

PHILIPP MELANCHTHON'S PSYCHOLOGICAL THINKING UNDER THE INFLUENCE OF HUMANISM, REFORMATION AND EMPIRICAL ORIENTATION

WOLFGANG HOLZAPFEL
& GEORG ECKARDT¹
Universidad de Jena (Alemania)

ABSTRACT

The theologian and philosopher Philipp Melanchthon (1497-1560) supported Martin Luther in his fight for reforms in the church, especially by specifying and recording the principles of Protestantism in his writings. Melanchthon dealt with psychological topics particularly in his treatises *Loci communes* and *De anima*. In these psychological thoughts he regarded not only the Protestant doctrine and the thoughts of ancient authors (Aristotle, Platon, Galenus etc.) according to the humanist tradition but also the newest results of empirical research such as Vesalius' findings from autopsies. Referring to the old traditional doctrine of an ethereal substance called *spiritus* which was supposed to be specially at work in the ventricles of the brain, Melanchthon differentiated between faculties of the soul that are somatic in nature (perception, fantasy, memory, desire etc.) and those that are immaterial in nature (will, intellect). In this article some of these faculties are discussed in detail. Furthermore Melanchthon's thoughts about the relationship between affective states and intellect are shown. Finally we discuss the value of Melanchthon's psychological reflections for modern psychology.

RESUMEN

El teólogo y filósofo Philipp Melanchthon (1497-1560) apoyó a Martin Luther en su lucha para reformar la iglesia, sobretodo detallando y apuntando los principios del Protestantismo en sus escritos. Melanchthon trató particularmente los temas psicológicos en su tratado *Loci communes* y *De anima*. En esos

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pensamientos psicológicos, el consideró no sólo la doctrina Protestante y el pensamiento de los autores clásicos (Aristóteles, Platón, Galeno, etc.) de acuerdo con la tradición humanista, sino que también tuvo en cuenta los resultados de la más reciente investigación empírica, tales como los descubrimientos de Vesalius a partir de autopsias. Respecto a la vieja y tradicional doctrina de una substancia etérea llamada *espíritu*, la cual se suponía que trabajaba especialmente en los ventrículos del cerebro, Melanchthon diferenció entre las facultades del alma que son de naturaleza somática (percepción, imaginación, memoria, deseo, etc.) y aquellas que son de naturaleza inmaterial (voluntad, inteligencia). En este artículo se analizan con detalle algunas de estas facultades. Además también se muestra el pensamiento de Melanchthon sobre la relación entre los estados afectivos y la inteligencia. Finalmente, analizamos el valor de las reflexiones psicológicas de Melanchthon para la psicología moderna.

1 MELANCHTHON'S PSYCHOLOGICAL THINKING IN THE THEOLOGICAL AND PHILOSOPHICAL DOCTRINAL SYSTEMS

Philipp Melanchthon (1497-1560), whose German name "Schwarzerd" (black earth) was translated by Johannes Reuchlin (1455-1523) into the Greek word for black earth "Melanchthon", studied at the universities of Heidelberg and Tübingen. During his student days he devoted a great deal of time to reading the works of ancient and contemporary humanistic authors such as Erasmus from Rotterdam (1469?-1536). In 1518 he was appointed as chairman of Greek at the University of Wittenberg where he met Martin Luther (1483-1546). Both scholars soon became allies in the fight for reforms in the Church. Melanchthon's treatise *Loci communes* (1521) was the first systematic presentation of the principles of the Reformation and clarified the new doctrine to those outside of the movement. Because of his conciliatory attitude toward the Calvinist doctrine of the Last Supper Melanchthon was sharply criticized by strict Lutherans.

In accordance with the double determination of his thinking by the Protestant doctrine and by humanistic ideas, he distinguished the *disciplina Christiana* and the *disciplinae literarum et artium*. Troeltsch (1891, p.70) emphasized that these two fields are separate spheres of knowledge with equal rights which have been given by God. Other authors doubted a real equality between theology and philosophy in Melanchthon's works. For example Max Wundt (1932, p.9) suggested that Melanchthon's philosophical discussions are only a part in the general context of the theological doctrine and that the last decisions with regard to content were made based on theology. According to Wundt revelation is the limit of philosophical reflections. Undoubtedly Melanchthon did not support a secularized philosophy, but in retrospect we want to clarify whether the scientific thinking of the modern era was necessarily developed out of a secularized philosophy. On the other hand it could be possible that philosophical reflection on the basis both of theology and reforming theological arguments supported the development of modern scientific thought.

Only in the context of Melancthon's theological thinking can we adequately put a value on his works regarding psychological topics. Elementary statements of philosophy and theology have the same level of certainty: for example the proposition "4x2=8" has the same level of certainty as the proposition "God will raise the deceased from the dead and he will punish the ungodly"². But the criteria or norms of certainty (*normae certitudinis*) in philosophy are essentially quite different from those of theology. In theology the most important and absolute norm of certainty is the divine revelation (*revelatio divina*) that has come down to us in the Bible. In contrast the philosophical norms or criteria are 1) the universal experience (*experientia universalis*), 2) the knowledge of general rational principles (*noticiae principiorum*), and 3) the realization of the order by conclusion (*intellectus ordinis in syllogismo*) (Melancthon, 1846 [1553], p.150). The first norm of certainty results from the fact that all healthy people judge that which is sensually perceptible in the same way³. The second norm of certainty concerns the innate principles of realization that were imparted to us by God as "seed"⁴, such as the knowledge of numbers or the knowledge of certain elementary propositions. The third criteria, rational judgement, is obtainable by dialectics and logic and corresponds to the Gnosis of the Stoics⁵.

According to Melancthon, philosophy includes three branches: 1) *artes dicendi* (dialectics and rhetoric), 2) *physiologia*, which contains for example physics, psychology and mathematics, 3) *praecepta de civilibus moribus* (ethics)⁶. Melancthon assigned psychology to physiology - the scientific branch of philosophy. That is why he saw his treatise upon the soul as part of a conception of physics.

Melancthon wrote explicitly about psychological topics in his *Commentarius de anima* that was conceived as commentary on Aristotle's *De anima* and in which Aristotelian concepts were occasionally rendered as unfamiliar by the transformation in a theological context. Whereas Aristotle used the concept *entelechy* (*enteleceia* = realization) to describe the soul as the principle enabling the body to realize its potential, Melancthon accepted Cicero's misinterpretation in which the concept *endelechy* (*endeleceia* = continuance) was used to describe the immortality of the soul.

The *Commentarius de anima* appeared in four editions (1540, 1542, 1544

² "Ut sine dubitatione adseveramus, bis 4 esse 8: ita statuendum est, Deum excitatum esse homines mortuos et Ecclesiam ornatum aeterna gloria, et impios abiectum in aeternas poenas" (Melancthon, 1846 [1553], p.151).

³ "Experientia universalis est, cum de iis quae sensu percipiuntur, omnes sani eodem modo iudicant" (Melancthon, 1846 [1553], p.150).

⁴ "Principia sunt noticiae nobiscum nascentes, quae sunt semina singularium artium divinitus insita nobis" (Melancthon, 1846 [1553], p.150).

⁵ "Tertium κριτηριον est: Intellectus ordinis in syllogismo, recte coagmentatis membris, ut latius in dialecticis dicitur" (Melancthon, 1846 [1553], p.151).

⁶ "Philosophia continet artes dicendi, physiologiam et praecepta de civilibus moribus" (Melancthon, 1844 [1538], p.689).

and 1548). Further editions (1553, 1558, 1560, 1562, 1569, 1571, 1574, and 1584) were entitled *Liber de anima*. In the foreword Melanchthon described this book as "the part of the physical doctrine that deals with the soul" ("... *eam partem doctrinae physicae, quae de anima agit*"; Melanchthon, 1846 [1553], p.1). According to Hartfelder (1889) the *Liber* was still in use at the universities in the 18th century. This interval of more than 150 years indicates the importance of Melanchthon's textbook, *de anima*, in the history of psychology.

Melanchthon structured the field of psychology following Aristotle, who differentiated between the soul of plants, animals and humans. The following table shows the different faculties of the human soul:

Table 1 The faculties of the soul according to Melanchthon

- | | |
|------------------------|---|
| 1. potentia vegetativa | potentia nutritiva
potentia auctrix
potentia generativa |
| 2. potentia sensitiva | exterior (visus, auditus, olfactus, gustus, tactus)
interior (sensus communis, phantasia, memoria) |
| 3. potentia appetitiva | adpetitus naturalis (fames, sitis)
adpetitus sensitivi (delectatio, dolor, spes, amor, tristitia, metus, odium, ira) |
| 4. potentia locomotiva | naturalis (pulsus etc.)
voluntaria
mixta |
| 5. potentia rationalis | intellectus
voluntas |

While plants have only the *potentia vegetativa*, animals have the *potentia vegetativa*, *potentia sensitiva*, *potentia locomotiva*, and *potentia appetitiva*.

Melanchthon also dealt with psychological problems in his *Loci communes*. This theological treatise that originally appeared in 1521 and in several editions since then shows the changes in Melanchthon's theological and psychological views. From the psychological standpoint the *Loci* are very interesting, because the anthropological foundation of Melanchthon's theology is explained in the introductory chapter *De hominis viribus* (about the human faculties) (see Maurer, 1969, II, pp.244-261). In the following sections we will analyze Melanchthon's expositions about three abilities in particular: *potentia sensitiva*, *potentia rationalis*, and *potentia appetitiva*.

2. POTENTIA SENSITIVA AND POTENTIA RATIONALIS

In the second century Claudius Galenus, a famous Roman physician of

Greek origin, developed his doctrine of the so-called *pneuma*. Based on this Melanchthon postulated the existence of the *spiritus* as the finest matter produced out of the blood by the activity of the heart. Melanchthon differentiated between the *spiritus vitalis* and the *spiritus animalis*. The former flows through the arteries and provides the limbs of the body with warmth so that they are able to function. The *spiritus animalis* is related in character to the *spiritus vitalis* and also comes into being by the heart's activity. Then it runs to the four brain ventricles where it becomes very shiny due to the activity of the brain. From there the *spiritus animalis* flows into the nerves in order to cause voluntary motions and to facilitate sensations (Melanchthon, 1846 [1953], p.88).

In the case of the perceptive faculties (*potentia sensitiva*), Melanchthon differentiated between the external senses (sight, hearing, smell, taste, touch) and the inner senses (*sensus communis*, *phantasia*, *memoria*). In Melanchthon's opinion the process of perception starts with the reflections (*imagines*) of externally perceptible objects in the outer sense organs. The *spiritus* are set in a swinging motion and transport copies (*similitudines*) of these reflections through the hollow nerves to the brain, where special pictures (*simulacra*) result due to the organization of the *spiritus*. The processing of stimuli in the brain is carried out especially by the inner senses. Melanchthon localized the *sensus communis* in the first and second brain ventricles, the faculty of imagination in the middle ventricle, and the memory both in the fourth ventricle and in the cerebellum. The latter forms the boundary with the fourth ventricle and facilitates the storage of the pictures because of its dryness and its furrowed surface. In this organ of the memory, pictures are impressed onto it by the *spiritus* like a seal into hot wax⁷. The function of the *sensus communis* is to receive the impressions from the external senses and to distinguish between them. During this process the sensory impressions are transported to the appropriate place in the brain. Melanchthon didn't specify the functioning of the *sensus communis* in more detail. The faculty of imagination makes simple conclusions and judges these by combining and distinguishing the empirical contents and by deriving them from each other. Finally the faculty of memory facilitates the storage and the remembering of the perceived objects.

Following Galen who applied his results from animal autopsies to the human being, Melanchthon supposed that damage to the brain caused mental disorders. Galen didn't assume that there were any qualitative differences between the structure of the animal brain and the human brain. Therefore there were also no differences between the inner senses of animals and those of humans since the functioning of the inner senses depends on brain structures. Due to the immortality of the human soul, faculties of the soul that were specifically human were not attributed to a transitory physiological basis.

⁷ „Est autem cerebellum siccius, et multos sinus habet, quare ad accipiendas imagines et retinendas magis accommodatum esse existimatur. Ut autem in cera σφραγίδες imprimuntur, ita in organo memoriae a spiritibus imprimi simulacra cogitemus.” (Melanchthon, 1846 [1553], p.122).

Melanchthon would not have accepted any inconsistency in the psychological and theological doctrines. That is why the assumption of immortal faculties of the soul that are not somatic in nature arose. These immortal and incorporeal faculties are the intellect (*intellectus*) and the will (*voluntas*), which are the essentials of the *potentia rationalis* (Melanchthon, 1846, [1553], p.139). In contrast to the inner senses, the intellect is responsible for both comprehension and judgement through a *priori* knowledge (*noticiae*) and by the reflexive power to evaluate one's own deeds. Melanchthon (1846 [1553], p.145) regarded numbers as well as arithmetical, geometrical, physical, and logical concepts as moral principles of innate ideas (*noticiae*). Those ideas are similar to a source of light in the mind that mankind has received from God. Excited by sensory perceptions, the *noticiae* are the starting point of all further thoughts. Owing to the *a priori* knowledge, Melanchthon saw the *potentia rationalis* as a connecting link between the material and the immaterial world. He justified this intermediate position by supposing that the *spiritus animalis* is the finest substance of which the immortal human soul consists or at least the substance on which the human soul has an immediate effect (Melanchthon, 1846 [1553], p.88).

In Melanchthon's opinion, the lower levels of the soul are faculties of the *potentia rationalis*, which ensures the unity of the soul. He explained this relation by different forces contained in one and the same thing. For example Melanchthon (1846 [1553], p.19) referred to the rays of the planet Mars as being simultaneously both burning and drying as well as to the rays of the moon as being simultaneously both slightly warming and moistening (see also Stigel, 1581, p.81). To clearly show the relationship of the single faculties to the soul, Melanchthon (1846 [1553], p.20) assumed that the soul has different effects on different body organs just as a gentle breeze produces different sounds in a shepherd's pipe. Such effects of the soul on the body organs played an important role within the framework of Melanchthon's psychological considerations. This is why Melanchthon considered a description of the structure, the functioning, and especially the purpose of the body organs as necessary. Melanchthon, who visited medical lectures during his studies in Tübingen, devoted roughly 40 % of his *Liber de anima* to detailed descriptions of the human body⁵. His sources were Galen, the anatomist Andreas Vesalius (1514/15-1564), and Leonhard Fuchs (1501-1566) (see Melanchthon, 1840 [1552], p.1127). The emphasis on the medical aspect indicates a close interaction between medicine, philosophy, and psychology, respectively.

In addition to this, Melanchthon's medical descriptions were also influenced by theology. For example he was convinced that the *spiritus animalis*, which is of a very fine consistency and shiny, becomes more shiny and with that more

⁵ *"Intexui autem de praecipuis membris humani corporis descriptiones qualescunque. Nam discerni potentiae animae non possent quidem, nisi earum domicilia seu machinae in corpore hominis aliquo modo ostendantur. Quanta est enim insulsitas, si quis dicat de motu locali, nec discernat nervos a venis et arteriis?"* (Melanchthon, 1840 [1552], p.1127).

similar to God by divine force. Especially in the case of religious people, the Holy Ghost (*Spirtus sanctus*) mingles with the *spirtus animalis*. This mixture makes the cognition of God clearer, the faith stronger, and the love for God deeper (see Melanchthon, 1846 [1553], p.89). Consequently, the brain ventricles might be brightly illuminated cavities⁹. In Melanchthon's (1846 [1553], p.69) opinion, they are the place where God influences the mental processes by acting on the *spirtus animalis*. This is why he compared the ventricles and the complete brain, respectively, with a divine temple¹⁰; see also Stigel, 1581, p.76; Strigel, 1590, p.99). In addition to this internal place for divine effecting, Melanchthon envisioned the sky as the external place where God works. There are also structural similarities between the brain and the sky. Stigel remarked on this that both the nature of the sky and the nature of the brain with their spirits is partly solid and partly ethereal¹¹. Based on such analogies between the brain and the sky, Stigel (1581, p.84) deduced concrete conclusions about physiological processes: during the movement of celestial bodies the firmament is moving and, analogous to this, the brain is moving during the processes of the inner senses. For this Stigel assumed that the functioning of the inner senses depends not only on the proper motion of the *spirtus*, but also on the motion of the brain¹².

3. POTENTIA APPETITIVA AND THE RELATIONSHIP BETWEEN AFFECTIVE STATES (AFFECTUS) AND THE INTELLECT (INT ELLECTUS)

The section about *the potentia appetitiva* (faculty of desire) in the *Liber de anima* contains Melanchthon's doctrine of affective states, although

⁹ *"Sunt autem hae cavitates plenae spiritu, qui per arterias adsidue ex corde advehuntur, et in his cavitatibus fiunt lucidiores, et quasi ex igneis flammis fiunt coelestes."* (Melanchthon, 1840 [1552], p.69).

¹⁰ *"Sunt in cerebro cavitates magnae, velut in aedificio, mirumque est stare culmen velut ardua laquearia in templis"* (Melanchthon, 1840 [1552], p.69) *"Caput est templum divinitatis, in quo anima rationalis est sacerdos, ara est cerebrum, in ea fiunt functiones & operationes, quae competunt officio huius sacerdotis, Videlicet mentis, quae a coelo originem ducit, ut Electio, Cognitio, Iudicatio, Ratiocinatio, Discursus, Memoria."* (Stigel, 1581, p.76).

Johannes Stigel (1533-1589) and Victorin Strigel (1524-1569) studied under Melanchthon and each wrote a treatise commenting on Melanchthon's *Liber de anima*. These commentaries were published posthumously and their structure agreed with the structure of Melanchthon's *Liber de anima*. Stigel and Strigel quoted passages out of this book and elucidated them with regard to the works of ancient and contemporary scholars as well as with regard to passages of the Bible. Therefore we will refer to the commentaries of Stigel and Strigel now and then in the following discussion.

¹¹ *"Coeli natura partim est elementaris, partim aetherea, Huic simile est cerebrum, quia materia cerebri est elementaris, & spirtus sunt pars aetherea cerebri."* (Stigel, 1581, p.81).

¹² *"Actiones interiorum sensuum non fiunt sine motu cerebri, sicut actiones orbium coelestium non fiunt sine motu firmamenti."* (Stigel, 1581, p.84).

Melanchthon already dealt with affective states in his treatise *Loci communes* that appeared in 1521, especially the relation between affective states and intellect. The thematic context of the *Commentarius* and the *Loci* was admittedly quite different. In the *Commentarius*, later *Liber*, Melanchthon commented on the nature of man. These anthropological-psychological views were influenced considerably by theological standpoints of overriding importance. The *Loci*, however, are conceived as a fundamentally theological programmatic discourse upon Lutheran Protestantism, using anthropological-psychological theses to support theological propositions. In Melanchthon's complete work the theological statements clearly have priority. In comparing the psychological statements in the *Loci* and in the later *Liber*, however, we see that 1) psychological statements play a different role and 2) that changes in Melanchthon's theological views took place in the two decades between the publication of the *Loci* and the *Commentarius*, causing a change in Melanchthon's psychological views.

3.1 The topic of affective states in the *Loci communes*

The *Loci* classify the mental faculties (*vires*) of man only roughly. Melanchthon was convinced that in theological argumentation a simple scheme is sufficient and that precise philosophical constructions are not necessary. So he simply discerned between the faculty of cognition (*vis cognoscendi*) and the power from which affective states originate (*vis e qua affectus oriuntur*) (Melanchthon, 1993 [1521], p.26f.). The latter power we can equate with *voluntas* (will), *affectus* (affective state) or *appetitus* (drive, desire)¹³. This division comes from the scholastic theologian Gerson (*De theologia mystica*, 1408) and is not compatible with Luther's three-way division of the body, mind, and spirit.

With regard to the anthropological fundamental philosophy in Melanchthon's *Loci*, his statements about the relationship between affective state (*affectus*) and intellect (*intellectus*) are essential. According to his initial thesis (*cognitio servit voluntati*), the will dominates the intellect so that the intellect is the slave of the will. Compared with the intellect, the affective state qua will plays the dominant role in the regulation of human behavior and experience. That is why human behavior and feelings are not the result of free rational decisions, but the result of a struggle among affective states. The accompanying thesis is that one affective state is defeated by another (*affectus affectu vincitur*, Melanchthon, 1993 [1521], p.36f.).

Melanchthon gave reasons for the dominance of the affective states over perceptions and behavior in daily experiences from passages in the Bible and by referring to authors of Graeco-Roman antiquity. First of all, we will give an example used by the naive empiricist Melanchthon to explain the momentum in the sphere of affective states: If you are offended by a loved person, then

¹³ "*Hanc vim alias voluntatem, alias affectum, alias appetitum nominatur*" (Melanchthon, 1993 [1521], p. 26f.).

you are very hurt. In this case the affective state of being hurt defeats the affective state of love (*affectus affectu vincitur*). This change of affective states is not caused by the intellect or by a rational will, but it is caused by the fundamental affective state of self-love, which is the most distinctive human affective state. In the end this naïve empirical argumentation should serve to show the correctness of theological doctrines: the affective state of self-love is the expression of the corruptness (*malum*) caused by the Fall (original sin) and this *malum* is the most basic constitution of human nature. Therefore man needs the divine grace that cannot be obtained by a decision of the free will, but only by the will of God (*conversio Dei*). Secondly, some texts of the Bible follow such as "the heart is defiant and unfathomable" (Jeremia 17, 9)¹⁴ Thirdly, Melanchthon quoted authors of antiquity such as Horaz: "If you drive out nature with a pitchfork it will return every time"¹⁵ According to this, the intellect and a possibly rationally directed will, respectively, cannot rule the affective states, so that we do not have any power over the inner affective states: *Interni affectus non sunt in potestate nostra* (Melanchthon, 1993 [1521], p.36f.). To round the topic off we want give another example, in which Melanchthon refers to the Graeco-Roman mythology: If Paris decides to relinquish his love for Oenone, then this is a deceptive illusion of the intellect, that has really been overcome by a stronger affective state¹⁶

3.2. The topic of affective states in the *Liber de anima*

In the *Liber de anima* Melanchthon dealt explicitly with affective states as a psychological problem under the category *potentia appetitiva*. He described the *potentia appetitiva* as the faculty of pursuing or fleeing (*facultas prosequens aut fugiens obiecta*). There are three kinds of the *potentia appetitiva*: *appetitus naturalis* (natural desire), *appetitus sensitivus* (sensorial desire) and *appetitus voluntarius* (willful desire). The *appetitus naturalis* includes the fundamental organic needs such as hunger as the desire for food or thirst as the desire for drinkable liquid. It isn't an affective state in the narrow sense. The affective states that we would call emotions in modern terminology, have to be assigned to the *appetitus sensitivus*. In other words, Melanchthon grouped the affective states in the narrow sense together with sensations. Therefore, the *appetitus sensitivus* is the "companion" of the sensations¹⁷ Melanchthon mentioned that the primary sensation that triggers affective states and emotions, respectively, is touch. The feeling of well-being (*delectatio*) results from touching pleasant

¹⁴ "Et 'cor hominis pravam et inscrutabile' esse, dicit Jeremias propheta" (Melanchthon, 1993 [1521], p. 42f.).

¹⁵ "Naturam licet expellas furca, tamen usque recurret" (Horaz, Epist. 10, 24, quoted by Melanchthon, 1993 [1521], p.42f.).

¹⁶ "Si statuat Paris ponere Oenones amorem, nisi fuerit victus revera vehementiore affectu, fucata fallaxque cogitatio intellectus est" (Melanchthon, 1993 [1521], p.40f.).

¹⁷ "Appetitus sensitivus ..., qui comitatur sensum" (Melanchthon, 1846 [1553], p.123).

objects, whereas touching unpleasant objects causes pain (*dolor*). The generation of emotions by tactile sensations is based on the activity of the nerves. The negative effects of touching unpleasant objects might even result in damaging the nerves. Apparently Melanchthon explained the generation of emotions and affective states by a quasi-physiological argumentation. In order to understand these explanations we have to consider them within the tradition of philosophy and the tradition of the history of ideas. Melanchthon's quasi-physiological interpretations were in contrast to the widespread doctrine of the Stoics that stated that emotions such as pleasure and reluctance generally result from acts of thinking. Therefore, they are ruled by the rational will. In Melanchthon's opinion there were emotions that were generated and controlled independent of the intellect.

A second kind of affective state was not combined with touch, but required a reflective processing of the perceived objects. These affective states were localized in the heart¹⁸ and their quasi-physiological correlates were the motions of the heart (*motus cordis*). They were independent of the faculty of thinking (*cogitatio*).

Melanchthon (1846 [1553], p.124) formulated the opinion in varying ways that – to use the modern terminology – cognitive processes precede the generation of affective states: “*gradus adpetitionum, qui... sequuntur cogitationem*”; “*motus cordis noticiam sequentes*”; “... *motibus cordis antecedere cognitionem*”. *Cogitatio*, *noticia* and *cognitio* designate cognitive processes. This argumentation is supported by Latin and Greek aphorisms: “*Quod latet ignotum est, ignoti nulla cupido*” (Something hidden is unknown; the ignorant have no desire); “*Ek tou oran gignetai to eran*” (loving results from seeing).

By assuming that the *cogitatio* preceded the affective state, Melanchthon demonstrated a remarkable change of his standpoint as compared to that in the *Loci*. This change occurred in conjunction with a shift in Melanchthon's view of the doctrine of the free will that started in 1527 (see Scheible, 1992, p.373f.). Now that man as a creation of God was capable of really knowing God, a more positive assessment of the human faculty of cognition resulted. The *cogitatio* was assigned a higher status and was stated as the following: *Affectus qui cogitationem sequitur* (the affective state comes after the cognition). That is the opposite of what Melanchthon said in 1521 in the *Loci*¹⁹.

In his doctrine of the affective states Melanchthon was also essentially

¹⁸ “*Sunt igitur alii quidam gradus adpetitionum, qui non fiunt per contactum, sed sequuntur cogitationem, et proprie sunt in corde, ac nominantur Adfectus*” (Melanchthon, 1846 [1553], p.124).

¹⁹ It may be assumed that Melanchthon tried to bring reforming-theological thinking in line with the confidence in the human cognitive capacities as propagated by the humanists. For this he changed his view of the role the intellect played in regulating the human experience. Especially with regard to anthropological views, Melanchthon intended to generate a synthesis or at least an extensive compatibility of reforming and humanistic body of thought. The split between Luther and Erasmus from Rotterdam indicated the tensions held by the relation between reformation and humanism.

influenced by Aristotle (see Petersen, 1921). As a result Melanchthon extensively adopted the catalogue of affective states as well as the qualitative description of the individual affective states from Aristotle's "Rhetorik". Melanchthon merely added some Christian concepts such as hope and pleasure. Aristotle also tried to explain the generation of affective states scientifically. In his opinion both the dialectician (dialektikoV) and the natural scientist (jusikoV) have vocations suited for dealing with the problem of affective states from their respective specialized perspectives. The dialectician should discover the nature of affective states whereas the scientist should describe and explain the somatic processes which form the basis of affective states such as anger being the outburst and warming of the blood around the heart (see Lanz, 1971, column 89f.). Melanchthon systematically continued his endeavors for ascertaining the physiological correlates of affective processes or states. For example he assumed that pleasure is accompanied by a dilation of the heart, sadness by a contraction of the heart, and love by a glowing of the heart. In anger the blood begins to surge through the veins and heats up to such a strong extent that the brain and nerves might be damaged.

Another differentiation of the affective sphere regards the different modes of generation (see Rump, 1897). There were affective states that were elicited externally by objects. An object is perceived, recognized, and deemed good or bad.

In this process the so-called *spiritus* are moved from the brain and conducted to the heart. The heart is "beaten" by the *spiritus*. A kind of interaction arose between the heart and the brain. In addition to the affective states induced by objects there were also affective states occurring naturally in the body. The substance of the heart produced affective states of its own accord by releasing certain bodily fluids. Anger, for example, might arise by an excitation of the red bile, which is the hottest fluid. In connection with this excitation other body fluids, such as the blood, may be affected as well. The affective state of mourning might result from processes occurring naturally in the body. In this case the heart extracts the so-called "inert fluid" which is also called "black bile". Melanchthon assumed that blockages in the circulation of the other bodily fluids resulted from the extraction of the inert fluid. The psychopathological manifestation of such blockages were mental illnesses. We have to be cautious in analyzing these statements Melanchthon's that may be classified more as speculations in the philosophy of nature. Nevertheless, we cannot help but notice that the assumption of an endogenous cause of psychoses was anticipated by Melanchthon. This is all the more remarkable because, until modern times, mental illnesses were generally explained as possession by demons.

4. MELANCHTHON'S VIEW OF THE EMPIRICAL PROCEEDINGS

During Melanchthon's time many humanistically-minded scientists ignored new empirical results or considered them to be inconsequential. This was characteristic for the humanistic way of thinking in which the human mind had

reached the zenith of its development in antiquity and modern man should orient himself toward the ancients. Correspondingly, among those in the medical profession, the opinion was widespread that Galen was infallible. Andreas Vesalius, however, the founder of modern anatomy, discovered many of Galen's errors through his own observations while conducting autopsies on humans. Therefore many of his colleagues despised him, such as his teacher Jacobus Sylvius (1478-1555), who gave him the nickname "Vesanus" (Lunatic). To preserve Galen's authority Sylvius concocted the erroneous and eccentric argument that the human body had degenerated since Galen's lifetime. For example, Sylvius suggested that the curvature of the femur was changed by the recent fashion to wear close-fitting trousers. That explained why Vesalius' results differed from Galen's observations (see Ackerknecht, 1989, p.93).

Despite his own humanistic orientation that included a high regard for the restoration of ancient tradition, Melanchthon didn't reject the modern developments of this tradition, but also accepted the recent results of Vesalius. With respect to medical questions Jakob Milichius (1501-1559), a professor of medicine in Wittenberg, and Caspar Peucer (1525-1602), a natural scientist and physician, acted in an advisory capacity to Melanchthon (see Melanchthon, 1840 [1552], p.1127)²⁰

We can show Melanchthon's open-mindedness about recent observations at the time with the so-called *rete mirabile* (wonderful net). This was an arterial gauze and some authors assumed that it improved the *spiritus vitales* (Harvey, 1975, p.37). According to Galen this arterial structure could be found at the base of both human and animal brains. But Vesalius didn't find a *rete mirabile* during his human autopsies. Melanchthon (1846 [1553], p.72) took this recent knowledge into consideration in his *Liber de anima* which came out ten years after the publication of the Vesalian results²¹. In the *Commentarius de anima* (1544), however, the *rete mirabile* was still seen as a real existing arterial structure²². In general Melanchthon (1846 [1553], p.21) cited the works of Vesalius as "*locupletissimum opus viri peritissimi Vesalii*" (the very reliable work of an exceedingly experienced man). Stigel (1581, p.84) and Strigel (1590, p.10f.) also refer to Vesalius in their commentaries of "*de anima*"

Another instance of Melanchthon's open-mindedness about the recent results based on experience is his recommendation to study the treatise *De anima et vita libri tres* (1538), written by the Spaniard Ludovico Vives (1492-1546) (Melanchthon, 1836 [1540], p.911). This is remarkable because Vives didn't refer first and foremost to the ancient tradition, but instead stressed the importance

²⁰ W. Kaiser (1982) gives a thorough account about physicians and natural scientists that were associated with Melanchthon.

²¹ "*Nominat Galenus contextum quandam arteriarum..., quod nuncuparunt Arabes Rete mirabile. Sed in capite hominis hunc insignem contextum negant esse.*" (Melanchthon, 1846 [1553], p.72).

²² "... *sub tota basi cerebri est rete mirabile*" (Melanchthon, 1544, p.124).

of experiential and experimental proceedings to investigate the characteristics and capacities of the soul although he disregarded fathoming the essence of the soul. In addition Melancthon valued the latest Copernican knowledge even though he had rejected it when he was younger. Although Melancthon tolerated and even cherished empirical knowledge, his explanations of psychological problems are more influenced by philosophical and theological perspectives, than being determined by empirical directions. In his doctrine of the *spiritus* Melancthon emphasized the physiological basis of the inner senses and tried to limit cognitive processes to particular places in the brain. Without undue worry over elaborate schemes, methodological proceedings, such as ancient anatomical descriptions and results found by observations of brain damaged persons or by autopsies, were joined together. From the results of those methodological mixtures, Melancthon deduced hypotheses about the faculties of the soul which are daring from today's viewpoint. Melancthon's disciples also proceeded in such a way.

Referring to failures caused by brain injuries, Stigel (1581, p.83f.), for example, placed the *sensus communis* to the front part of the brain and the memory to the back part²³. To verify this anatomically, Stigel gave two arguments: First, the substance of the brain around the first two ventricles is especially suited for receiving the fleeting pictures of perception because of its soft texture and moisture (see Stigel, 1581, p.85). In comparison, the cerebellum adjoining the fourth ventricle is drier and more curved, as already mentioned above. Therefore, it is especially suited for the permanent storage of sensory information. Moreover, the liquid in the brain ventricles verifies the existence of the *spiritus animalis*. In contrast to these examples, this speculative process sometimes produced knowledge that is valid from today's viewpoint, too. Thus in Stigel's (1581, p.84) opinion, the brain is structured in pairs in order to compensate for failures caused by injuries to the corresponding structures of the other brain hemisphere.

5. MELANCHTHON AND PROBLEMS OF MODERN PSYCHOLOGY

When we interpret old psychological texts, we should take into consideration that it is often much easier to find out, what our predecessors have already known, than to ignore what we have learned meanwhile. If we disregard this problem, we might easily produce wrong interpretations by trying to show relations to the present psychology. Nonetheless we will present possible relations to current issues to bring out the heuristic fruitfulness of such historical considerations. In the following section we will discuss problems of modern cognitive psychology already implied by Melancthon's ventricle-theory as well as Melancthon's doctrine of affective states in the context of modern debates about the relationship between emotion and cognition.

²³ *"Certum enim est, habitare sensum communem in anteriori parte. Hac enim parte laesa deficiunt exteriores sensus. Item, eas actiones in posteriore parte esse, quas memoria exercet, ea parte laesa fiunt homines obliviosi."* (Stigel, 1581, p.83f.).

Probably the most fundamental idea of joining the doctrine of the inner senses with anatomical knowledge about the brain ventricles was produced by Nemesios from Emesa (4th century anno domini). For more than a thousand years this idea was seen as if it were the most natural thing in the world and accepted at face value. There seem to be two important reasons for holding onto this theory for such a long time. On the one hand the ventricle theory explained mental disorders resulting from injuries of the head. On the other hand it enabled people to explain the abilities of animals to process information, learn, or to perform complicated acts such as spinning a cobweb (see Kemp, 1990, p.58f., Kemp & Fletcher, 1993, p.560f.). Time and again such observations supported the ventricle theory which was not cast into doubt until Vesalius (1543, p.310) had shown by autopsies that the nerves between the brain and the sense organs don't reach the ventricles and that a human *rete mirabile* doesn't exist (see Kemp & Fletcher, 1993, p.566).

We have already mentioned above the negative reactions from Vesalius' colleagues to his autopsies. This indicated the strange effects resulting from a rigid and uncritical position as well as the risk that always arises by attributing a real and non-hypothetical character to scientific dogmas. The grave misinterpretations in the context of the ventricle theory may be a warning for modern psychology inasmuch as today the idea of a neuronal brain prevails. Therefore the processes in the nervous tissue are seen mostly as the physiological basis of mental functions. Today we are convinced that the glia cells only have a supporting function although the chemical and electrical phenomena of the glia cells are similar to those of the nerve cells (see Florey, 1996, p.84). For this reason we can't completely reject the possibility of an analogy of the minor role attributed to the glia today, on the one hand, to the minor role attributed to the brain substance and especially to the cortex by the ventricle theory, on the other hand. In Melanchthon's opinion the *spiritus animalis* is an ethereal and extremely shiny substance mediating between body and mind. The *spiritus* in the ventricles and nerves is the immediate tool of the immaterial soul to realize its functions. That is why, according to Melanchthon (1846 [1553], p.20), the movements of the *spiritus* are the fundamental principle of all soul processes. Moreover, he supposed different effects of the *spiritus* in different body organs. In light of today's view we can't help comparing the *spiritus* to the electrical processes in the nervous tissue because the former are a very fine transferring substance with an immediate position between body and mind. For example, the *spiritus* and the electrical nerve impulses, respectively, may cause a perception or a motor reaction. In accordance with the modern level of knowledge, Melanchthon assumed the kind of effect depended on the location and constitution of the excited organ.

Melanchthon's ventricle theory already contained important aspects of cognitive information processing – to use a modern terminology – as so far as the input is transformed step by step and the output at every processing level becomes in turn the input of the next processing level. These different steps, each located in different brain ventricles, correspond to different representations of the information coming from the outside. Furthermore, in the perception process

Melanchthon already differentiated simplistically between three steps of coding, the arousal in the sense organ (*imago*), in the nerve fibers (*copia*), and in the brain (*simulacrum*). As far as the memory is concerned, Melanchthon distinguished between a store for accumulating pictorial contents and a store for abstract concepts. The first is located in the fourth ventricle and in the adjoining cerebellum, the latter in the *potentia rationalis*.

Apart from these remarkable classifications, we have to raise the criticism that the supposed faculties, such as abstract thinking and processes of will etc., are seen as resulting from faculties acting like homunculi and given by God. This way of thinking that enables us to explain all and yet nothing, was more of a hindrance than a help to the further advancement of psychology.

As far as the relationship between affective states and the intellect was concerned, Melanchthon's considerations in his *Loci communes* (1521) differed from those in his *Liber de anima* (1553). This difference corresponded to a long occidental tradition that continued to have an effect on the conception of modern research programs. H. Thomae (1983) points out in a historical look back at concepts and theories of motivation that the fundamental patterns for defining the relation between motivation and cognition were already created during high Scholasticism. On the one hand we have the formula of Thomas from Aquin, *appetitus ... enim cognitionem sequitur* (the desire follows the reason), that is, cognition precedes and the motivation follows. On the other hand we find the formula of Thomas' opponents, such as Duns Scotus and the young Melanchthon. This formula goes *cognitio ... enim appetitum sequitur* (the reason follows the desire). Thomae emphasizes that modern cognitive models describing the relation of motivation to cognition are consistent with Thomas' position. In the 20th century this model dominated from 1900 until 1920 and in the fifties (cognitive change). In comparison psychoanalysis and other directions of depth psychology as well as W. Mc Dougall's hormic psychology are based on the standpoint opposite to Thomas'.

Looking at more recent history, we find the debate on emotions and cognitions between R.B. Zajonc (1980, 1984a, 1984b) and R.S. Lazarus (1984). In Zajonc's opinion cognitions are not necessary for causing emotions. According to Lazarus, however, a kind of cognition, actually a judgement, precedes each emotion. Zajonc emphasizes the primacy of emotion and Lazarus the primacy of cognition. Dörner and Stäudel (1990, p.298) say that the fruitlessness of this debate results from a different conception of the concepts used. But in view of the continuity with which this problem has been discussed in the long tradition of the history of ideas, we cannot be sure if the mentioned differences between Lazarus and Zajonc result solely from insufficiently clarified concepts. We suggest that the different modern definitions concerning the relationship between emotion and cognition isn't based on different concepts, but on different conceptions of man.

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