

THE HISTORICAL DEVELOPMENT OF PSYCHOLOGY
IN SCANDINAVIA
A STUDY ON THE HISTORY OF SCIENCE

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INTRODUCTION

This paper considers the development of scientific psychology in four Nordic countries: Denmark, Norway, Sweden and Finland. The fifth country, Iceland, is not handled in this paper. It should, however, be emphasized that Iceland has its own university with a faculty and institute in Reykjavik, and that Iceland, also has its ancient and respectable cultural traditions. Iceland is also a member in the Scandinavian cooperation between the Nordic states, and is actively contributing e.g. to the Editorial Board of the Nordic scientific Journals, in the field of psychology as well as medicine, for example.

All the five Nordic countries have different historical and cultural backgrounds. However, there are a number of common elements in the histories of these nations: the population of Iceland was originally formed of vikings, i.e. emigrated Norwegians. Later on, Iceland was a part of Denmark, and became independent in 1941. After independence in the middle-ages, Norway became a part of the great Nordic Union between Sweden, Norway, Denmark and Finland, in 1397-1448. Finland was already a part of Sweden then.

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After the dissolution of the Great Union, Norway became a part of Denmark, and later fell under the Swedish throne in 1814. Norway won its independence in 1905. Finland, after being a part of Sweden for several centuries, became a part of Russia in 1809, and won independence in 1917.

During the earlier centuries, Copenhagen without doubt was a cultural and political centre in Scandinavia. Another equally powerful center was formed in Sweden, in Stockholm-Uppsala.

Like in other countries, psychology in the Nordic countries also developed as an integral part of philosophy and medicine. Later on, however, psychology turned to a more empirical direction, and during this development, it also produced its own institutions and laboratories. In this paper, the philosophical psychology and empirical psychology in each country are presented respectively in separate chapters.

In a short paper like this, it is naturally impossible to give any kind of detailed information on the historical development of psychology in the Nordic countries. However, some kind of profundity is sought through a comparative study of the different historical backgrounds. The national traits are emphasized, but also the common elements are presented when they exist.

Due to these different historical and cultural backgrounds, which are, however, interwoven in a complicated way, it presents a special challenge to characterize the historical development of psychology in these countries briefly.

The author of this paper agrees with Edwin G. BORING and his scepticism on the usefulness of the concept of purely "national psychologies" expressed in his *History of Experimental Psychology*. This scepticism is well-argued because of the international nature of intellectual and scientific activities in general. However, it has some value to present analytically the history of psychology as science in a specific country, and because of the special historical and common cultural traits, in the Nordic area. At the same time, the significant international trends, which developed psychology all over the world and came mainly from Continental Europe, should be kept in mind. However, even these trends were taken up for consideration in somewhat different ways in the various academic communities of the Nordic countries.

DENMARK

The academic life in Denmark has long and established contacts with the universities of Western Europe. The German-speaking cultural area has been of special significance, but influences from France and Great Britain have also played a considerable role in the history of Danish psychology and philosophy. The oldest university is in Copenhagen, founded in 1479, and it is also the largest in the country (22000

students). Other universities are in Århus (1928), Odense (1964) and Roskilde (1970). In addition, the country has a number of other Institutes, e.g. the Academy for Engineering Sciences and the Royal Institute for Higher Education in Educational Sciences.

PHILOSOPHICAL PSYCHOLOGY

Actually, the history of psychology in Denmark should begin with Ludwig HOLBERG. He is considered in a chapter of Norwegian psychology.

Johan Nicolai TETENS (1738-1807) belongs to the history of philosophical psychology and empirical psychology. TETENS was a professor of philosophy at the University of Kiel, Germany, and later in Copenhagen and he published a large treatise on perception already in 1795. He became famous for the very systematic classification of psychological phenomena. He had influences both on German and Danish psychology, and was himself of Danish origin. However, his significance for the general development of scientific psychology was very much overshadowed by the growing importance of his great contemporary in Königsberg, Immanuel KANT. J.N. TETENS had academic education in exact sciences, physics and mathematics. This is an interesting fact to note: it often happens in the development of scientific psychology that those men who have had an important impact on the development of this young science, have had a background, in natural sciences and medicine, combined with a strong interest in the philosophical aspects of science and life.

Another characteristic trait in Danish psychology and philosophy is a strong interest in an individual personality, his emotions and needs. A prominent representative of this tradition is F.C. SIBBERN (1758-1872). His psychological texts show a fine capacity to observe many shades of individual behavior and experience. He also had a keen interest in the relationship of psychological and biological phenomena.

Søren KIERKEGAARD (1813-1855) is internationally better known than SIBBERN. His thinking is still actual today, and he has given important contributions to the existentialist philosophical psychology. In Germany, he has influenced especially the philosophically oriented phenomenological and humanistic psychology. It is probable that the individualism so typical of KIERKEGAARD is at least partly due to the teachings of SIBBERN. KIERKEGAARD was a strong opponent of the Hegelian tradition, and he criticized harshly all systematic philosophy. According to KIERKEGAARD, the central question is the human existence and the anxieties inevitably bound with it. This human condition is essentially a lonely one, and here Hegelian systematics has no relevance.

Harald HÖFFDING (1843-1931) was, in many respects, totally different from KIERKEGAARD, even though KIERKEGAARD had some influence on him. However, HÖFFDING was an academician, and worked systematically with the questions of empirical and philosophical psychology. He was a philosopher, and wrote, among other things, an internationally wide-spread textbook on the history of philosophy. His textbook on *Psychology, based on experience*, was translated into many languages, e.g. into English, Finnish and Russian. HÖFFDING was a representative of moderate empirism and neutral monism. His psychology can be characterized as functionalism, which in many respects was nearer to William JAMES and American functionalism than to German tradition dominated by WUNDT.

The central psychological function for HÖFFDING is will. This voluntarism makes him different from his contemporaries in many respects. The identity-theory and monism represented by SPINOZA influenced his thinking in many ways. The central function of consciousness for him is synthesis. The approach of HÖFFDING is determinism.

Jörgen JÖRGENSEN (1894-1969) was a disciple of HÖFFDING but was strongly influenced by logical empirism in the classical sense of the concept, represented by the Vienna circle. His main work is *A Treatise on Formal Logic* in three volumes (1931). His significance for Nordic psychology is based on his work *Psykologi paa biologisk grundlag* (1942-1945). In addition to introspection, there exist, according to JÖRGENSEN, two other plausible methods to reach psychological knowledge: behaviorist observations and physiological methods. According to JÖRGENSEN, psychology is a part of General Biology which studies the activities of the living organisms. Consciousness is for him a characteristic of life in general. JÖRGENSEN had a very significant influence in all Nordic countries, especially in Finland. His above mentioned *Psychology on the Basis of Biology* was noted and reviewed by a Finn, Eino KAILA, and it was for long used as a standard reference.

The strong philosophical tradition in Denmark did not end with these classic authors. Quite to the contrary, philosophical tradition still has a strong position in psychological thought and research in Denmark. In this sense, the work by K.B. MADSEN should be noted. MADSEN is one of the most significant authors in the Nordic countries on the questions of theoretical, metatheoretical, historical and other philosophical nature in psychology. Other philosophical traditions also have some bearings on psychology, e.g. on humanistic and existentialist psychology, psychoanalysis, marxism and feminism.

EMPIRICAL PSYCHOLOGY

The name of Johan Nikolai TETENS (1738-1807) was already mentioned in the chapter on philosophical psychology. It should be emphasized that TETENS performed original experiments on perception almost one hundred years before Alfred LEHMANN, who founded institutional psychology in Denmark. One century before FECHNER he made experiments and measurements of after-effects and their durability in various sensory areas.

Experimental psychology in Denmark was founded by Alfred LEHMANN (1858-1902), who originally was an engineer. During his early career, he became interested in the German experimental psychology. After being graduated in an engineering academy, he continued his studies and made his academic dissertation on the perception of colours. He studied in Leipzig at Wilhelm WUNDT, and after coming back to Copenhagen, he founded the first Danish Institute in 1886. LEHMANN had a wide interest in all areas of psychology. He was nominated a professor at the University of Copenhagen in 1919. He published in the areas of the psychology of emotions, psychotechniques, developmental psychology, and educational psychology. In his work *Overtro og trolldom* he attempts a scientific explanation of spiritualistic phenomena. He polemized against the famous theory of emotions presented by William JAMES and his countryman, physiologist Karl LANGE (1834-1900). According to LEHMANN, psychological life is a totality. Psychological processes are dependent on the central nervous system and its energies. He defended an original theory of psychological energy which he called "P-energy".

A follower of LEHMANN was Edgar RUBIN (1886-1951). RUBIN studied under LEHMANN and HÖFFDING. Later he studied in Göttingen at the Institute of G.E. MÜLLER. In 1915 he published his academic dissertation *Synsoplevede figurer (Visually perceived figures)*, which was later translated into German. This work had some influence on the Gestalt theory, even if RUBIN did not consider himself as a representative of the Gestalt school. It was typical of Rubin that all schools, large-scale theories, and systems aroused deep suspicion in him. He never wanted to create any "system" of psychology. He valued concrete research and empirical results. Yet, laboratory conditions also awakened his sceptical instincts: he criticized these as too artificial. He wanted to understand the real human experiences instead of being isolated in his laboratory. However, it is generally accepted that the speciality of Edgar RUBIN was a Gestalt-theoretically oriented perceptual psychology. He was interested in the construction of the outer world as a result of complicated perceptual processes.

LEHMANN and RUBIN were the dominating figures in Danish scientific psychology for more than half a century. No real difference of tradition was hardly

noticed between them. Some slight differences can be seen: while RUBIN was nearer to the Gestalt-theory, LEHMANN was more oriented to German classical experimental psychology.

After these two classic figures, the scene in Danish psychology changes significantly. The picture is more complicated, and contains more diversified trends, more shades and perhaps more conflict but also more institutions, research and teaching, publications and other scientific activities.

Edgar TRANEKJÆR RASMUSSEN (1900-) was originally educated as a mathematician, but his interest in the problems of the theory of science were aroused as a result of influences from Jørgen JØRGENSEN and other representatives of logical empiricism, especially Karl POPPER. After the death of R.H. PEDERSON (1870-1938), RASMUSSEN was nominated a professor of applied psychology in Copenhagen. He developed an empirical theory of science on the basis of a cognitive and phenomenological theory. His main work is "Bevidsthedsliv og erkendelse" (1956) (Consciousness and knowledge). Tranekjaer RASMUSSEN has also developed the personality theory of MURRAY. He has completed this theory with phenomenological descriptions and classification of emotions.

The strong tradition in perceptual psychology has been continued by Martin V. JOHANSEN (1920-) and Ib MOUSTGAARD (1926-), among others. There is, however, another strong tradition in Danish psychology, that is an interest in individual personality as a totality (this tradition could be called the tradition of KIERKEGAARD and HÖFFDING). Lise ÖSTERGAARD (1924-) has studied the schizophrenic distortions of thought (dissertation in 1962), and she was nominated a professor in clinical psychology. Kaj SPELLING (1915-) was nominated a professor in experimental pedagogical psychology at the Royal Institute for Higher Studies in Education in 1969, and he also represents a new international type of thinking and research. His studies based on material collected in Malaysia handle the question of the relationship between race and intelligence. S.A. TORDRUP (1895-) has studied child psychology (main work in 1937).

From the 1960's onwards, the university system in Denmark has expanded, and the picture of scientific psychology gets more and more manifold and complicated. A typical characteristic in Danish psychology is the close connection between psychological research and pedagogical activities. Yet, the fields of applied psychology have expanded widely outside the pedagogical and educational field during the past two decades: psychology is present in all social activities, especially in social care and health care. Possibilities for prevention in mental health, for community psychology and other new areas are actively explored.

NORWAY

Because of old cultural and political ties, the academic life in Norway has traditionally had close contacts with Denmark. Some influential figures in the Norwegian intellectual life could as well be counted as Danish, and vice versa. The University of Oslo is the largest and oldest in the country (est. 1811). Other universities are in Bergen, Trondheim and Tromsø. In addition, there are special university level institutes in the country, such as polytechnic institutes, institutes for economics and regional institutes for higher education.

PHILOSOPHICAL PSYCHOLOGY

Ludwig HOLBERG (1684-1754) was a famous writer, well-known for his plays. He was of Norwegian origin, but moved to Copenhagen, and performed his life's work in Denmark, after having attended primary school in Norway and having continued studies at Oxford. He states in his Epigrammes: I have studied metaphysics, but I have also seen how little useful there is in it. His foremost intellectual master is John LOCKE. English philosophers influenced him very much in other respects as well. HOLBERG had a special interest in the psychology of morality and religion. Besides BAYLE, he studied TOLAND, COLLINS and WOOLSTON. HOLBERG was a typical representative of the age of the enlightenment: in his opinion, it was more important to know the real behavior of human beings and influence that rather than philosophize about moral ideals. No doubt, his literary activities influenced his psychological and philosophical thinking in a remarkable degree.

Niels TRESHOW (1751-1833) was the first professor of philosophy in Norway. Like many other compatriots of his, he began his career in Denmark, where he published a work on the philosophy of Immanuel KANT. He criticized KANT's intellectualism: perceptions are not mere representations of the outer world and of the cognitive categories described by KANT; they are also reflections of the personality of the perceiver, of his emotional states and moods. He defended a kind of evolutionary philosophy long before DARWIN. In those days, however, it was not unusual to meet evolutionary ideas in the production of contemporaries - some foremost representatives of the enlightenment and of the age of romanticism (e.g. GOETHE) wrote about the possibility that nature shows a number of phenomena which indicate a gradual development of the world, especially in the biological sphere. However, TRESHOW is rather explicit in this respect. He presents the hypothesis of the descent of man and he does it in a very specific manner. He rejected the theory of dualism and defended a kind of identity theory between the physical world and psychological phenomena.

M.J. MONRAD (1816-1897), a professor of philosophy at the University of Kristiania (Oslo), was a devoted Hegelian and had a humanistic background. He was strongly influenced by the power of the philosophy of the absolute idealism and for him the natural scientific orientation of TRESHOW was very alien. It is in a way historical irony that during the period MONRAD was active, psychology moved decisively in the direction of natural scientific research. These influences came to Norway e.g. in the research conducted by a Norwegian medical doctor, Christian BECK, in a paper delivered in the same symposium where MONRAD gave a paper on the natural scientific views of ancient Greeks and their significance for modern science. BECK had studied the time used for certain mental operations with the help of a kymographer, a self-made apparatus developed on the basis of an invention of the German physiologist Carl LUDWIG. MONRAD himself never accepted this new development and he expressed deep scepticism and worry about the "confinement of psychology and philosophy in the sphere of natural sciences".

As a result of the strong influence of M.J. MONRAD, psychology in Norway, remained for half a century within the Hegelian absolut philosophy. But gradually the Hegelian spirit was compelled to leave its dominating position to a more empirical, natural scientific oriented psychology.

Strong criticism and dissatisfaction with the speculative method was expressed especially by the medical profession. A.M. SCHWEIGAARD attacked the "German philosophy", as he called Hegelianism, in a French review, for being empty play with words (1835). In 1956, Christian BØECK presented his paper on psychophysiology, mentioned above in a Scandinavian congress of natural scientists. Later he attacked Hegelianism explicitly. He refers to Hermann HELMHOLTZ, among others. J. Mourly VOLD, a Hegelian, studied dreams, and is cited by Sigmund FREUD in his *Traumdeutung*.

A dawn of modern times was clearly felt in Norway. Psychology was ready for a decisive change.

EMPIRICAL PSYCHOLOGY

In 1909, Anathon AALL (1867-1943), professor of philosophy at the University of Kristiania, founded the first institution of psychology in Norway. AALL had done some work in experimental psychology at German universities and published a textbook on psychology in Norwegian.

The earliest work on experimental psychology conducted in Norway is the research done by S. THORKELOSON on the perception of time (1886). During the 1890's, K.P.-R. AAS did some research on the perception of colours. During this early phase of empirical psychology, the impact of physiologists and medical doctors was remarkable. Professor R. VOGT was a psychiatrist and he lectured and published

on the work of Ivan Pavlov and Sigmund FREUD,

The first period of the University Institution lasted from 1909 to about 1920. Only two of the students of the Institute in this period continued their studies: those were Harald SCHJELDERUP (1895-1974), who became a professor of philosophy and later the first professor of psychology in Norway, and Helga ENG (1905-), who was later nominated a professor in education at the University of Oslo.

A famous work of research was conducted by T. SCHJELDERUP-EBBE on the pecking-order of hens (1922-1924). This work is a classic in social psychology and since the publication of this work, "pecking-order" has been standard international vocabulary. Helga ENG published some studies, also internationally acknowledged, on the drawings of children. She also studied the possibility of using psychological tests for vocational guidance.

Harald SCHJELDERUP was nominated a professor in 1922 and in 1928 his chair was changed for the first chair in psychology in Norway. He was originally a medical graduate, but his academic dissertation was on the psychology of senses.

The interest of Harald SCHJELDERUP turned to psychoanalysis. In his *Textbook of Psychology* (1927), academic and experimental psychology are combined with psychoanalytic interpretations. During the years 1928-1940, 12 psychologists graduated with the degree of magister artium from the Psychological Institute of Oslo University. This favourable development was broken, when the country was occupied by Germany in 1940.

Harald SCHJELDERUP developed in many ways an original form of psychoanalysis which he called "global analytic theory" and which in many respects differed from the orthodox freudism. The research conducted by SCHJELDERUP was based on his patient contacts obtained in psychoanalysis.

Ase Gruda SKAARD (1905-) has studied developmental psychology, but also differences between various cultures. Her impact has been remarkable also in international context.

In the field of social psychology, the work by Gunnar ROMMETVEIT should be noted. He has studied, among other things, the influence of attitudes on learning. In the field of experimental psychology, Ivar LIE has studied perceptual processes. Per SAUGSTAD is well-known for his work in theoretical psychology and cognitive psychology.

During the period before World War II, impulses from psychoanalysis were of great importance. Not only FREUD but also Wilhelm REICH should be mentioned as one of the early figures who greatly influenced the development of psychology in Norway and gave it its special tinge. After the war influences from other research traditions gained significance. The cognitive tradition should be specially mentioned. Such persons as Jean PIAGET, DUNCKER, FRENKELL-BRUNSWIK and David

Olden HEBB are important figures in this later period.

Research, development and educational activities have expanded during the recent years: the Economic Institute of Norway has a department for the psychology of work and personnel administration. There is also a special institute for social studies. Pedagogical institutes in Oslo, BERGEN and TRONDHEIM conduct studies in psychology.

The interest in social psychology has increased while the social relevance of psychology has increased. At the same time discussion on general social matters is well alive and some elements of psychoanalysis are reintroduced.

Like in all Nordic countries, it is hardly possible to speak about characteristic Norwegian psychology. There are, instead, many schools and trends. In many respects, psychology is becoming more and more international and this leads to the disappearance of purely national characteristics. Yet, historically speaking, psychology has different backgrounds in every country. In Norway the strong influence of psychoanalysis is one characteristic. However, today psychology in Norway is very much differentiated and specialized and is very international in its approach.

SWEDEN

In Sweden, the university as a social institution was established relatively early. The first university was that of Uppsala, founded in 1477. Now, there are five other universities in Sweden as well, in Lund, Stockholm, Gothenburg, Umeå and Linköping. In addition there are regional institutes for higher education and other special institutes.

PHILOSOPHICAL PSYCHOLOGY

A typical characteristic of philosophical psychology in Sweden is that influences of the enlightenment on the Continental are considerable as well as influences of the British empirism. Contacts with Hegelianism had some significance(1).

Nils WALLERIUS (1706-1746) was a professor of philosophy at Uppsala, and he was very much influenced by Christian WOLFF. In the spirit of WOLFF he published his work *Psychologia empirica* (1755) and another one, *Psychologia rationalis* (1758). As a result of the teaching activities of WALLERIUS, the Wolffian spirit dominated Swedish psychology for many decades.

After P.N. KRISTIERNIN had started his academic career as a professor (1771) in Uppsala, the psychology of John LOCKE gained more importance although WOLFF still had some significance.

Later Immanuel KANT had a leading position. Kantian philosophy and psychology reached Sweden in the 1790's as a result of the activities of D. BOETHIUS and B. HÖIJER. After KANT, the romantic movement was important, especially such names as SCHELLING and FICHTE. Also materialistic ideas had a remarkable impact. A special figure in this respect is prof. M. FREMLING (1745-1820), who lectured at the University of Lund. FREMLING had studied medicine and natural sciences and this background influenced his psychological thinking. He also had a lively interest in the physiology of the nervous system.

Growing influence of Hegelian absolute philosophy is clearly seen during the 1820's and the 1830's. The best known person among the Hegelians is F.G. AFZELIUS in Uppsala. Besides HEGEL, he had a number of other important masters: FISCHER, MICHELET, ROSENKRANTZ, ERDMANN and FICHTE. AFZELIUS was also well versed in the psychology of HERBART.

During the later part of the 19th century, a powerful figure emerged in Sweden, who dominated philosophy and psychology for several decades: C.J. BOSTRÖM (1797-1866). He developed a kind of idealistic and rather subjective philosophy of a person. His thinking was very much based on PLATON, but possibly a source even more important to him is PLOTIN. BOSTRÖM's philosophical system is rather independent from the contemporary German speculative philosophy. He rejects the idea of empiristic psychology and considers only humanistic understanding a possible method. Generally his view of natural sciences was very critical. There is something very aristocratic and old-fashioned in his philosophy. However, according to the Norwegian professor Anathon AALL, the psychology of BOSTRÖM is much more valuable than contemporary Norwegian psychology which was purely Hegelian. BOSTRÖM had, however, a number of devoted disciplines and his spirit dominated Swedish thinking in philosophy and psychology for several decades.

Gradually, empirical and experimental elements gained importance. K.G. GEIJER was a professor in Uppsala and he was still a student of BOSTRÖM's philosophy. However, he had also studied a number of other sources: R.H. LOTZE, T.H. RIBOT, Harald HÖFFDING, G.Th. FECHNER, H. SPENCER, J.S. MILL, Wilhelm WUNDT, A. BAIN, Hermann von HELMHOLTZ, Pierre JANET, FRIES, E. BENEKE, F.R. von BRENTANO, Theodor LIPPS, William JAMES and William HAMILTON.

Hans LARSSON (1862-1944) was a professor in philosophy at Lund and he had a remarkable interest in the questions of psychology. He published a textbook widely used in all Nordic countries, *Lärobok i psykologi på empirisk grund (Textbook of psychology on empirical basis)* (1899, a number of later editions).

Those philosophers who had a more empirist orientation than the Boströms, were usually very interested in psychological problems: A. HÄGERSTRÖM, A. PHALEN,

J. LANDQUIST. These philosophers published a number of original works on psychological problems and some textbooks and essays which helped to pave way for the development of empirical, experimental psychology.

EMPIRICAL PSYCHOLOGY

In the turn of the century, a small group was formed in Uppsala on a rather informal basis, a group which played a decisive role in the emergence of empirical psychology. This group consisted of the following persons: the key person was Sydney ALRUTZ (1868-1925), a psychologist. Others were the physiologists H. ÖHRVALL and T. THUNBERG and the philosopher Hans LARSSON, mentioned above. These four men formed a cohesive and efficient group. Their thinking was based on empirical arguments and scientific criticism. In the beginning of his career, ALRUTZ studied problems of sensory psychology and published *Studien auf dem Gebiete der Temperatursinne I-II* (1897-1900). In 1901 he presented his doctoral dissertation on the sensation of pain and the same year he became a docent at the University of Uppsala. He had originally studied both philosophy and physiology. His master in philosophy was GEIJER and in physiology ÖHRVALL. In 1902 ALRUTZ founded the first psychological institution in Uppsala, at the Institute of Physiology. Later ALRUTZ continued his active research and studied a variety of problems such as hypnosis and spiritual phenomena.

Per Axel Samuel HERRLIN (1870-1937) was a professor at Lund University in 1912-1935. He is one of the pioneers in Swedish psychology. In him philosophical and natural scientific traditions combined. He had studied under the leadership of G.E. MÜLLER in Göttingen. Another significant contact was Alfred LEHMANN in Copenhagen.

HERRLIN was particularly interested in problems of psychopathology and pedagogical psychology. The docent who worked under the leadership of HERRLIN was G.A. JAEDERHOLM (1882-1936) who in 1914 presented his academic dissertation *Studies on the theory and practice of intelligence measurement I-II* (in Swedish *Undersökningar över intelligensmätningarnas teori och praxis*). JAEDERHOLM was educated in Uppsala and he was originally a physiologist. Later he continued his studies and was, among other things, a visiting professor several times in the USA at the University of Berkeley. Another docent at the institute of HERRLIN was Rudolph ANDERBERG (1892-1955), who originally had studied natural sciences. In 1918 he published his dissertation *Quantitative measurement of an influence of a working period of a short duration* (in Swedish, *Kvantitativ bestämning av ett kortvarigt arbetets inverkan på ett efterföljande*). Later he studied intelligence in particular. He became a professor in Gothenburg

1919-1937. A follower of ANDERBERG in Gothenburg was John ELMGREN. He was interested in the Gestalt theory, in the questions of behaviour genetics and intelligence.

Applied psychology in Sweden started during the early 1940's when ANDERBERG in Uppsala developed testing methods. In Stockholm an Institute for Applied Psychology was founded. The significance of military psychology grew gradually.

The strong psychometric tradition in Swedish psychology was continued by Gösta EKMAN who published his dissertation *Reliability and Constancy* (1947), still a useful theoretical treatise on the basic questions of test theory.

David KATZ (1884-1953) this remarkable figure in experimental and theoretical psychology, started his career in Stockholm in 1937. His background was in classic German psychology and he was strongly influenced by the Gestalt theory. During the 1940's many works on the psychology of perception were conducted. Two men should be particularly mentioned: Gunnar JOHANSSON who published his dissertation in 1950 and Carl-Ivar SANDSTRÖM (diss. in 1951).

During the 1950's psychology as an academic discipline expanded remarkably in Sweden: new chairs were founded at Uppsala (1948), Stockholm (1953), Lund (1955), Gothenburg (1956) and Umeå (1966). After the 1950's research has specialized and expanded. Questions of quantitative psychology (psychophysics, theory of measurement) have been studied by Gösta EKMAN (1920-1971) and Theodor KÜNNAPAS (1902-). In the field of perception the work done by Gunnar JOHANSSON has paved the way for a new research tradition. Technical applications, psychology of work and environmental psychology should be mentioned. At Stockholm David MAGNUSSON has studied human perception and the theory of tests. Learning processes and cognitive functions have been studied by Mats BJÖRKMAN who is influenced by BRUNSWIK. Lennart SJÖBERG has studied decision processes.

In the field of physiological psychology Sweden has strong traditions since ALRUTZ and BLIX. Marianne FRANKENHÄUSER and Lennart LEVI have studied stress and its various manifestations. Sten HENRYSSON is known for his impact on differential psychology. Torsten HUSEN and Jan AGRELL started studies in military psychology and differential psychology.

Like in the other Nordic countries, scientific psychology in Sweden today is specialized, international and very research oriented. The general impression is that Sweden is, perhaps, the most international of all the Nordic countries, after having been relatively isolated and self-sufficient during the philosophical period. Naturally general statements like this must always be taken "cum grano salis", not too strictly.

FINLAND (2)

The first university founded in Finland was the University of Turku (in Swedish Åbo) in 1640. At that time Finland was a part of the kingdom of Sweden. This relationship with Sweden lasted up to 1809, when Finland became a part of the Russian Empire as a result of the war between Sweden and Russia in 1808-1809.

PHILOSOPHICAL PSYCHOLOGY

Of the early learned professors at the University of Turku, Henrik Gabriel PORTHAN should be mentioned (1739-1804). He was a universal spirit with encyclopaedic knowledge. He also gave lectures about psychology in the spirit of the German philosopher Christian WOLFF (1679-1754).

During the Russian epoch Finland had a special status of an autonomous grand duchy directly under the Czar. Finland retained its own institutions and laws. However, the national independence was not won till 1917. Until that time the political position of Finland was on an unsteady basis as it could be dominated by the growing political reaction by the czars and their bureaucrats, operating in the spirit of the famous Holy Alliance.

J.W. SNELLMAN (1806-1881) analyzed historical conditions in order to preserve and develop Finnish national identity. According to SNELLMAN, radical changes were required in higher education and cultural life. The people needed to be awakened from their apathy. SNELLMAN was a Hegelian from the beginning of his intellectual career. Because he was also a man of practical deeds, he was compelled to express in concrete terms what HEGEL expressed abstractly. HEGEL's philosophy of history provided SNELLMAN with a theoretical and ideological frame of reference which could be used to strengthen the national consciousness of intellectuals, the ruling classes and the common people.

SNELLMAN had a high opinion of the prevailing German philosophy. However, he criticized it for being too remote from the practical realities of the world and not contributing very much to the general education of the public. It is necessary to keep in mind this historical background in analyzing SNELLMAN's psychology.

According to SNELLMAN's *Lärobok i psykologi* (*Textbook of psychology*), published in Stockholm in 1837, psychology is a part of the philosophy of the subjective spirit. In the textbook the phases preceding the psychological phase are presented and analyzed. They are called anthropology and phenomenology.

Anthropology has the subjective spirit connected with the body as its subject-matter. In this stage of development, the subjective spirit represents itself as the soul, connected with the body.

In 1840-1841 SNELLMAN made a study tour to Germany and published a work on Personality (*Versuch einer speculativen Entwicklung der Idee der Persönlichkeit*) in Tübingen. Compared with HEGEL SNELLMAN's approach is more down to earth. Unlike HEGEL for SNELLMAN the central conception and the highest goal in the development of the spirit is not the absolute but the personality. In the science and culture of Christianity the concept of personality, according to SNELLMAN, means the innermost nature of the individual and the highest stage in the development of the spirit, its greatest degree of dignity and value.

In the concept of personality the dialectical development of the spirit and reflexion attains its end-station. Paradoxically, subjectivity is eliminated from the concept of personality during this process. The objective spirit exists, however, only in the individual consciousness. This standpoint does not lead to solipsism, because the personal spirit is the active self-realization of the individual personality in concrete actions.

Thiodolf REIN (1838-1919), a disciple of SNELLMAN and originally a Hegelian, describes the Hegelian system as "magnificent and brilliant". However, REIN began to doubt whether this abstract system was capable to comprehend the concrete reality with all its shades. REIN reached the conclusion that the dialectical method could not lead to relevant conclusions. Real knowledge is possible only with the help of empirical methods. REIN refers to new impulses brought about by COMTE, Charles DARWIN and empirical sciences, especially psychophysics and experimental psychology.

In Finland Hegelianism thus was never a conservative force impeding the development of empirical psychology as had been the case in Norway. Quite on the contrary, empirical psychology was introduced by a Hegelian who himself turned actively in the direction of the new scientific spirit without abandoning humanism and the philosophical point of view.

It is clear that the historical, social and scientific-technical development during this period was accelerating fast and the Hegelian system was not capable of giving adequate responses to the new challenges. Industrial and technological development needed a new kind of psychology, a psychology suitable for the purposes of scientific management, for measurement and predictability. The situation gave rise to new facts and theories which did not suit the Hegelian system.

EMPIRICAL PSYCHOLOGY

It was evident that the changes brought about by REIN in the psychological thinking in Finland would lead to new development in scientific psychology. Georg Hjalmar Garibaldi NEIGLICK (1860-1889) published his academic

dissertation *Zur Psychophysik des Lichtsinns* in 1887. It was the first experimental work on psychophysics in Finland. The experiments were conducted in Leipzig in Wilhelm WUNDT's laboratory and partly in Copenhagen in LEHMANN's laboratory. The work was supervised by WUNDT and the report was published in WUNDT's series *Philosophische Studien*.

The following year 1888 Arwid GROTENFELT, a student of Thiodolf REIN, published another work on psychophysics *Das Webersche Gesetz und die psychische Relativität*. GROTENFELT had also visited Leipzig, attended the lectures of WUNDT and visited WUNDT's laboratory. The author refers to the concrete impulses received from the work of Alfred LEHMANN. This demonstrates the central importance that LEHMANN (1858-1921), a Danish psychologist, had on the development of psychology in various Scandinavian countries.

Eino KAILA (1890-1958) has been called the father of Finnish psychology. He published his academic dissertation, a work in the Würzburg tradition, *Über die Motivation und die Entscheidung* in 1916. He was a docent in philosophy at the University of Helsinki in 1919-1929, a professor of philosophy at the University of Turku (Åbo) 1921-1930 and a professor of theoretical philosophy, which comprised the theory of knowledge, psychology, logic and the theory of sciences from 1930 until 1948 when he was appointed a member of the newly founded Finnish Academy of Arts and Sciences. Eino KAILA was a prolific writer with universal interests. His lectures were famous and were widely attended also by people with no direct academic ambitions. His work left deep traces in the general cultural climate in Finland.

In 1922 he founded a small "psychological laboratory" as the Institute was then called, at the University of Turku (Åbo). Ten years later he founded a similar Institute at the University of Helsinki (1932). Thus, psychology was institutionally established in the Finnish academic community.

The main psychological work of Eino KAILA is *Personality* (in Finnish *Persoonallisuus*) which was published in 1934. It is a synthetic psychological analysis of the human personality, covering the biological basis of human personality, principles of personality development, human language and its symbol function, social and psychological aspects. It is notable that this work was published before the great synthetic books such as *Gordon W. Allport's Personality: A Psychological Interpretation* (1935), or William STERN's *Allgemeine Psychologie auf personalistischer Grundlage* (1935). Even if the empirical material is outdated the depth and breadth of "Personality" make it a readable work even today.

After KAILA, psychology has expanded greatly in Finland. International and Scandinavian cooperation is lively and active. Both pure and applied psychology is studied. Research is highly specialized.

SOME COMMENTS ON NORDIC INTEGRATION

In this paper the individuality of the national development of psychology as a science in each Nordic country has been emphasized. However, there are some important forms of Nordic cooperation, which lead to a kind of scientific and professional integration among other kinds of integration, too. Besides, these countries have had a number of common historical, cultural and political factors, which have caused (certain kind of) intellectual interaction among the academic communities.

After World War II, the Nordic Council was founded in 1950. Finland became a full member in 1955. It is a cooperative organization between the Nordic states, having no power in matters of governmental control. However, it is an extremely important forum for the exchange of information. By its mere existence it leads to a number of natural cooperative projects, especially in cultural, social and health areas.

In the field of research a number of examples of integration can be mentioned. As to earlier times these examples are not dependent of any form of official governmental cooperation. When Sydney ALRUTZ was nominated a professor at the University of Lund, the statement given by the Finnish philosopher-psychologist REIN played an important role. In 1906 ALRUTZ founded a Scandinavian journal of psychology, which was called *Psyche*, with national editors from Sweden, Denmark (HÖFFDING), Norway (AALL) and Finland (REIN). Harald HÖFFDING gave a series of lectures at the University of Helsinki, which were later published in Finland. Another Dane, Alfred LEHMANN, played a very important role during the early phase of the development of Finnish experimental psychology. He, like HÖFFDING, had a remarkable influence on all Nordic countries.

The Norwegians Harald SCHJELDERUP, Åse Gruda SKAARD and Per SAUGSTAD have all given important contributions to the other Nordic countries.

Edgar RUGIN, David KATZ and Eino KAILA promoted greatly the interest in Gestalt psychology.

The first Scandinavian congress on psychology was organized in 1947 in Norway. After this, Scandinavian conferences have been organized regularly.

The first professional advisory committee was formed in 1951, based on the idea expressed by Åse Gruda SKAARD in her opening speech in the first conference in 1947.

In the field of publishing activities the Nordic journal *Nordisk psykologi* started in 1949. It is rather professionally and generally oriented. The *Scandinavian Journal of Psychology* which started in 1960, is more research-oriented. In the 1970's a number of Scandinavian journals in some special fields were started.

During the decades after World War II, an increasing international development in psychology has taken place. While the conditions for Nordic integration are better than earlier (financial, political and cultural conditions and efficient possibilities

for scientific communication) growing internationalism leads to a dilution of national psychologies, which also means that there are hardly any possibilities for real "Nordic" psychology in the future.

Psychologists like other professions (e.g. the medical profession) prefer to work in special fields, in communication with international specialized associations, societies and other organizations. However, it seems that the concrete forms of international specialist cooperation between a number of countries will prosper even in the future. In spite of the growing specialization and internationalism, there are still feelings of common historical ties and the existing official forms of cooperation on the political level give the Nordic integration a significant support. Based on this assesment of the situation, it is still meaningful to speak of psychology in the Nordic countries in the future.

SUMMARY

This paper considers the development of scientific psychology in four Nordic countries: Denmark, Norway, Sweden and Finland.

Like in other countries, psychology in Nordic countries developed as an integral part of philosophy and medicine. Later on, psychology turned to a more empirical direction, and during this development, it also produced its own institutions and laboratories.

RESUMEN

Este trabajo presenta el desarrollo de la psicología científica en los cuatro países nórdicos: Dinamarca, Noruega, Suecia y Finlandia.

Al igual qu en otros países, la psicología en un principio formaba parte de la filosofía y de la medicina, pero con el transcurso de los años adquirió un carácter cada vez más empírico, hecho que produjo un aumento del número de instituciones y laboratorios dedicados a esta disciplina.

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- (1) For lack of space, only a selection of the literature actually used has been included. Scandinavian titles translated in parentheses.

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INTRODUCCION

El objetivo de este trabajo es el de señalar un panorama general de la evolución de la psicología experimental en la Argentina. El trabajo se comienza describiendo los hechos que caracterizaron el desarrollo de la psicología experimental argentina durante la década de los años treinta de este siglo, cuando se inició la recepción crítica de los hechos publicados en relación con esta disciplina científica. Para facilitar la comprensión de los datos históricos, el trabajo se divide en cinco secciones cuya delimitación está basada en un criterio histórico.

Antes de comenzar con esta breve historia, es importante recordar la definición de psicología experimental utilizada en este trabajo. La definición de tipo de material utilizado para obtener la información se considera como criterio fundamentalmente habiendo reconocido que la psicología experimental significa el estudio experimental del comportamiento, el significado de este término es el de un grupo de datos que sirven para explicar un fenómeno específico de la psicología, como opuestos a subjetivos e intuitivos (Papini, 1957). Este trabajo tiene como propósito una serie de traducciones científicas que

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