a neutral context determined which interpretation was chosen. For example, the stimulus sentence *where are my book* would more likely be interpreted as *where are my books* than *where is my book*. In a sense this could also be viewed as the lexical items taking precedence over the interpretation since *is* and *are*, because of their irregularity could be viewed as lexical rather than grammatical alternatives.

These studies have also found that a greater number of errors per utterance is more likely to result in misinterpretation.

Johansson's studies focus on different types of grammatical errors. In his study in which errors in verb complementation, verb agreement and word order were contrasted, word order errors were found to be the least severe in terms of acceptability and the other two were, for the most part, equal. Why this is so is not immediately obvious. In English word order is quite strict; therefore, it would make more immediate sense for word order errors to be the more severe. However, viewed in conjunction with the findings concerning lexical items, a plausible explanation can be put forth. If it is assumed that language processing consists of the listener processing major constituents or

components first, such as word order and lexical items, and resorting to finer syntactic and grammatical relations only when necessary, even if the word order is incorrect, or a lexical choice is erroneous, these are accepted as given, i.e., without their correctness questioned. As discussed above, grammatical correctness is easier to define; there is not much margin for error.

2.5 Results with Native Speakers of Languages Other than English

A number of studies have focused on the judgements of native speakers of Spanish. Chastain (1980, 1982), Galloway (1978), and Guntermann (1978) made use of different methods to obtain judgements. Galloway's approach is more general; that is, she did not focus on specific error types but asked for overall impressions of videotaped presentations of speakers of Spanish as a second language. Her major finding was that an individual's lack of grammatical accuracy may not envoke negative reactions in listeners if an urgency and a desire to communicate are evident.

Chastain and Guntermann found that most errors in grammar did not impede communication to a significant extent; a hierarchy could, however, still be established. In Guntermann's study the errors which resulted in more misinterpretations were substitutions of *ser/estar/haber* (the verb *to be* in English), errors in tense, the omission of verbs, and the omission of the conjuction *que (that)*. In

terms of errors in agreement, misagreements in person and number between verbs and their subjects caused the greatest miscomprehension. The most frequent errors made by Spanish learners, those of noun-modifier agreement and article omission, were accurately interpreted by all informants. It is difficult to compare these findings with Chastain's studies of Spanish since his discussion of the results is much more detailed. He found the relatively most serious errors in terms of communication were those of mode, wrong form of stem, the omission of pronouns and the misuse of infinitives in the verb phrase and the wrong use of a noun in the noun phrase. Although these results do not precisely confirm Guntermann's results, they are not contradictory.

In the verb phrase, the most acceptable errors were incorrect stem, misuse of/wrong noun, mistake in agreement and extra articles. The most acceptable errors in the noun phrase were adjective agreement and extra words.

Guntermann's findings in terms of acceptability focused on specific contrasts. She found that the omission of articles was more acceptable than errors in agreement between articles and nouns, and errors of person were less acceptable than errors in tense in verbs. Chastain (1980) suggested the general finding that errors involving words were more likely to impede communication than grammatical errors.

Both Chastain and Guntermann found that the errors that were unnoticed generally involved redundancies such as noun

modifier agreement, article omission, plural formation etc.. Comparing result for result there are a number of direct contradictions, such as errors in tense and the omission of *que* being severe in Guntermann's study yet going unnoticed in Chastain's. This is possibly due to the different emphasis and methodologies as mentioned above.

Piazza (1980) in her study of errors made by learners of French found a relationship between comprehension and irritation in that the less comprehensible the error made a sentence the more irritating that error was. Combining comprehensibility and irritation, the respondents showed the greatest tolerance for errors of verb form and pronouns. The hierarchies developed for irritation and comprehensibility were not identical, however, so the the relationship is not strictly a dependent one.

Politzer's (1978) study of the perception of errors in German revealed that vocabulary errors are definitely the most serious followed by verb morphology, word order, and gender confusion. His study involved paired comparison of a variety of errors, which differs most widely from other methodologies; however, his results do conform to those already presented.

2.6 General Conclusions

Whether generalizations across languages in terms of error severity can be made remains to be seen. However, even from the few studies done a pattern can perhaps be detected.

The most obvious pattern is that vocabulary errors impede communication more than grammatical errors. All the studies which varied the number of errors per sentence also agree on incomprehensiblity increasing as the number of errors increases.

These studies have all dealt with specific areas of native speakers' perceptions of errors. In this respect the writer's experimentation is no different. In the study reported in this thesis, in order to allow for valid comparison of error types, the most common and frequent errors made by a specific group of English learners (native Spanish speakers) were determined. Only syntactic, lexical and morphological errors were selected. By contrasting the most common and frequent errors, the resulting hierarchy of severity can be applied practically in the classroom. The corpus of errors collected is divided into categories in terms of levels on a morphological to semantic scale - inflections, function words, verb morphology, content words and major constituents. In a sense, these units correspond to the progression of accuracy as a learner becomes more proficient; they loosely correspond to learning stages in ESL acquisition. For example, an adequate vocabulary is often acquired before simple inflections, such as the plural marking 's'. These error types, each with specific errors, were compared with each other. The two major findings of previous studies - vocabulary errors being more severe than grammatical errors and multiple errors disrupting

communication - received special attention. The effect of number of errors per sentence was also included because one error per sentence is not guaranteed in natural communication. Errors in phonology were not examined per se. The effect of accent was controlled in that the ESL speakers share the same first language background. The affect of accent is, however, manipulated to the extent that the Spanish speakers' pronunciation of English varied in terms of its nativelikeness.

The studies done previously have varied greatly in their methods of obtaining irritation, or affective reaction judgements, and in their findings in this area. In this domain, the main concern of this study is to ascertain whether there is a correspondence between affective judgements and comprehensibility, as Piazza suggests, or whether they are separate issues as Guntermann suggests. For this reason the same stimulus sentences were used for both judgements; however, the judgements were requested separately. In order to compare and control for specific error types, stimulus sentences were devised based on natural language data. However, since much of comprehensibility depends on context, the sentences were contextualized in presentation. It was hoped that this would allow for comparison of a finite set of errors (not possible in free flow conversation) while simulating contextual and natural speech.

In terms of the writer's search for which errors obscure meaning, and which errors provoke negative reactions, three alternatives, along with their combinations, are examined: error type, number of errors per utterance, and degree of deviance from native English pronunciation (i.e., accent). The sentences for scrutiny were contextualized in a typical question and answer situation with a native speaker. This contextualized stimulus material was presented orally since ESL learners are, for the most part, in contact with native speakers in a spoken informal environment. Thus, it was hoped that the presentation came close to replicating a natural language situation.

3. EXPERIMENTAL DESIGN

3.1 Purpose

The experimental work reported in this thesis is designed to test the effect of errors made by non-native speakers of English as perceived by native English speakers. These perceptions are tested in terms of two variables. The first variable, affective reaction, is tested by means of a subjective measure with the subjects simply being asked to determine and scale-rate their reactions. To test the second variable, comprehensibility, an objective measure is used. Instead of the subjects explicitly determining whether they understood or not, they were asked to record what they thought the speaker meant to say. From these records a comprehension score was determined.

The experiment is designed to answer four main sets of questions: 1) Which errors provoke a more negative reaction in listeners, and is there any similarity among errors which do/do not provoke a more negative reaction? 2) What effect do different errors have on comprehensibility, and is there any pattern among errors which do/do not hinder comprehensibility? 3) Is there a correlation between errors' effects on comprehensibility and their provocation of negative reaction? 4) Does the foreignness of a speaker's pronunciation affect comprehensibility or affective reaction judgements?

3.2 Stimuli

The error types examined in this experiment were selected from eight actual interviews with non-native speakers of English. The interviews were conducted by ESL instructors as part of the placement procedure for ESL classes at the Faculty of Extension, The University of Alberta. The interviews were conducted informally with the goal being the initiation of natural conversation. Thus the resulting corpus of actual language production is a fair equivalent to natural language. This corpus was restricted in two ways. It is restricted in terms of language background with only native South American Spanish speakers being used. Although the resultant dialogues used for the experiment were recorded by male speakers, both male and female speakers' utterances were included in the corpus. A native Spanish language background was chosen because there is a steady immigration of Spanish speakers to North America, and thus, the results of this study will be relevant. In relation to this point, subjects most likely would have been in contact with native Spanish speakers learning English previously. Thus, the experimental situation is not completely new to the subjects. The corpus was also restricted in terms of its correspondence to proficiency in English. To achieve this, only those interviewees who placed in higher level courses (intermediate, advanced) were included as data (error) sources.

The eight interviews were transcribed and the sentences containing errors were extracted. These sentences were categorized into five major types, each with three subtypes. A category of sentences with multiple errors and a category of errorfree sentences (also with three subtypes each) completed the set of seven major stimulus types. Table I lists these stimulus types and their corresponding subtypes. The abbreviations following the types and subtypes are used in the graphs and discussion which follow. The error types are numbered from 1 to 7 and the suberrors from 1 to 21. This numbering is used to refer to the error types and syberror types in the graphs.[1]

From this corpus of sentences with errors, two dialogues, each between a non-native English speaker and a native English speaker, were written. The dialogues replicate the interview situation from which the corpus of original sentences was taken. Each dialogue included two tokens of each of the subtypes listed above. The sentences in the dialogues were as close as possible to the original sentences; however, in order to produce flowing conversation some changes, mostly lexical, were necessary. In any case it can be safely said that the two dialogues replicate an authentic interview situation. Although the dialogues were

---

[1]The OmNnAdj suberror category actually contains one sentence with an omitted noun and one with an omitted adjective in one dialogue, and one sentence with an omitted noun and one with a wrong adjective in the second dialogue. The multiple error type is divided into subtypes on the basis of number of errors and sentence length. The errorfree type is divided on the basis of sentence length.

Table I. Error Types and Suberrors

1. MAJOR CONSTITUENTS(MC)
   1. nonparallel(Npar)
   2. word order(WO)
   3. repetition(Rep)

2. CONTENT WORDS(CW)
   4. wrong verb(WV)
   5. wrong noun(WN)
   6. omitted noun or adjective(OmNnAdj)

3. VERB MORPHOLOGY(VM)
   7. modal(Modal)
   8. participle(Part)
   9. tense(Tense)

4. FUNCTION WORDS(FW)
   10. pronouns(Pron)
   11. articles(Art)
   12. prepositions(Prep)

5. INFLECTIONS(INFL)
   13. plural(Pl)
   14. third person singular 's'(3rdPS)
   15. derivational(Der)

6. MULTIPLE ERRORS(MULT)
   16. two errors(Mult2)
   17. three errors(Mult3)
   18. five errors(Mult5)

7. ERRORFREE(EF)
   19. short(EF1)
   20. longer(EF2)
   21. longest(EF3)

not identical the topics of conversation were similar, e.g., native country, future plans, questions about the course (see APPENDIX A. Dialogues).[2]

By contextualizing the sentences to be judged, the results reflect the effect of errors in real life situations. The context of a sentence plays a role in comprehensibility. A sentence uttered in isolation may be meaningless, but if it is uttered in context the intended message may be clear. Requesting judgements on sentences uttered in isolation could perhaps produce results which are not a valid reflection of the true effects of language deviances.

To determine whether a non-native English speaker's accent has any effect on a listener's comprehension or affective reaction, two male native Spanish speakers were contrasted. Two speakers of the same sex were chosen to prevent a sex-bias effect. Both speakers were proficient in English, but their pronunciation was still influenced by their native Spanish. The nativelikeness of their pronunciation varied. The more native-English-like speaker was from Venezuela and had lived in an English speaking country for eight years. The second speaker was Colombian and had been in an English speaking country for less than one year. Neither speaker's accent was severe enough to hinder comprehensibility as a direct result of his

---

[2]Both dialogues contain one extra subtype which is not included in the results. Dialogue One has an extra Mult2 sentence (#22). Dialogue Two contains an extra EF3 sentence (#39).

pronunciation. The two speakers were chosen to have rather similar voices, both baritones and judged "pleasant" by several independent judges.

Each speaker recorded both dialogues. Thus combining the speakers and dialogues and the order in which they were heard results in four possible combinations, each consisting of two presentations. The subjects were divided into four groups with each group hearing a different combination of presentations - Group One: Speaker one/Dialogue one and Speaker two/Dialogue two; Group Two: Speaker two/Dialogue two and Speaker one/Dialogue one; Group Three: Speaker two/Dialogue one and Speaker one/Dialogue two; Group Four: Speaker one/Dialogue two and Speaker two/Dialogue one. Thus, in the overall scores for errors and for the two speakers, any possible differences caused by the different dialogues and/or the order in which the speakers/dialogues were presented is cancelled out.

3.3 Subjects

Ninety-two subjects participated in the experiment, and were divided into four groups of twenty-three with each group hearing one of the four combinations. The subjects were all native speakers of English and were all university students taking an introductory psychology course. They participated in this study for a portion of their psychology course mark. The subjects were not aware of the nature or subject of the experiment beforehand. The average age of the

subjects was twenty, ranging from eighteen to forty-two. There were forty-eight females and forty-three males (and one subject who did not indicate his/her sex). Seventy-three of the subjects knew or had studied another language. Ninety percent of these subjects knew or had studied French. On the average the subjects had known or studied a language for five years. Most of the subjects stated that their criteria for the affective reaction task was based on grammar and/or comprehensibility. Pronunciation and clarity or appropriateness of the message were also stated as criteria.

The subjects participated in the experiment in small groups. The entire experimental task was about one and one half hours in duration. The stimuli were presented to the subjects via tape recordings. The subjects heard the first presentation twice, the first time performing the affective reaction task and the second time performing the task designed to determine comprehension. They then heard the second presentation twice and performed the two tasks in the same sequence.

After the subjects had completed the experiment they were asked to fill out an information sheet. They recorded their age, sex, other languages studied or spoken, and the criteria they used for the affective reaction task (see APPENDIX B. Subject Information Sheet). Two of the questions on the information sheet are not discussed (#4 and #6) because most of the subjects were not taking or had not taken the courses inquired about.

3.4 Task A: The Affective Reaction Task

Task A is designed to elicit subjects' subjective reactions to sentences containing errors. These reactions were elicited by means of asking subjects to rate their responses to specific sentences on a scale of 1 to 7, with 7 being a more positive reaction and 1 being a more negative reaction. The written instructions for this task were purposely unspecific as to what constitutes an affective reaction so as to allow for individual variation. The instructions simply stated that all errors made by English learners are not judged equivalently by listeners; some errors provoke a more negative reaction than others (see APPENDIX C. Subject Score Sheet). Thus a variety of interpretations corresponding to the subjects' individual criteria for judgement is allowed for. In the oral explanation several examples of what the criteria might be were mentioned (e.g., degree of comprehensibility, grammatical accuracy, irritation, acceptability), and the subjects were cautioned to remain consistent in the criteria used thoughout Task A for both speakers. The subjects heard six practice sentences before the first presentation to insure they understood the task and to allow them to establish their criteria. The practice sentences had been recorded by a female speaker from Colombia and were not part of the actual test dialogues. Any questions the subjects had were answered after the practice sentences had been heard. The practice sentences were not repeated before Task A was

performed on the second presentation. The dialogues were played with a short pause following each of the forty-two sentences uttered by the non-native speaker to allow time for the judgements to be made.

3.5 Task B: The Comprehensibilty Task

Task B followed Task A for both speakers. Thus, the subjects were already familiar with the dialogue heard for Task B. The subjects were instructed to write down what they thought the foreign speaker was trying to say, staying as close as possible to the original. It was hoped that asking the subjects to write down what they thought the foreign speaker meant to say or was trying to say would result in an interpretation of the utterances from which comprehensibility could be judged. It was assumed that asking the subjects to stay as close as possible to the original utterance prevented paraphrases or interpretations worded according to the specific subject's language style. The written instructions did not state directly that the subjects were to *correct* the errors, so as to focus the task on comprehension rather than prescriptive error correction. The instructions also stated that some sentences, i.e., the errorfree sentences, may not need changes. It was also suggested that extensive rewording of sentences could be done if subjects felt it was not possible to remain close to the original. Subjects were given as long as they needed after each utterance by the foreign speaker to write down

what they thought the speaker meant to say. The subjects heard the same six practice sentences that were used for Task A before Task B was performed on the first presentation. Again, any questions were answered after the practice sentences had been heard.

3.6 Scoring

Scoring the responses for Task A was straightforward since the method of response was a numerical score. Thus the subjects' scores needed no further conversion.

The scoring of Task B was not as straightforward. The subjects' rewritten sentences were interpreted in terms of a five point scale. A score of 5 indicated that the subjects clearly understood the intended meaning of the utterance. A 4 indicated a minor misunderstanding. If the main idea was still represented in the rewritten sentence but other changes had been made, a score of 3 was given. A score of 2 indicated that the main idea of the utterance was not understood, although, minor parts of the utterance were understood. If the utterance was completely misunderstood a score of 1 was assigned. The scores for Task B were interpreted by the writer over a period of six weeks and then were rechecked for consistency.

3.7 Analysis

In the analysis of the results the seven error types, twenty-one specific suberrors, the two speakers, the subjects and the four subject groups were looked at for the affective reaction scores and the comprehensibility scores. The groups are for the most part only examined overall as the results are of secondary importance in terms of the purposes of the experiment. The results for negative reaction and comprehensibility are correlated to see if these scores are related in any way.

4. RESULTS

4.1 Introduction

The results for Task A, the affective reaction scores, and Task B, the comprehensibility scores were analysed separately. For both analyses, a multifactored repeated measures analysis of variance (ANOVA) provided by the BMDP 8V statistical package was used (see APPENDIX D. BMDP Program and Datafiles). In the design the independent variables were: subjects, groups, speakers, error types and suberrors (each suberror had two replications). The dependent variables were the affective reaction scores and the comprehensibility scores. For purposes of analysis speakers were termed talkers and suberrors were termed undererrors. These analysis terms will be used in the following discussion. The more nativelike speaker (Venezuelan) will be referred to as talker one and the other speaker (Colombian) as talker two. To determine significant differences between error types and undererrors, tukey tests were done on pairs of mean scores.

The scores from the two analyses were also correlated using the Midas Interactive Data Analysis System. A correlation of all the scores obtained (every subject's score on every replication) was done as well as a correlation of the combined subjects scores on the undererror types for each talker.

4.2 Affective Reaction Analysis

4.2.1 Introduction

In the analysis of the affective reaction scores (ranging from 1 to 7, where 1 corresponds to a more negative reaction and 7 to a more positive reaction) almost all of the factors and their interactions turned out to be significant. Thus, it can safely be said that subjects do differentiate in their subjective reactions to a speaker and/or what the speaker says. The ANOVA results are shown in Table II. The sum of squares shown in Table II indicates that the main effect for subjects accounts for the greatest proportion of variation followed by errors and subject by error interaction.

4.2.2 Subjects

The main effect for subjects is significant ($p=0.0$). Although interactions involving subjects are significant, this main effect is briefly discussed to give an overall view of the subjects and so that a general comparison can be made between the affective reaction scores and the comprehensibility scores. Figure 1 is a bar graph which illustrates the subject variation. The information gathered for each subject, i.e., age, sex, other languages spoken or studied, or the criteria used in determining the reaction, does not offer any explanation for this variation. The

Table II. Anova for Affective Reaction Results

	SOURCE	ERROR TERM	SUM OF SQUARES	D.F.	MEAN SQUARE	F	PROB.	EXPECTED MEAN SQUARE
1	MEAN	S(G)	195637.641	1	0.19564E+06	4916.60	0.0000	7728(1) + 84(5) + (19)
2	GROUPS	S(G)	274.028	3	91.343	2.30	0.0833	1932(2) + 84(5) + (19)
3	ERRORS	SE(G)	1289.922	6	214.99	146.13	0.0	1104(3) + 12(10) + (19)
4	TALKERS	ST(G)	465.659	1	465.66	58.20	0.0000	3864(4) + 42(12) + (19)
5	S(G)	R(GSEUT)	3501.628	88	39.791	33.56	0.0	84(5) + (19)
6	U(E)	SU(GE)	376.397	14	26.885	26.84	0.0	368(6) + 4(15) + (19)
7	GE	SE(G)	75.550	18	4.1972	2.85	0.0001	276(7) + 12(10) + (19)
8	GT	ST(G)	126.516	3	42.172	5.27	0.0022	966(8) + 42(12) + (19)
9	ET	SET(G)	35.567	6	5.9278	6.48	0.0	552(9) + 6(16) + (19)
10	SE(G)	R(GSEUT)	776.814	528	1.4712	1.24	0.0003	12(10) + (19)
11	GU(E)	SU(GE)	89.995	42	2.1427	2.14	0.0000	92(11) + 4(15) + (19)
12	ST(G)	R(GSEUT)	704.076	88	8.0009	6.75	0.0	42(12) + (19)
13	UT(E)	SUT(GE)	35.375	14	2.5268	2.64	0.0009	184(13) + 2(18) + (19)
14	GET	SET(G)	397.617	18	22.090	24.16	0.0	138) + 6(16) + (19)
15	SU(GE)	R(GSEUT)	1234.275	1232	1.0018	0.84	0.9998	4((19)
16	SET(G)	R(GSEUT)	482.816	528	0.91442	0.77	0.9999	6(+ (19)
17	GUT(E)	SUT(GE)	370.060	42	8.8109	9.20	0.0	46(17) + 2(18) + (19)
18	SUT(GE)	R(GSEUT)	1179.565	1232	0.95744	0.81	1.0000	2(18) + (19)
19	R(GSEUT)		4581.500	3864	1.1857			(19)

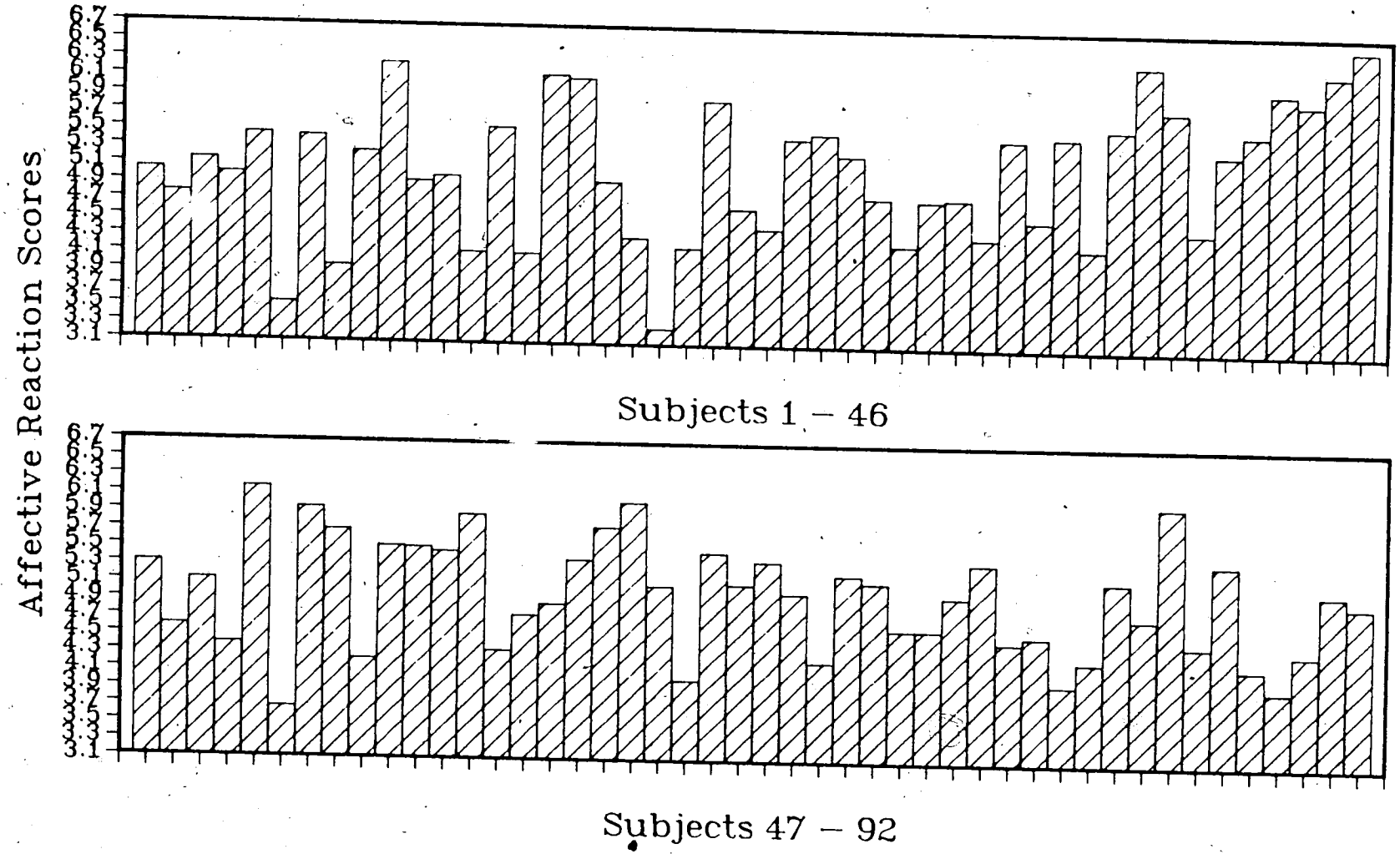

Figure 1. Affective Reaction – Subjects – Main Effect

subject by error interaction is significant (p=0.0003); however, subject by undererror is not significant (p=0.9998). (The results for the subject by error interaction are too extensive to represent graphically. These results are listed in APPENDIX E. Additional Results.) Thus, among individual subjects, undererrors were regarded similarly while the error types were viewed differently. Neither the subject by error by talker nor the subject by undererror by talker interaction is significant (p=0.9999, p=1.0 respectively). Thus, when specific scores for talkers are compared, we find that the subjects tend to be quite consistent in their judgements.

The subject by talker interaction is also significant (p=0.0); seventy-four out of the ninety-two subjects scored talker one higher than talker two overall. A scattergram, Figure 2, plotting talker one against talker two by subject, indicates that there is a general trend for the subjects to score both talkers either higher or lower; that is, the sections of the graph indicating a high score for talker one but a low score for talker two, or vice versa are not very populated. The degree of variation among subjects is highly evident. There does not appear to be any obvious clustering of subjects. If there were a certain set number of strategies that people use in determining their reaction, we could expect some clustering in the points. This does not appear to be the case; thus individual differences or strategies must account for the significant subject by

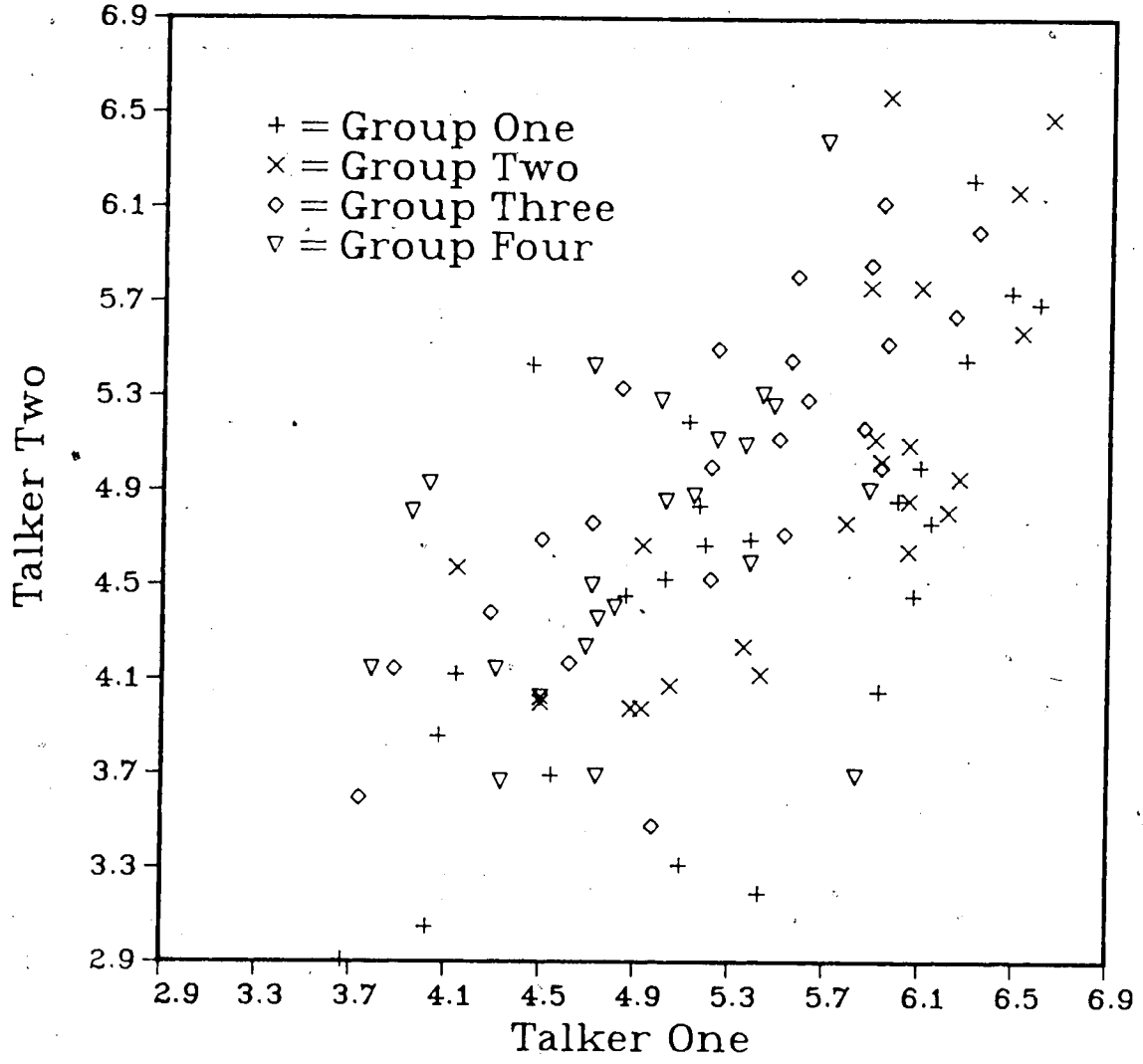

Figure 2. Affective Reaction – Subject by Talker Interaction

talker interaction.

4.2.3 Groups

Although the inclusion of groups in the experimental design is intended as a counterbalance measure rather than a variable, the differences between them may still be of interest. The main effect for groups is not significant ($p=0.0833$) but all of the subsequent interactions are significant. In the group by error by talker interaction ($p=0.0$) all groups scored the errorfree sentences highest and the multiple errors lowest except for groups one and two which scored the inflection errors higher than the errorfree type. The remaining error types do not place consistently across groups. With the exception of three pairings, all groups scored talker one higher than talker two on specific error types (see APPENDIX E. Additional Results for actual sco-). Group by undererror ($p=0.0$) is also significant. Eor the group by undererror by talker results ($p=0.0$), Figures 3a to 3d illustrate that talker one generally received better scores if heard second. Talker two was scored higher if he was heard first. Both speakers received better scores on the first dialogue than the second dialogue. Each dialogue has a consistent pattern regardless of the speaker or order and the patterns for the two dialogues are different from each other.

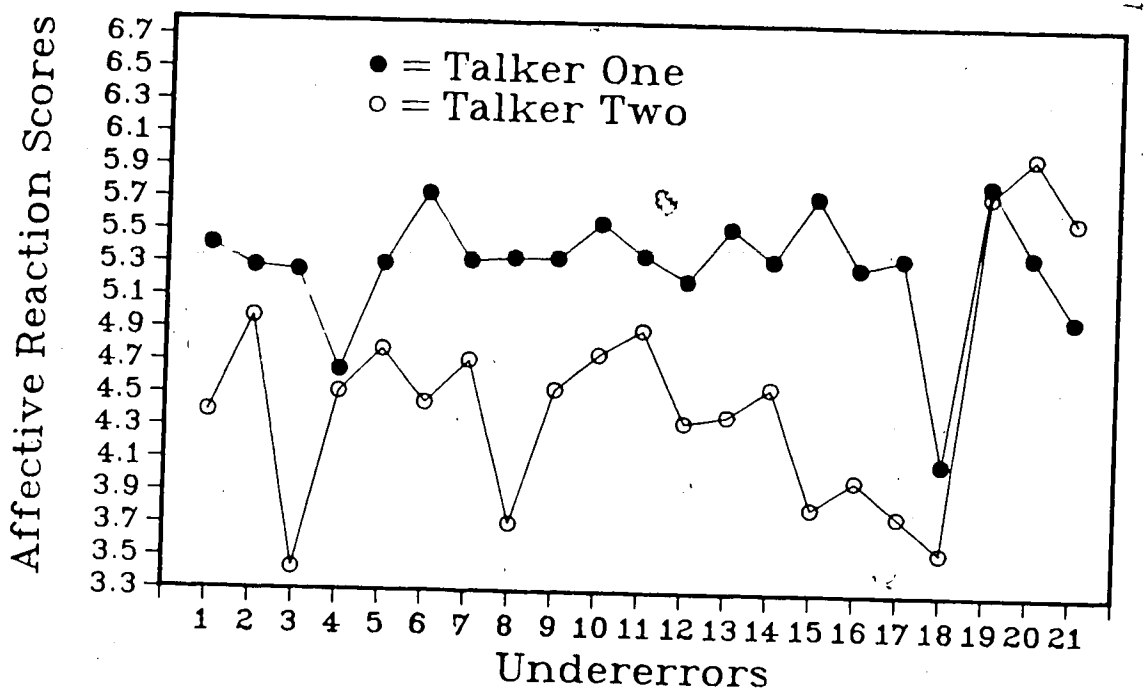

Figure 3a. Affective Reaction – Group One
Group by Undererror by Talker Interaction

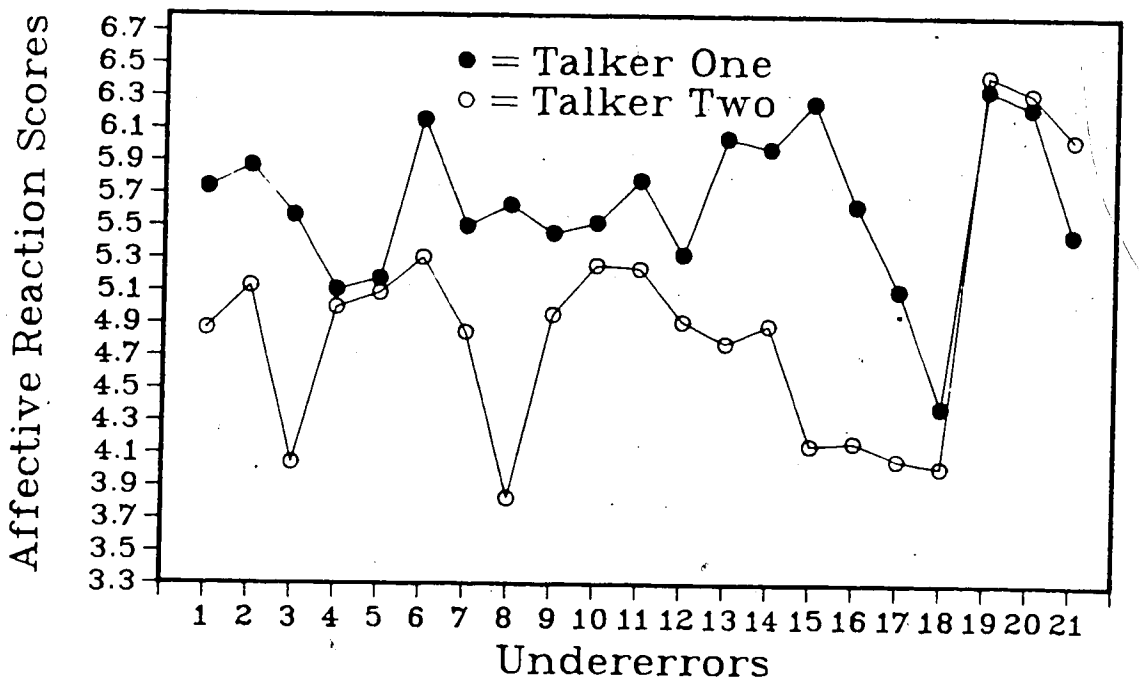

Figure 3b. Affective Reaction – Group Two
Group by Undererror by Talker Interaction

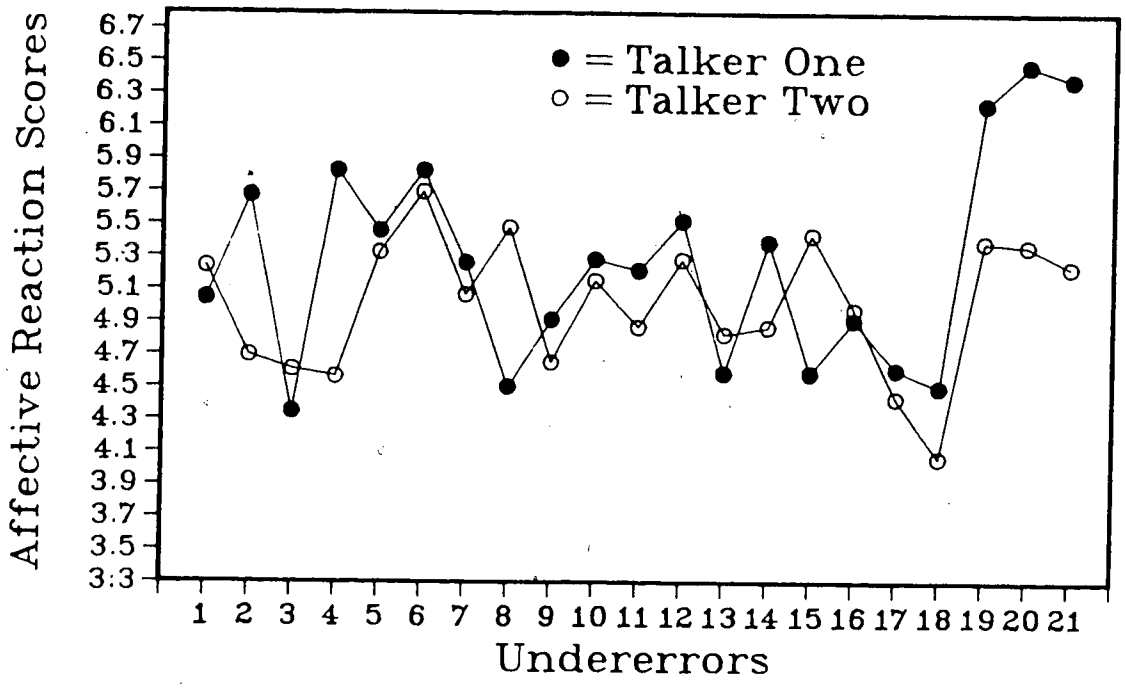

Figure 3c. Affective Reaction – Group Three Group by Undererror by Talker Interaction

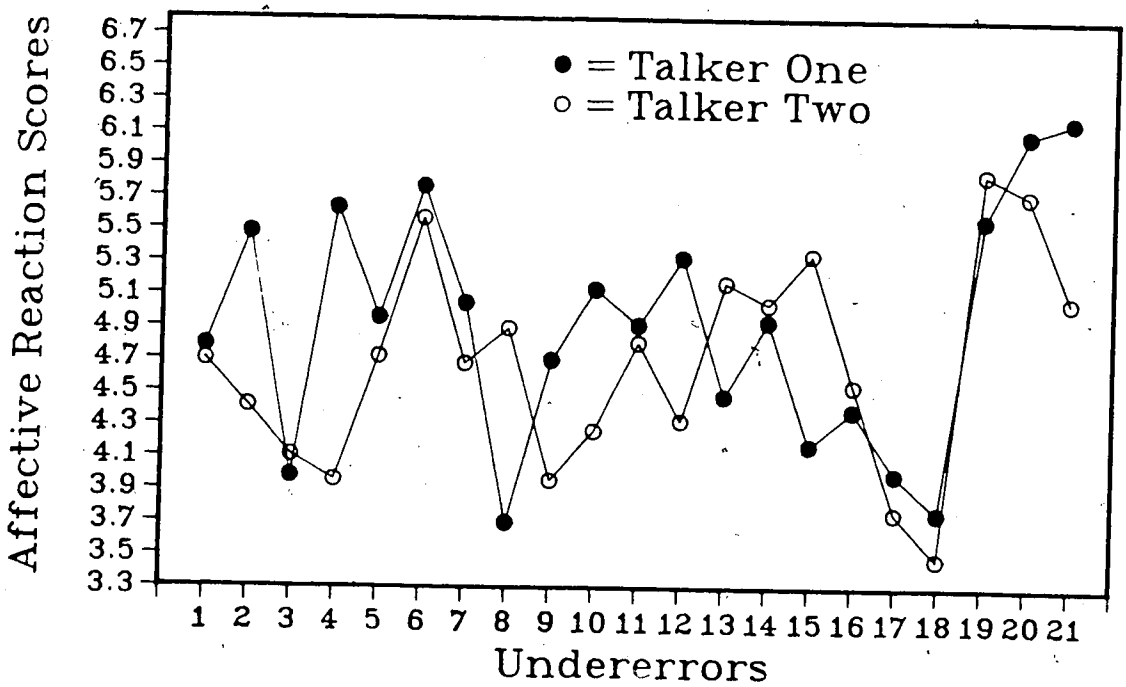

Figure 3d. Affective Reaction – Group Four Group by Undererror by Talker Interaction

4.2.4 Talkers

The main effect for talkers is significant (p=0.0) with talker one scoring an average of 5.28 and talker two scoring an average of 4.79. Talker by error was also significant (p=0.0). Talker one scored higher than talker two on all seven error types, as Figure 4 illustrates. Talker by undererror is significant (p=0.0009) and, as Figure 5 illustrates, talker one scored higher than talker two on all twenty-one errors.

4.2.5 Error Types

The error by talker interaction is significant (p=0.0). Thus the error types had differing effects depending on the talker. The scores for this interaction are rank ordered in Table III. The scores for each talker are ranked similarly except that the scores for talker one are higher for major constituents than for verb morphology whereas talker two was scored higher on verb morphology; however, tukey tests show that these two types are not significantly different. According to the tukey tests, the errorfree sentences are significantly higher than the remaining types. Multiple errors were scored lowest for both talkers; however, for talker two this error type is not significantly different from major constituent errors. For talker two, inflection errors are not significantly different from content word errors whereas for talker one they are. In the talker one results, multiple errors are significantly different from

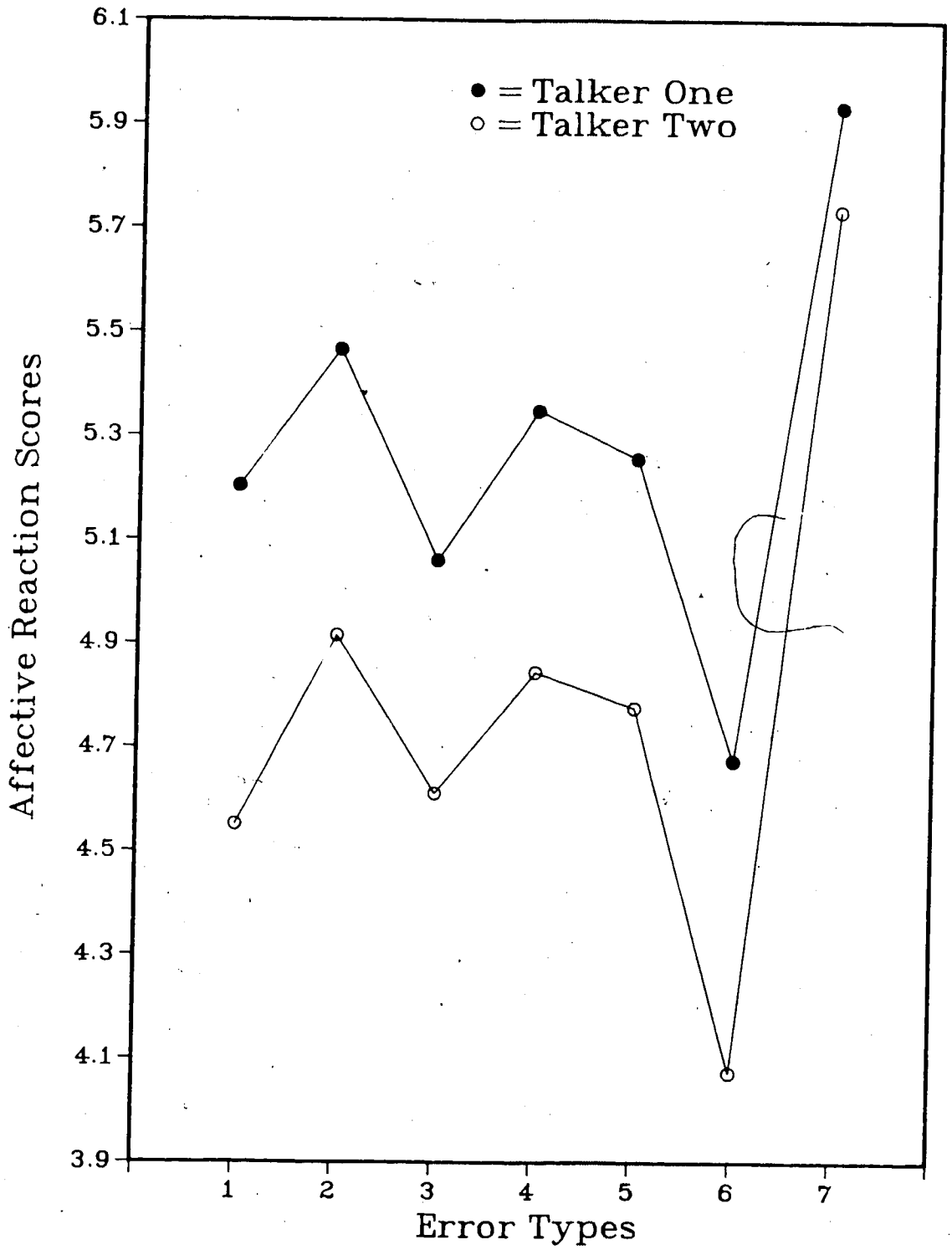

Figure 4. Affective Reaction – Error by Talker Interaction

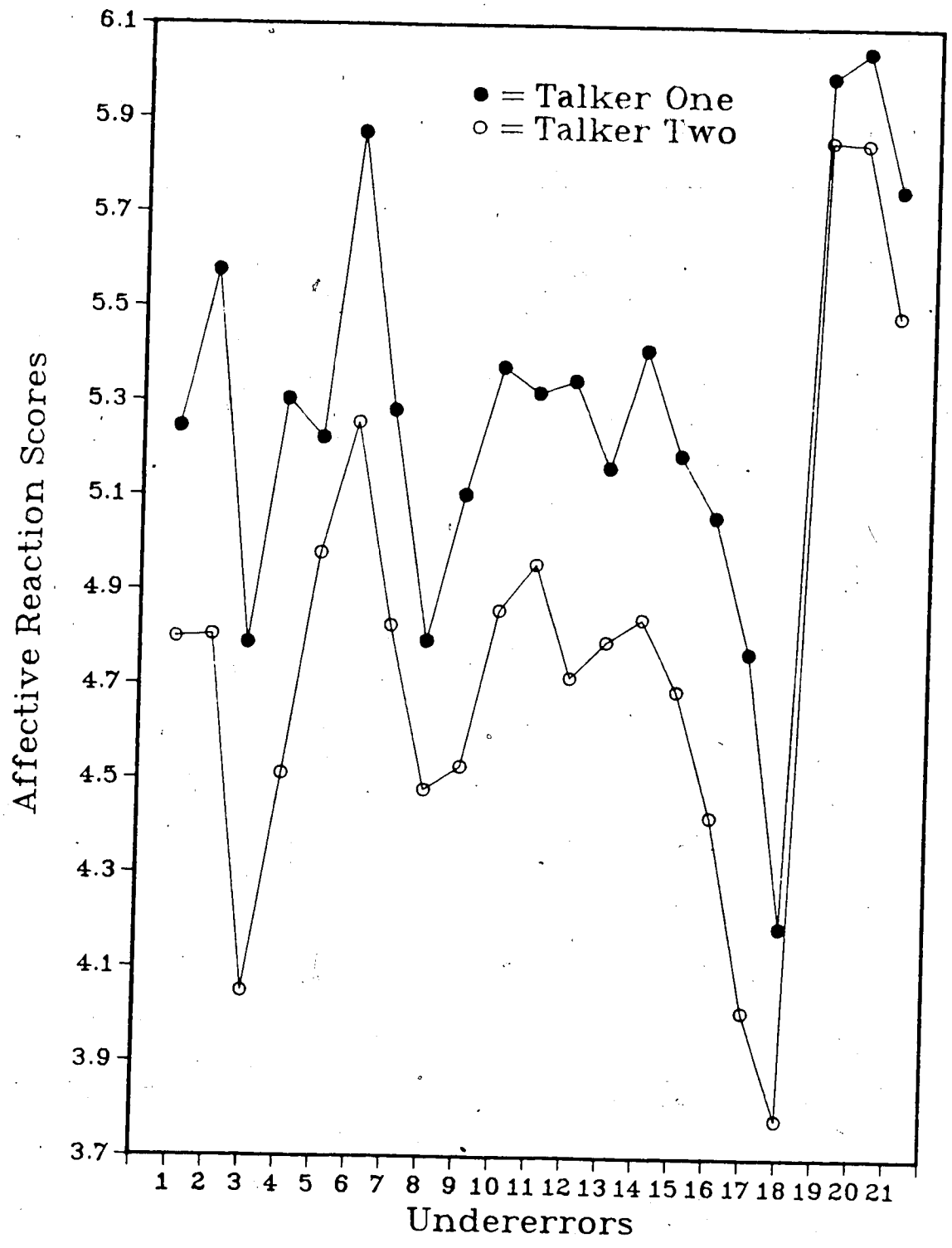

Figure 5. Affective Reaction – Undererror by Talker Interaction

Table III. Error by Talker - Affective Reaction Scores and Tukey Test Results

Talker One		Talker Two	
EF	5.93297	EF	5.73370
CW	5.46558	CW	4.91486
FW	5.34783	FW	4.84420
INFL	5.25543	INFL	4.77536
MC	5.20290	VM	4.61051
VM	5.05978	MC	4.55076
Mult	4.67391	Mult	4.07246

[Not significantly different by tukey tests

The error abbreviations are shown in full form in Table 1.

the six remaining types; in the talker two results they are similar to the major constituent type. The main effect for errors (p=0.0) summarizes the basic similarities between talker one and talker two. Thus, for the reader's benefit, Table IV and Figure 6 which represent the scores for the main effect errors are included. According to tukey tests done on the twenty-one undererror scores for each talker(see Table V in Section 4.2.6) only errorfree, function word and inflection error types are not significantly different within their own error type for talker one. For talker two only function words, inflections and verb morphology operated similarly and formed cohensive groups. The remaining error types for each talker for the most part functioned independently.

4.2.6 Undererrors

The undererror by talker interaction is significant (p=0.0009). This interaction addresses itself to two main questions prompting this particular experimental design. It addresses itself to the influence of accent level and to the effects of different errors. Table V is a graduated representation of the results for the twenty-one undererrors for each talker. Overall, talker one always scored higher than talker two. The order of errors from highest to lowest is not identical for the two talkers; however, the orders are similar. Tukey tests indicate that for talker one, the errorfree sentences and OmNnAdj sentences are similar.

Table IV. Error Types - Affective Reaction Scores and Tukey Test Result

Errorfree	5.83333
Content Words	5.19022
Function Words	5.09601
Inflections	5.01540
Major Constituents	4.87681
Verb Morphology	4.83514
Multiple Errors	4.37319

[Not significantly different by tukey tests

The error abbreviations are shown in full form in Table 1.

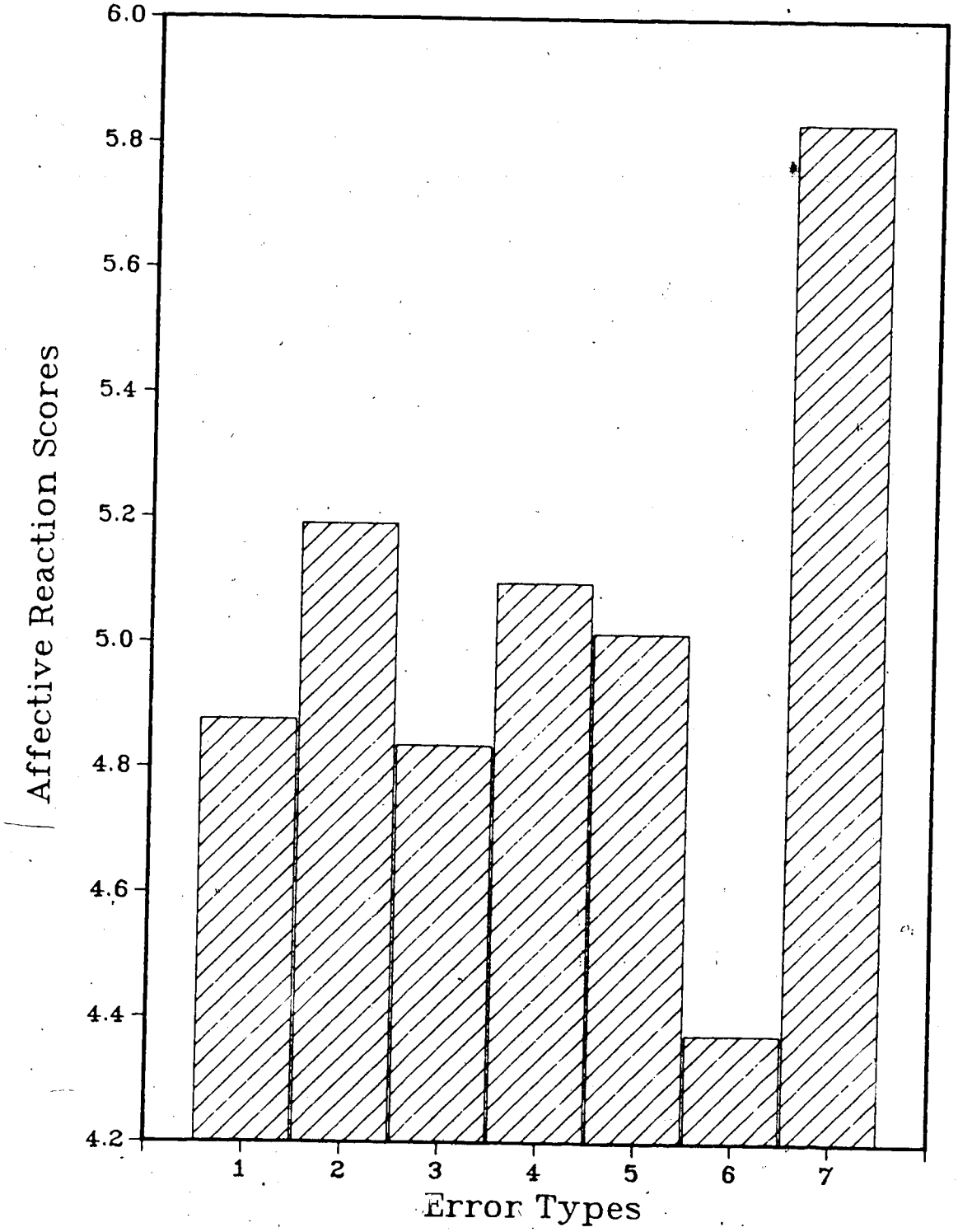

Figure 6. Affective Reaction – Error Types – Main Effect

Table V. Undererror by Talker - Affective Reaction Scores and Tukey Test Results

Talker One		Talker Two	
EF2	6.04891	EF1	5.85870
EF1	5.99457	EF2	5.85326
OmNnAdj	5.86957	EF3	5.48913
EF3	5.75543	OmNnAdj	5.25543
WO	5.57609	WN	4.97826
3rdPS	5.41304	Art	4.95652
Pron	5.37500	Pron	4.85870
Prep	5.34783	3rdPS	4.84239
Art	5.32065	Modal	4.82609
WV	5.30435	WO	4.80435
Modal	5.28261	Npar	4.79891
Npar	5.24457	Pl	4.79348
WN	5.22283	Prep	4.71739
Der	5.19022	Der	4.69022
Pl	5.16304	Tense	4.52717
Tense	5.10326	WV	4.51087
Mult2	5.05978	Part	4.47826
Part	4.79348	Mult2	4.42391
Rep	4.78804	Rep	4.04891
Mult3	4.77174	Mult3	4.01087
Mult5	4.19022	Mult5	3.78261

[Not significantly different by tukey tests

The error abbreviations are shown in full form in Table 1.

Function word errors, inflection errors as well as WV, WN, Modal, Npar, Tense, and Mult2 errors were given similar scores. WO sits in the middle between the highest and second highest groupings. Part, Rep and Mult3 errors, along with the last two undererrors from the next highest grouping (Tense and Mult2) were similar in effect. The effect of Mult5 was different from all the others. The results for talker two do not group into as few distinctive groups as the results for talker one do. The groupings overlap to a greater extent. The two shorter errorfree sentences group together. The longest errorfree sentence and OmNnAdj group together. Again all of the function word and inflection errors and WN, Modal, WO and Npar operated similarly. All of the verb morphology errors along with WO, Npar, Pl, Prep, Der and WV form an overlapping group with the third highest grouping. Mult2 groups itself with the lower half of the group just described. Rep, Mult3 and Mult5 group together to form the lowest group. Give or take one grouping, the results of the significant differences between undererrors for the two talkers are similar. However, the fact that the groupings are significantly different from each other is a clear indication that accent level does have a significant effect on listeners' affective judgements.

The main effect for undererrors is also significant ($p=0.0$). These results are represented in Table VI and Figure 7. Tukey tests show that the shorter errorfree sentences, EF1 and EF2, produced similar results but are

Table VI. Undererrors - Affective Reaction Scores and Tukey Test Results

EF2	5.95109
EF1	5.92663
EF3	5.62228
OmNnAdj	5.56250
WO	5.19022
Art	5.13859
3rdPS	5.12772
Pron	5.11685
WN	5.10054
Modal	5.05435
Prep	5.03261
Npar	5.02174
Pl	4.97826
Der	4.94022
WV	4.90761
Tense	4.81522
Mult2	4.74185
Part	4.63587
Rep	4.41848
Mult3	4.39130
Mult5	3.98641

[Not significantly different by tukey tests

The error abbreviations are shown in full form in Table 1.

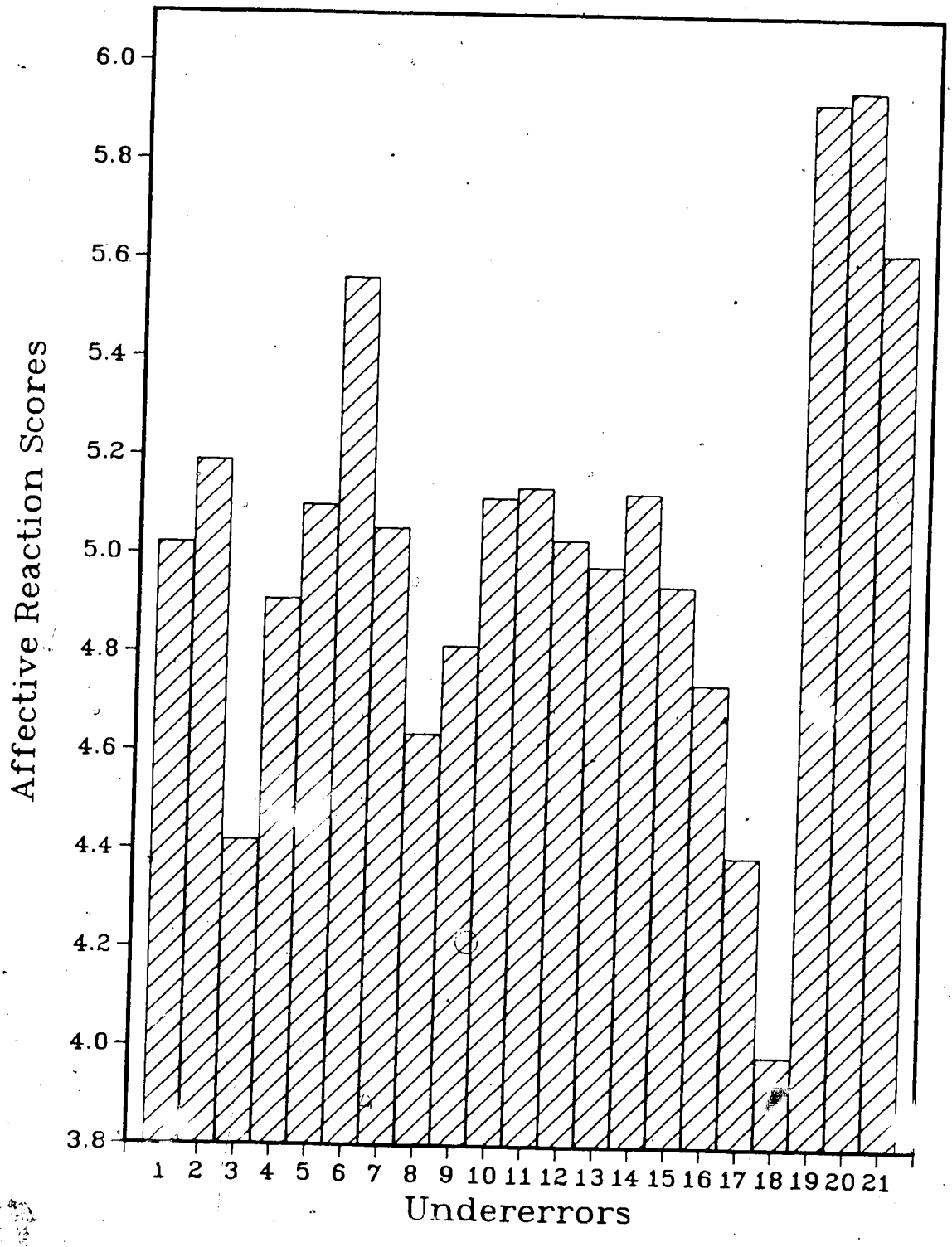

Figure 7. Affective Reaction – Undererrors – Main Effect

significantly different from EF3 which clusters with OmNnAdj. All of the function word and inflection undererrors, two of the content word errors (WN and WV), two of the major constituent errors (WO and Npar), and M produced similar results. T, Mult2, and Part then cluster together followed by Rep and Mult3. Mult5 is significantly different from all the rest.

4.3 Comprehensibility Analysis

4.3.1 Introduction

The analysis of the comprehensibility scores (ranging from 1 to 5, where 1 indicates complete miscomprehension and 5 indicates complete understanding) indicate that there is not as much variability among the factors as there is with the affective reaction scores. The ANOVA results for comprehensibility in Table VII indicate that fewer of the interactions are significant in the comprehensibility results than in the affective reaction results. The main effects for subjects, error types and undererrors are significant. Talkers is not significant and, as in the affective reaction results, groups is not significant. The sum of squares in Table VII indicate that errors account for the greatest proportion of variance. Thus, it appears that it is the actual errors which affect comprehensibility. The accent of the talkers and the other factors did not account

Table VII. Anova for Comprehensibility Results

	SOURCE	ERROR TERM	SUM OF SQUARES	D.F.	MEAN SQUARE	F	PROB.	EXPECTED MEAN SQUARE
1	MEAN	S(G)	0.14774E+06	1	0.14774E+06	68455.56	0.0000	7728(1) + 84(5) + (19)
2	GROUPS	S(G)	4.6598	3	1.5533	0.72	0.5428	1932(2) + 84(5) + (19)
3	ERRORS	SE(G)	1257.7	6	209.62	290.77	0.0	1104(3) + 12(10) + (19)
4	TALKERS	ST(G)	0.19682	1	0.19682	0.25	0.6197	3864(4) + 42(12) + (19)
5	S(G)	R(GSEUT)	189.91	88	2.1581	1.65	0.0001	84(5) + (19)
6	U(E)	SU(GE)	570.74	14	40.767	59.56	0.0	368(6) + 4(15) + (19)
7	GE	SE(G)	26.464	18	1.4702	2.04	0.0070	276(7) + 12(10) + (19)
8	GT	ST(G)	6.4973	3	2.1658	2.73	0.0487	966(8) + 42(12) + (19)
9	ET	SET(G)	41.172	6	6.8620	9.32	0.0	552(9) + 6(16) + (19)
10	SE(G)	R(GSEUT)	380.63	528	0.72089	0.55	1.0000	12(10) + (19)
11	GU(E)	SU(GE)	73.764	42	1.7563	2.57	0.0000	92(11) + 4(15) + (19)
12	ST(G)	R(GSEUT)	69.842	88	0.79365	0.61	0.9986	42(12) + (19)
13	UT(E)	SUT(GE)	50.101	14	3.5787	5.42	0.0	184(13) + 2(18) + (19)
14	GET	SET(G)	520.15	18	28.897	39.27	0.0	138(14) + 6(16) + (19)
15	SU(GE)	R(GSEUT)	843.33	1232	0.68452	0.52	1.0000	4(15) + (19)
16	SET(G)	R(GSEUT)	388.56	528	0.73590	0.56	1.0000	6(16) + (19)
17	GUT(E)	SUT(GE)	410.78	42	9.7805	14.80	0.0	46(17) + 2(18) + (19)
18	SUT(GE)	R(GSEUT)	813.95	1232	0.66067	0.51	1.0000	2(18) + (19)
19	R(GSEUT)		5049.5	3864	1.3068			(19)

for as much variation as they did with the affective reaction scores.

4.3.2 Subjects

The main effect for subjects is significant (p=0.0001). Again this variation can be attributed only to individual variation or unknown factors, as the age, sex, or other languages studied or spoken do not account for the variation. The amount of variation among subjects is much less in the comprehensibility scores than in the affective reaction scores as comparing Figures 1 and 8 indicates. The subject by talker interaction (p=0.9986) is not significant; however, it is discussed here to allow for comparison with the corresponding interaction in the affective reaction results. The nonsignificance of this interaction indicates that the strength of accent did not affect the subjects in terms of comprehensibility. Figure 9, a scattergram of this interaction, shows a plotting of the subjects in one major cluster with just a few outliers.

4.3.3 Groups

Again, the results for groups will be discussed as a matter of interest, although they do not directly pertain to the goals of this experiment. The main effect for groups is not significant (p=.5428). The subsequent interactions involving error type or undererror are significant: group by error (p=.0070), group by undererror (p=0.0). Group by error

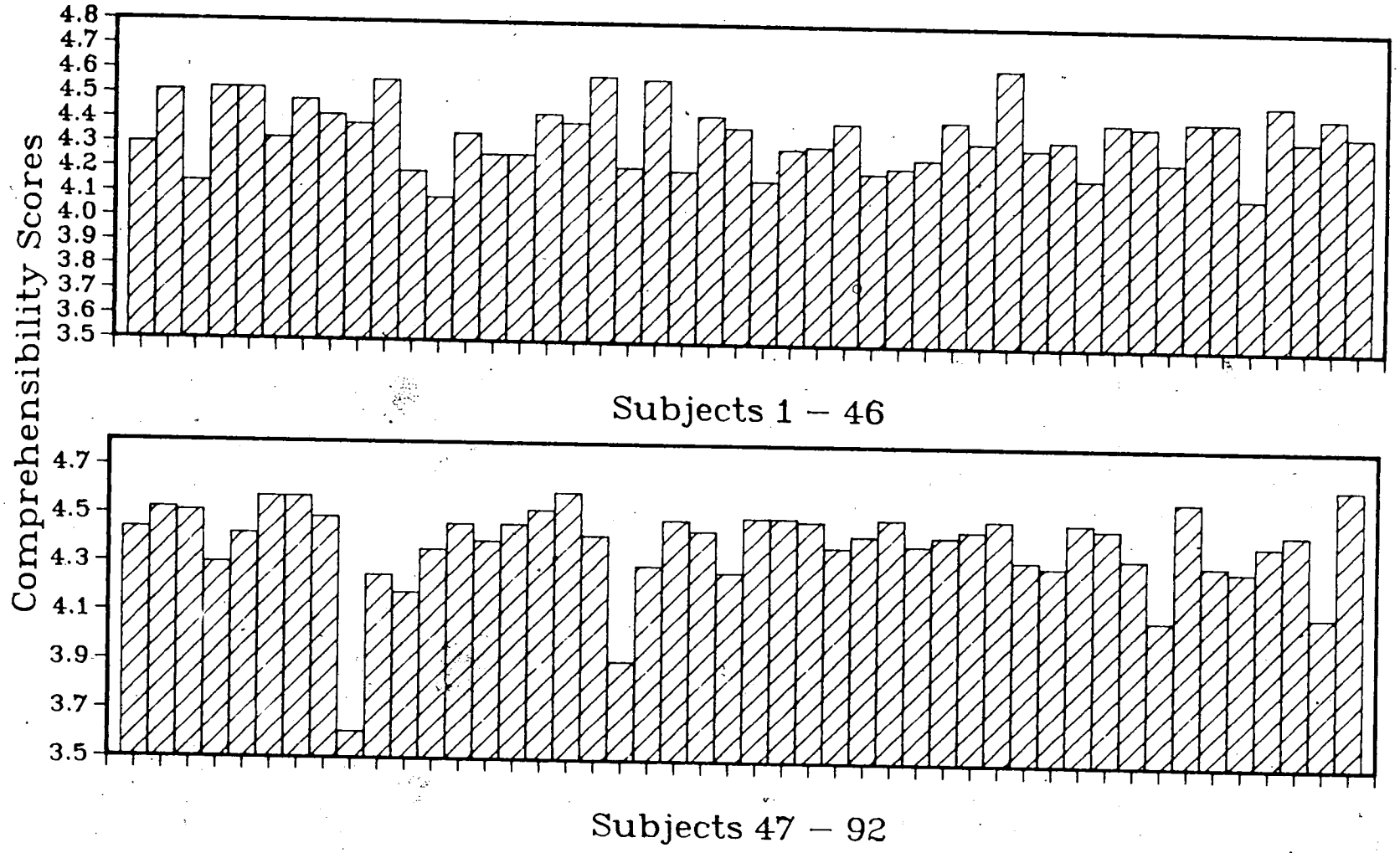

Figure . Comprehensibility – Subjects – Main Effect

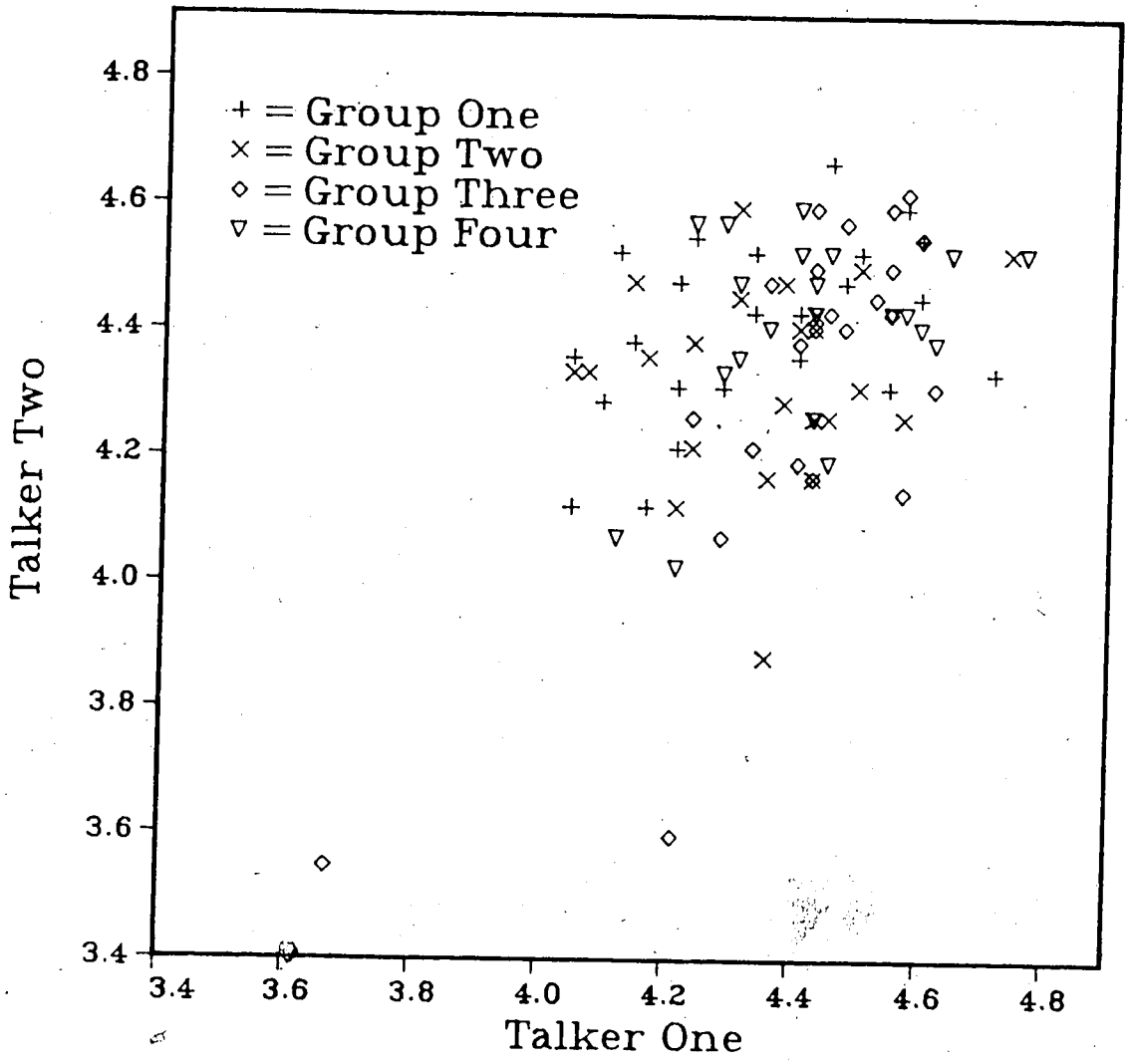

Figure 9. Comprehensibility – Subject by Talker Interaction

by talker is significant (p=0.0); however, neither talker scores consistently higher. All four groups scored errorfree or function word types highest. Major constituents were scored lowest for all four groups. The remaining error types varied as to the position of their scores (see APPENDIX E. Additional Results for these scores). Group by undererror by talker (p=0.0) is also significant. Figures 10a to 10d illustrate these results. Inspection of these results indicates that the dialogue heard seems to have more influence on scores than the speaker heard. All of the representations of the results when the first dialogue was heard follow a similar pattern (i.e., talker one in groups one and two, and talker two in groups three and four). The same is true for the results representing the second dialogue (talker two in groups one and two, and talker one in groups three and four). The patterns for the two dialogues are different from each other. Which dialogue was heard first or second or who they were spoken by does not seem to be influential in the scores.

4.3.4 Talkers

The main effect for talkers is not significant (p=.6197). The interactions for error by talker (p=0.0) and undererror by talker (p=0.0) are significant; however, neither talker scores consistently higher or lower in these results as Figures 11 and 12 illustrate. These results are discussed in section 4.3.5 and 4.3.6.

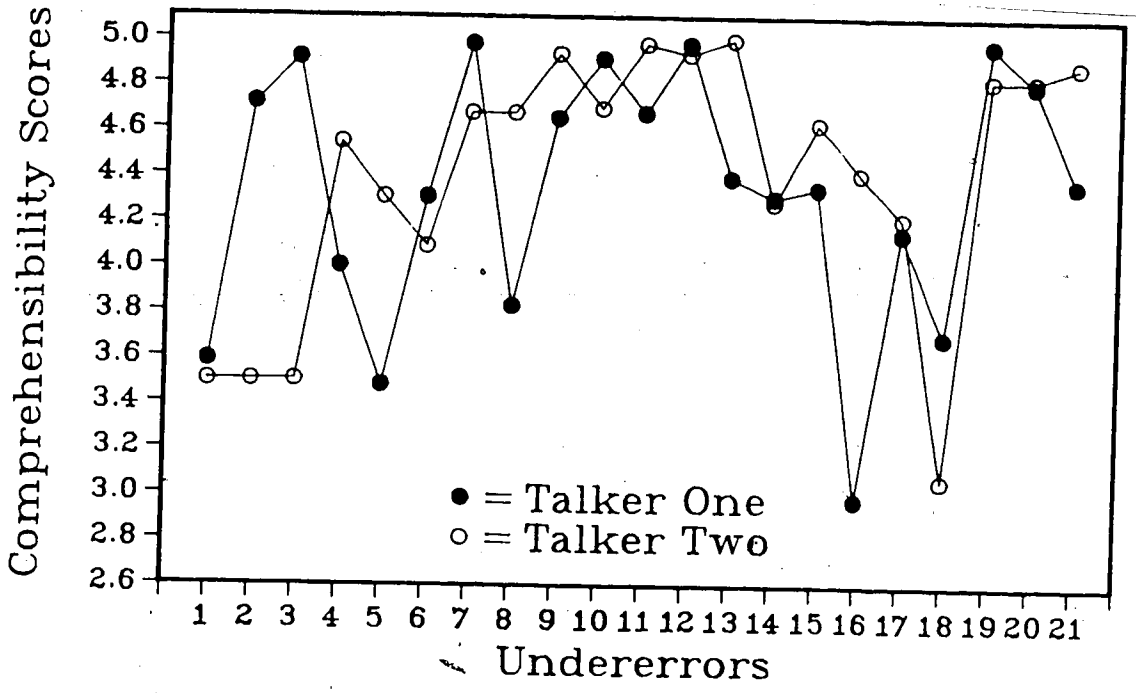

Figure 10a. Comprehensibility – Group One Group by Undererror by Talker Interaction

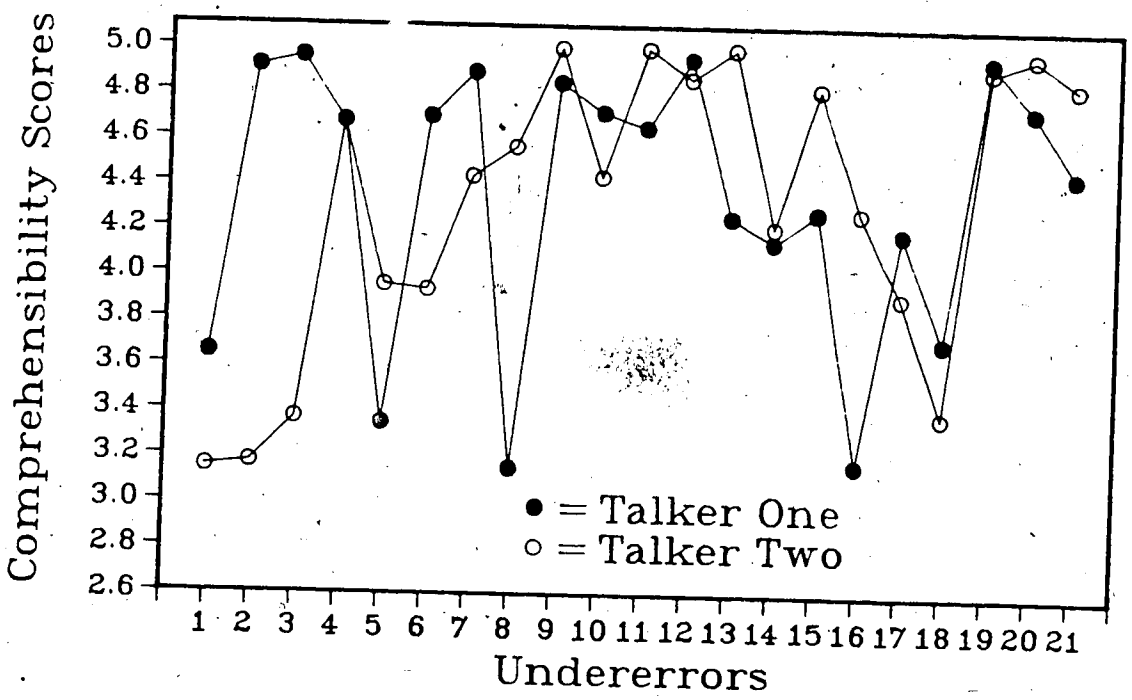

Figure 10b. Comprehensibility – Group Two Group by Undererror by Talker Interaction

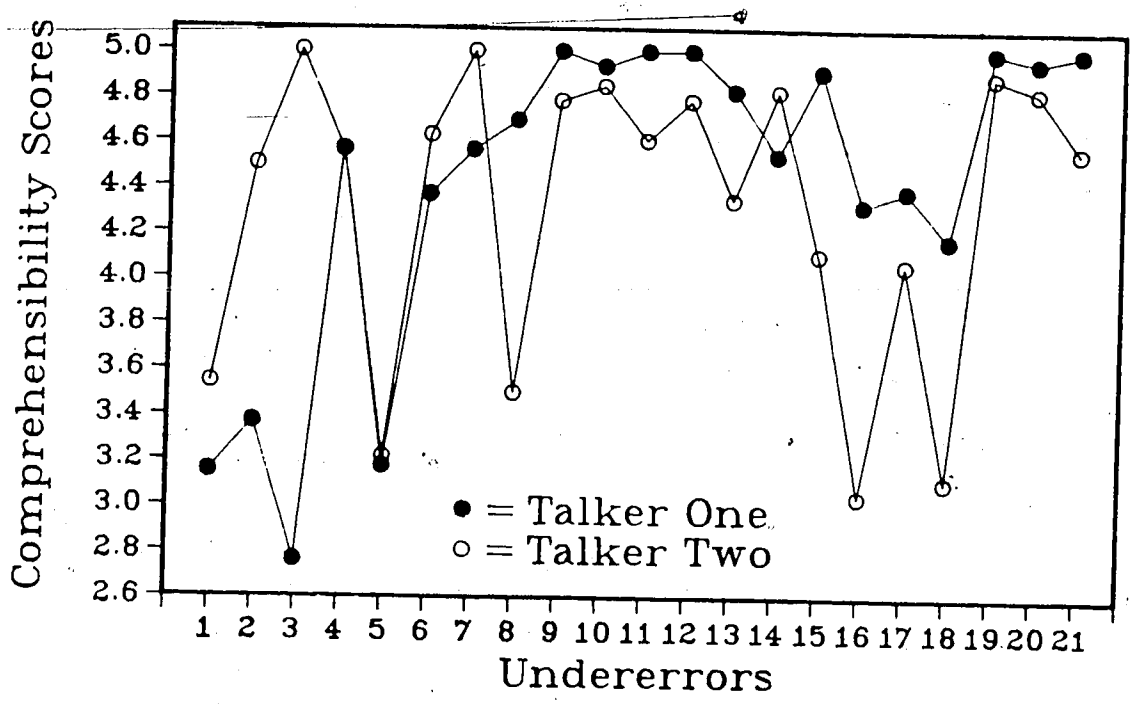

Figure 10c. Comprehensibility – Group Three Group by Undererror by Talker Interaction

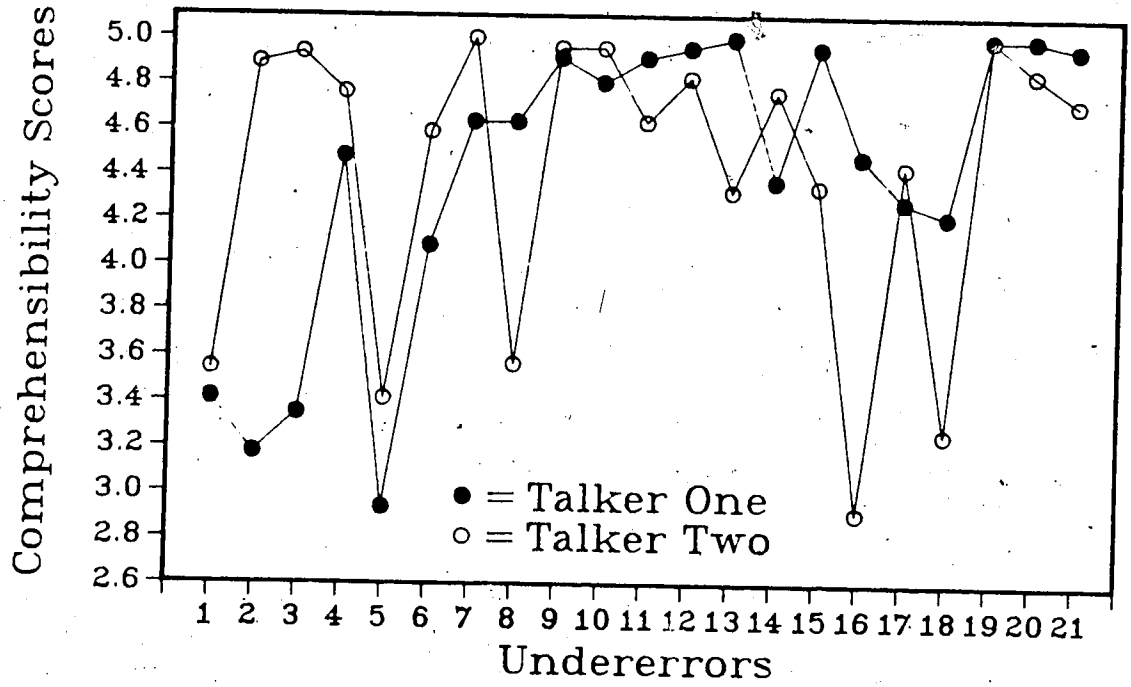

Figure 10d. Comprehensibility – Group Four Group by Undererror by Talker Interaction

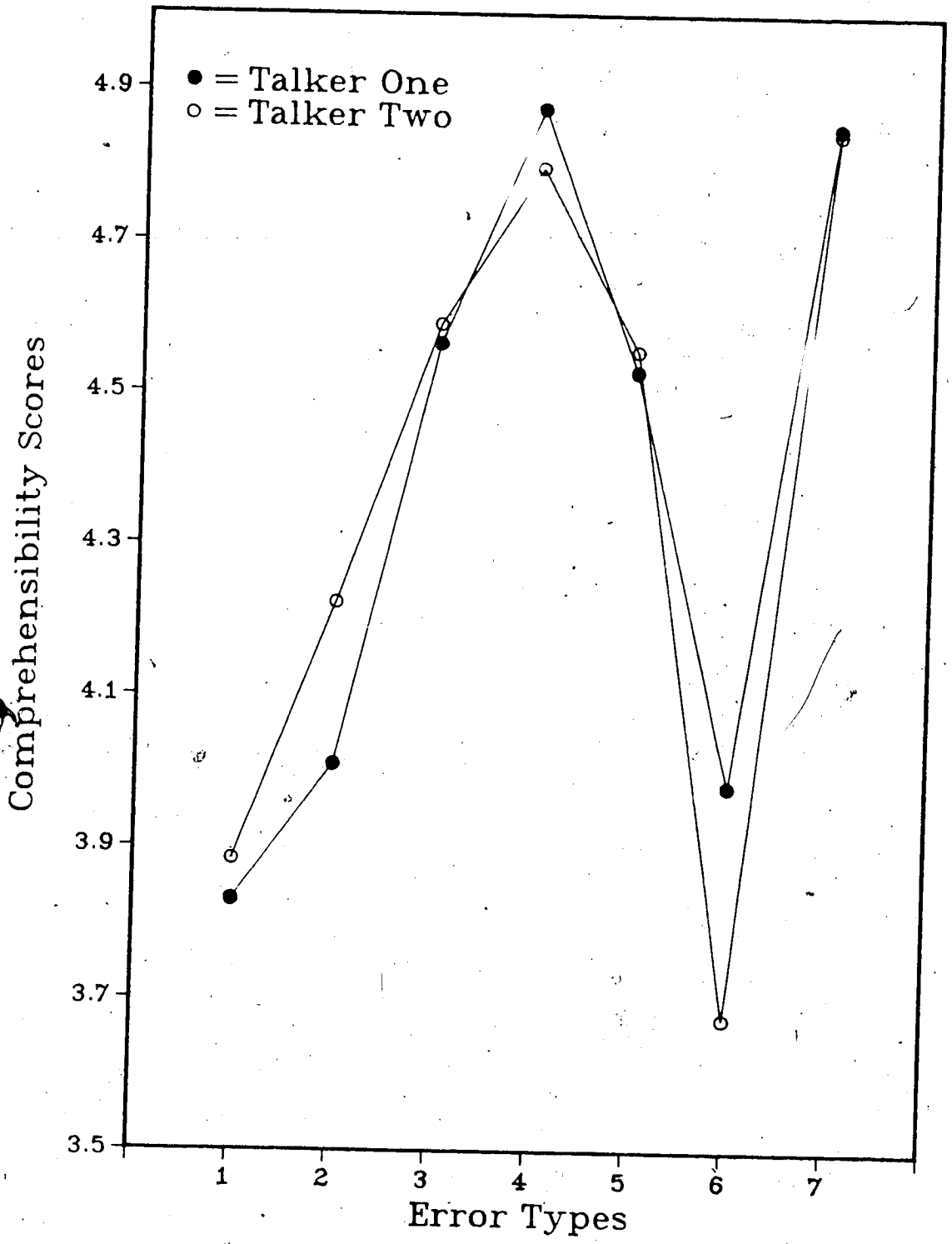

Figure 11. Comprehensiility – Error by Talker Interaction

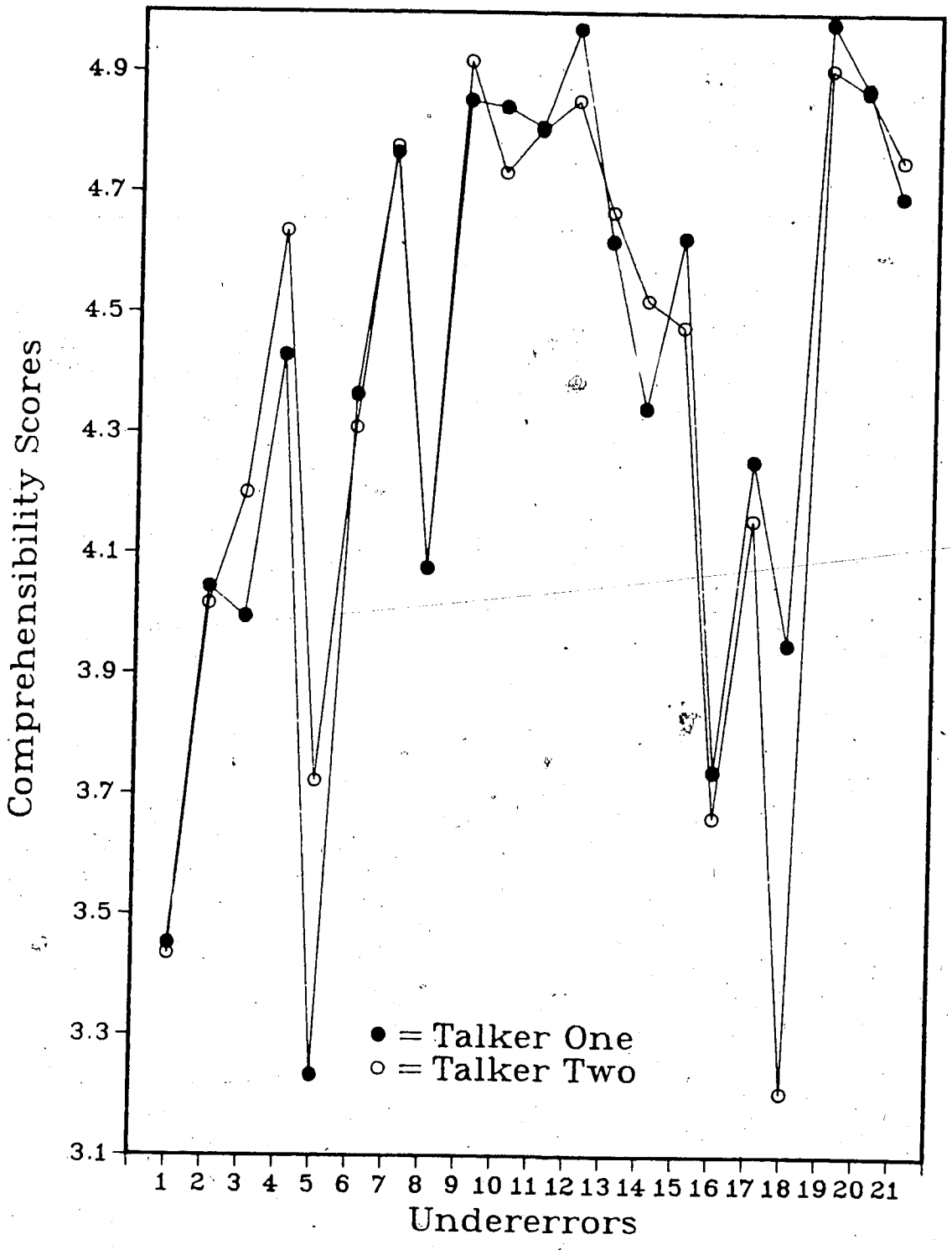

Figure 12. Comprehensibility – Undererror by Talker Interaction

4.3.5 Error Types

The error by talker interaction (p=0.0) is significant for comprehensibility. The differences caused by the two talkers occur at the upper and lower ends of the rank ordered list in Table VIII. Talker one scored highest on the function word error type and second highest on the errorfree sentences while this order is reversed for talker two; however, tukey tests show that for both talkers these two error types are not significantly different. Talker two scored lowest on multiple errors and second lowest on major constituent errors. In the talker one scores, this order is reversed; however, for talker one, these two error types are not significantly different. In both talkers' scores, verb morphology and inflections are similar. For talker one the content word error type and multiple error type are not significantly different. For talker two, however, the three lowest scoring error types are all significantly different from each other. According to tukey tests done on pairs of undererror means for each talker (see Table X in section 4.3.6) the errorfree, function word and inflection undererrors function cohesively; that is, the undererrors under each of these error types are not significantly different from each other. The undererrors under the remaining four error types do differ from each other.

The main effect for errors is significant (p=0.0). Error types account for the greatest proportion of variation. The scores for the main effect give a general

Table VIII. Error by Talker - Comprehensibility Scores and Tukey Test Results

Talker One		Talker Two	
FW	4.87500	EF	4.84420
EF	4.85145	FW	4.76710
VM	4.56522	VM	4.59058
INFL	4.52899	INFL	4.55616
CW	4.00906	CW	4.22283
Mult	3.98188	MC	3.88406
MC	3.82971	Mult	3.67572

[Not significantly different by tukey tests

The error abbreviations are shown in full form in Table 1.

summary of the similarity between talker one and talker two on error type scores. Table IX and Figure 13 represent these results.

4.3.6 Undererrors

The undererror by talker interaction is significant ($p=0.0$). This interaction addresses itself to two of the questions this experimental design endevors to answer, effect of error and effect of accent on comprehensibility. Table X is a rank ordered list of the undererror by talker scores. Tukey tests done for each talker reveal that the two talkers are quite similar but the different undererrors produce different results. For talker one errorfree, function word and two of the verb morphology undererrors (Modal and Tense) group together. The inflection and two of the content word undererrors (WV and OmNnAdj) produced similar results. Mult3 errors, the remaining verb morphology error (Part) and two of the major constituent undererrors (WO and Rep) grouped together. Mult2 and Mult5 produced similar results. The two undererrors receiving the lowest scores, Npar and WN were not significantly different from each other. For talker two, the results are quite similar; the highest grouping is the same as for talker one (errorfree, function word, Modal and Tense); however, for talker two this grouping is not significantly different from Pl, WV and 3rdPS undererrors. Inflection and WV undererrors are not significantly different. OmNnAdj, two of the major

Table IX. Error Types - Comprehensibility Scores and Tukey Test Results

Errorfree	4.84783
Function Words	4.83605
Verb Morphology	4.57790
Inflections	4.54257
Content Words	4.11594
Major Constituents	3.85688
Multiple Errors	3.82880

[Not significantly different by tukey tests

The error abbreviations are shown in full form in Table 1.

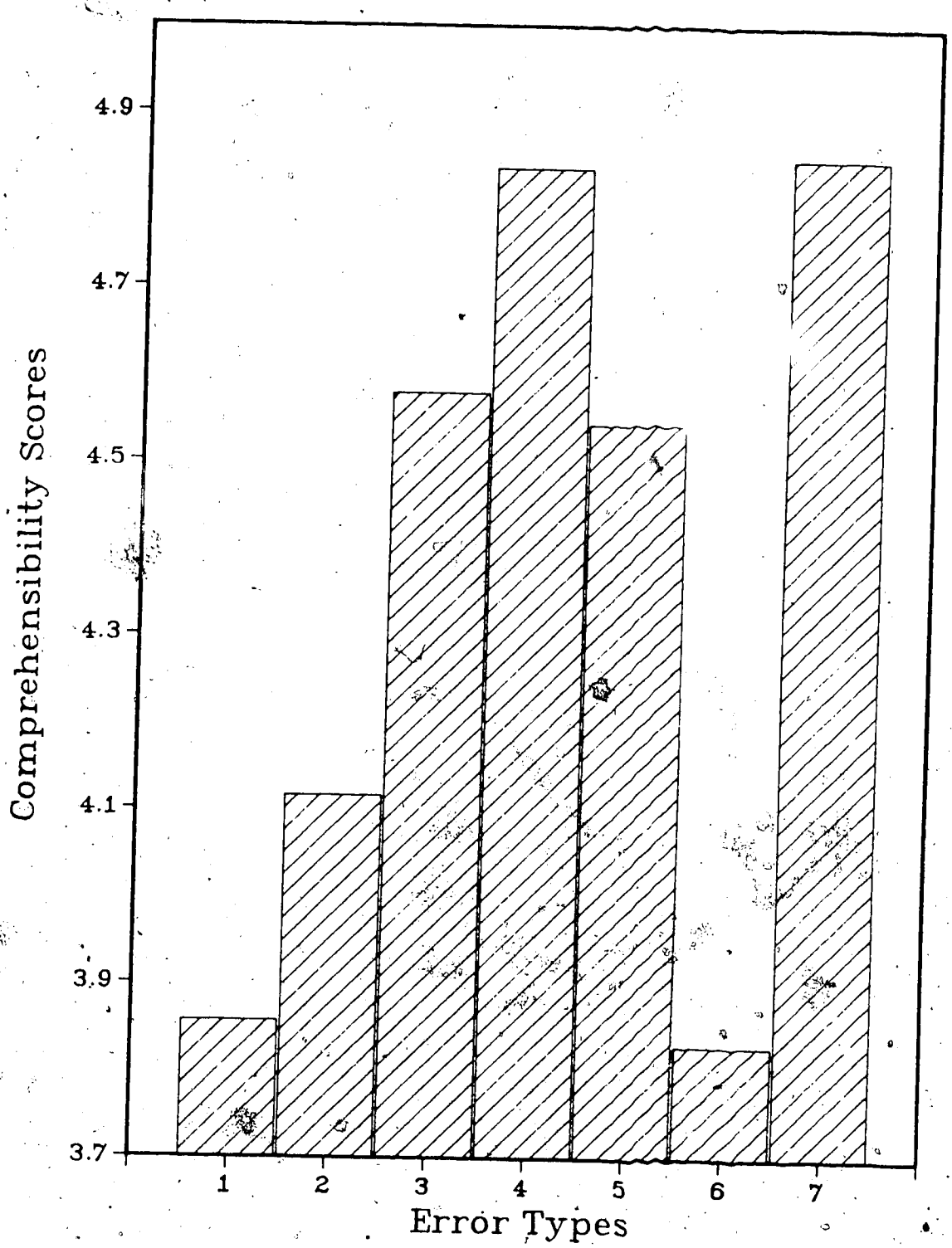

Figure 13. Comprehensibility – Error Types – Main Effect

Table X. Undererror by Talker - Comprehensibility Scores and Tukey Test Results

Talker One		Talker Two	
EF1	4.98370	Tense	4.91848
Prep	4.97283	EF1	4.90761
EF2	4.87500	EF2	4.86957
Tense	4.85326	Prep	4.85326
Pron	4.84239	Art	4.80435
Art	4.80978	Modal	4.77717
Modal	4.7 630	EF3	4.75543
EF3	4. 0565	Pron	4.73370
Der	4.62500	Pl	4.66848
Pl	4.61457	WV	4.63587
WV	4.42935	3rdPS	4.52174
OmNnAdj	4.36413	Der	4.47826
3rdPS	4.34239	OmNnAdj	4.30978
Mult3	4.25543	Rep	4.20109
Part	4.07609	Mult3	4.15761
WO	4.04348	Part	4.07609
Rep	3.99457	WO	4.01630
Mult5	3.95109	WN	3.72283
Mult2	3.73913	Mult2	3.66304
Npar	3.45109	Npar	3.43478
WN	3.2337	Mult5	3.20652

[Not significantly different by tukey tests

The error abbreviations are shown in full form in Table 1.

constituent undererrors (Rep and WO), Mult3 and Part function similarly. The lowest four for talker two are the same as for talker one; however, the two significantly different groups they form are not divided in the same way. For talker two, WN and Mult2 are not significantly different and Npar and Mult5 are similar. The results for these two talkers in terms of undererrors are similar; only minor variations are evident. There is a definite hierarchy in the extent to which different errors affect comprehensibility and certain undererrors, although belonging to different error types, appear to have the same effect.

The main effect for undererrors is significant (p=0.0) and summarizes the similarities between the two talkers' undererror scores. The scores for the undererror main effect are represented in Table XI and Figure 14. Tukey tests reveal that all of the error-free, function word errors and two of the verb morphology undererrors (Modal and Tense) produce similar results. The inflection undererrors and WV function similarly. OmNnAdj and Mult3 achieve similar scores. WO, Part and Rep function similarly. Mult2, Mult5 and WN produce similar results. Npar, achieving the lowest score is not significantly different from WN or Mult5.

Table XI. Undererrors - Comprehensibility Scores and Tukey Test Results

EF1	4.94565
Prep	4.91304
Tense	4.88587
EF2	4.87228
Art	4.80707
Pron	4.78804
Modal	4.77174
EF3	4.72554
Pl	4.64402
Der	4.55163
WV	4.53261
3rdPS	4.43207
OmNnAdj	4.33696
Mult3	4.20652
Rep	4.09783
Part	4.07609
WO	4.02989
Mult2	3.07109
Mult5	3.57880
WN	3.47826
Npar	3.44293

[Not significantly different by tukey tests

The error abbreviations are shown in full form in Table 1.

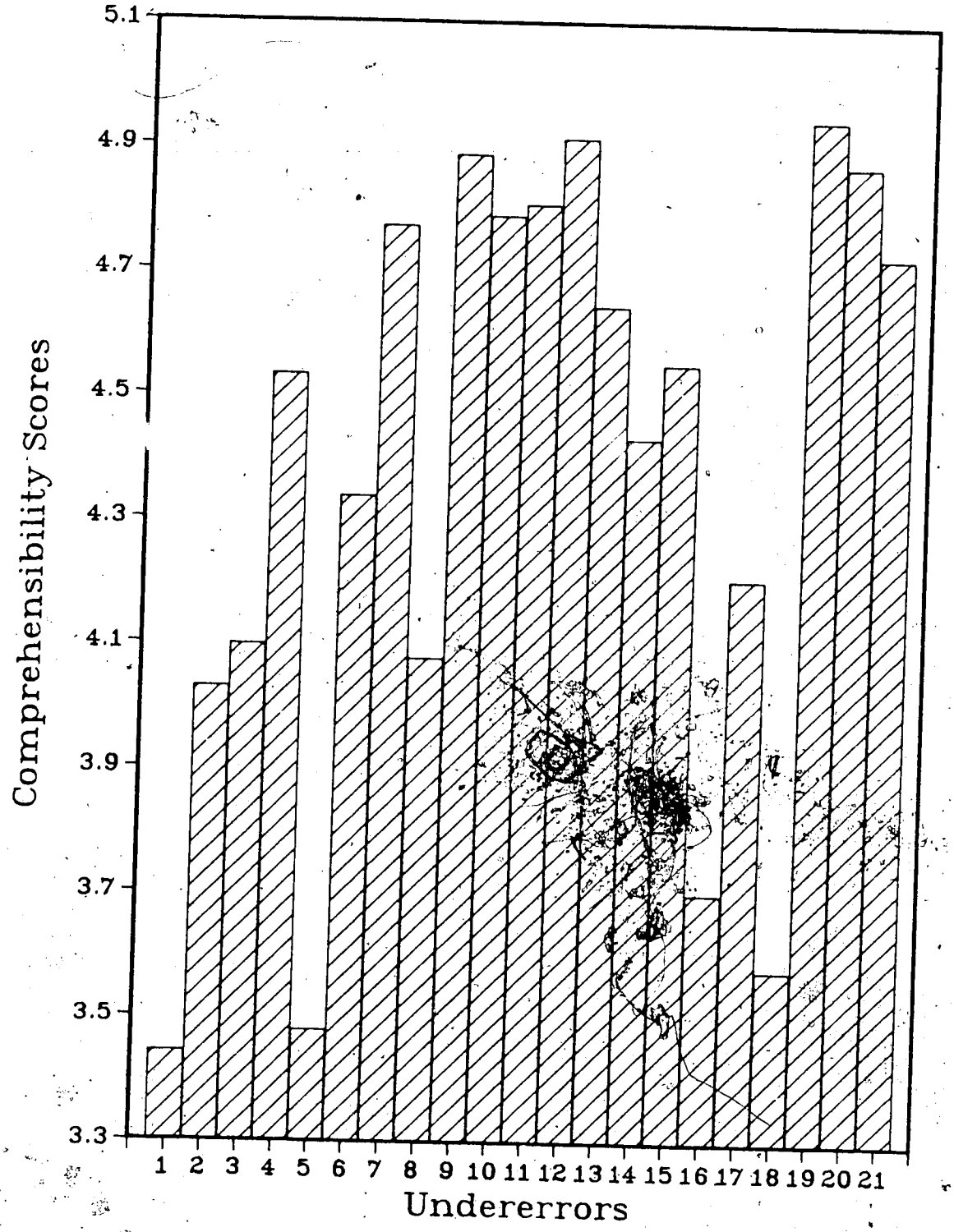

Figure 14. Comprehensibility – Undererrors – Main Effect

4.4 Correlation

4.4.1 Introduction

The results for the affective reaction scores and the comprehensibility scores were correlated using the Midas Interactive Data Analysis System. All of the scores for each subject (two replications of all twenty-one undererrors for two talkers, for ninety-two subjects) for affective reaction and comprehensibility were correlated. The overall scores for each undererror type for each talker were also correlated. Various results from the separate analyses of the two measures are also compared and discussed.

4.4.2 Midas Correlation

The correlation of every score for each subject (7728 scores for each measure) results in a positive correlation. The critical value of the correlation coefficient at .01 is .0293. The correlation between negative reaction and comprehensibility is .4348. Thus there is a significantly positive correlation for all of the subjects' scores. This indicates that the subjects' two measures of a specific utterance are consistent in relation to each other to some extent, indicating that the comprehensibility of an utterance influenced the subjects' affective reaction judgements. However, this relationship only accounts for approximately nineteen percent (.4348 squared) of the correlation. Thus, affective reaction was not entirely determined by the comprehensibility of an utterance.

The scores for the undererror by talker interactions (42 scores for each measure) were correlated in the same manner. The critical value of the correlation coefficient at .01 in this case is .3932. The correlation between affective reaction and comprehensibility is .4348. Again there is a significantly positive correlation. Figure 15 is a scattergram of this correlation. A positive trend is evident. However, this positive correlation only accounts for about nineteen percent (.4348 squared) of the relationship. Thus other unknown factors are also influential.

4.4.3 Other Comparisons

Comparing the results from the separate analyses shows that the affective reaction scores and the comprehensibility scores both produce a significant main effect for subjects. In the affective reaction scores, subjects accounted for the greatest proportion of variance; subjects did not vary as greatly in the comprehensibility scores. Comparing the bar graphs in Figures 1 and 8 it is easy to observe greater variation in the affective reaction scores and more homogeneity in the comprehensibility scores. This suggests that the effect which errors had on subjective reaction judgements depended on the individual subject, while the effect of errors on comprehensibility were relatively consistent for subjects. The subject by talker interaction is significant in the affective reaction results but is not

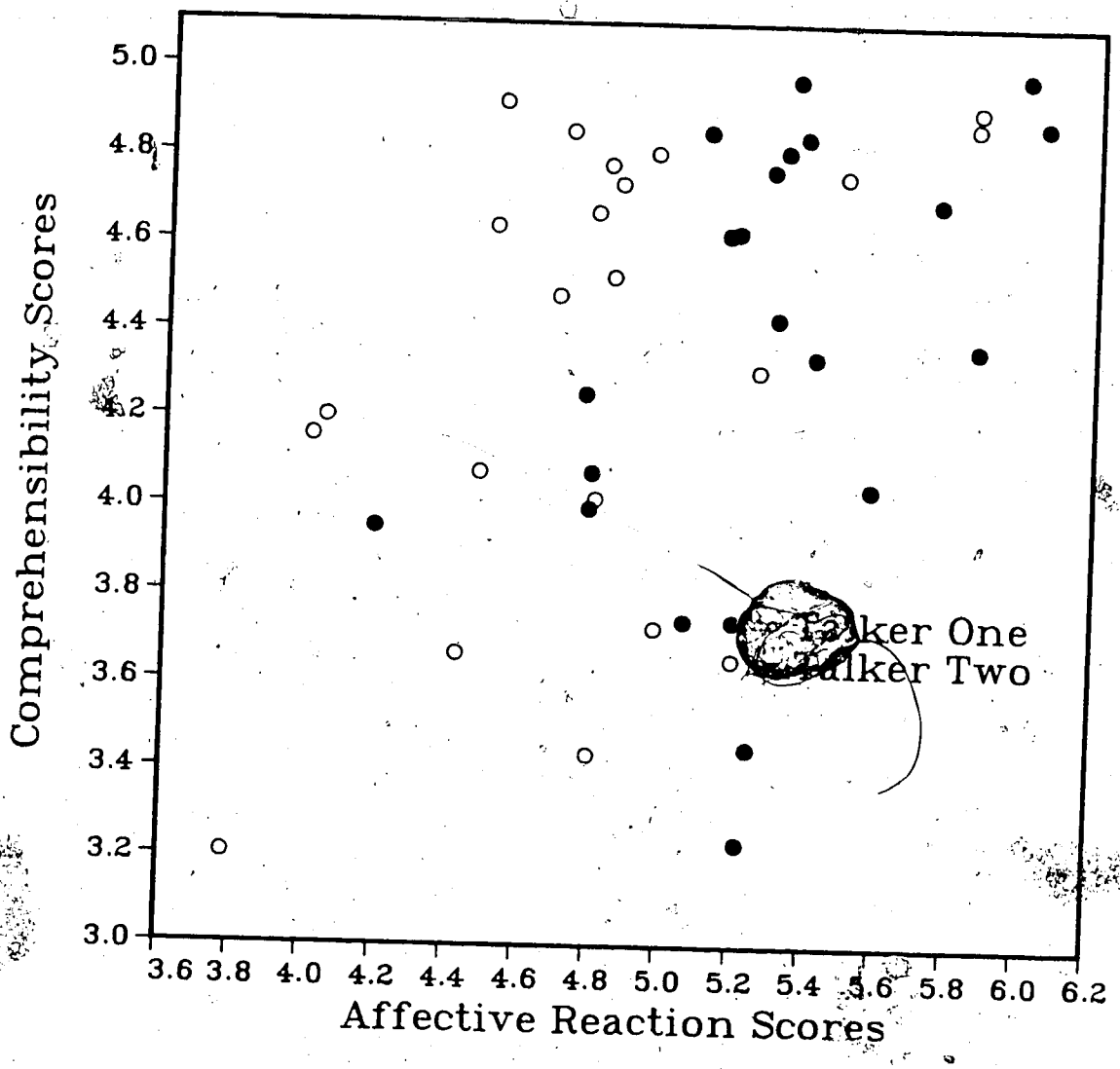

Figure 15. Correlation –
Undererror by Talker
Affective Reaction and Comprehensibility

significant in the comprehensibilty results.

The different subject groups also produced more variation in the negative reaction scores than in the comprehensibility scores. Comparing Figures 3a-3d and 10a-10d, affective reaction and comprehensibility scores respectively, it appears that the different presentations and the order had less of an effect on comprehensibility. The fact that the main effect for talkers was not significant for the comprehensibility scores but is significant for affective reaction scores adds further evidence that comprehensibility is determined in a more straightforward and homogeneous manner than affective reaction judgements.

In order to simplify the comparison between error types and undererrors, the main effects will be discussed rather that the interactions with talker, inasmuch as they are a summary of the talker interaction similarities. There is a larger number of significantly different groupings in the affective reaction results than in the comprehensibility results. Comparing the results for the seven error types (Tables IV and IX) reveals similarities but also a certain amount of difference. The ends of the two scales are identical and the placement of the remaining error types is similar except for two types, content words and verb morphology. Content words cause a comparatively large amount of miscomprehension; however, they are rated second highest in terms of affective reaction scores. On the other hand,

verb morphology errors cause a minor amount of miscomprehension, while they receive the second to lowest negative reaction scores. A comparison of the error by talker interaction agrees with ve comparison with the exception of one point (see Ta and VIII). In the results for talker two there are e significantly different groupings for comprehensibility than for affective reaction.

Comparing the scores for the undererrors (Tables VI and XI) reveals a similar situation. All of the errorfree undererrors were scored high and the multiple errors low for both measures. Function word errors were scored higher on co nsibility scores than negative reaction scores. I on error scores were all rated in the mid-range in both sures. Exce for multiple errors, the suberrors in the aforementioned error types are not significantly different from each other in the negative reaction or the comprehensibility scoring. Multiple errors are significantly different from one another; however, they all occur toward the lower end of both groups. Content word errors are spread over the scale for both measures. OmNnAdj was scored highest in the negative reaction results with WN next and WV receiving the lowest score f is error type. In comprehensibility WV scored highest with OmNnAdj next and WN lowest. Verb morphology undererrors are also spread throughout both scales; however in the negative reaction scores they do occur in the mid to low parts of the scale.

From highest to lowest, the order for negative reaction is Modal, Tense and Part. For comprehensibility the order is Tense, Modal and Part. In both measures Part scored very low and, in terms of tukey test groupings, in the same position. The major constituent undererrors are spread over the affective reaction scale with WO occurring near the top, Npar next and Rep very near to the bottom. In the comprehensibility scores, the major constituent undererrors all occurred near the lower end of the scale in the order Rep, WO and Npar.