

intellectual interest. It takes account of the sexual repression which made it so strong in contributing to it sublimated libido, by avoiding all occupation with sexual themes.

In mentioning the concurrence in Leonardo of the powerful investigation impulse with the stunting of his sexual life which was limited to the so-called ideal homosexuality, we feel inclined to consider him as a model example of our third type. The most essential point of his character and the secret of it seems to lie in the fact, that after utilizing the infantile activity of curiosity in the service of sexual interest he was able to sublimate the greater part of his libido into the impulse of investigation. But to be sure the proof of this conception is not easy to produce. To do this we would have to have an insight into the psychic development of his first childhood years, and it seems foolish to hope for such material when the reports concerning his life are so meager and so uncertain; and moreover, when we deal with information which even persons of our own generation withdraw from the attention of the observer.

We know very little concerning Leonardo's youth. He was born in 1452 in the little city of Vinci between Florence and Empoli; he was an illegitimate child which was surely not considered a great popular stain in that time. His father was Ser Piero da Vinci, a notary and descendant of notaries and farmers, who took their name from the place Vinci; his mother, a certain Caterina, probably a peasant girl, who later married another native of Vinci. Nothing else about his mother appears in the life history of Leonardo, only the writer Merejkowski believed to have found some traces of her. The only definite information about Leonardo's childhood is furnished by a legal document from the year 1457, a register of assessment in which Vinci Leonardo is mentioned among the members of the family as a five-year-old illegitimate child of Ser Piero.[24] As the marriage of Ser Piero with Donna Albiera remained childless the little Leonardo could be brought up in his father's house. He did not leave this house until he entered as apprentice--it is not known what year--in the studio of Andrea del Verrocchio. In 1472 Leonardo's name could already be found in the register of the members of the "Compagnia dei Pittori." That is all.

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## II

As far as I know Leonardo only once interspersed in his scientific descriptions a communication from his childhood. In a passage where he speaks about the flight of the vulture, he suddenly interrupts himself in order to follow up a memory from very early years which came to his mind.

*"It seems that it had been destined before that I should occupy myself so thoroughly with the vulture, for it comes to my mind as a very early memory, when I was still in the cradle, a vulture came down to me, he opened my mouth with his tail and struck me a few times with his tail against my lips."*[25]

We have here an infantile memory and to be sure of the strangest sort. It is strange on account of its content and account of the time of life in which it was fixed. That a person could retain a memory of the nursing period is perhaps not impossible, but it can in no way be taken as certain. But what this memory of Leonardo states, namely, that a vulture opened the child's mouth with its tail, sounds so improbable, so fabulous, that another conception which puts an end to the two difficulties with one stroke appeals much more to our judgment. The scene of the vulture is not a memory of Leonardo, but a phantasy which he formed later, and transferred into his childhood. The childhood memories of persons often have no different origin, as a matter of fact, they are not fixated from an experience like the conscious memories from the time of maturity and then repeated, but they are not produced until a later period when childhood is already past, they are then changed and disguised and put in the service of later tendencies, so that in general they cannot be strictly differentiated from phantasies. Their nature will perhaps be best understood by recalling the manner in which history writing originated among ancient nations. As long as the nation was small and weak it gave no thought to the writing of its history, it tilled the soil of its land, defended its existence against its neighbors by seeking to wrest land from them and endeavored to become rich. It was a heroic but unhistoric time. Then came another age, a period of self-realization in which one felt rich and powerful, and it was then that one experienced the need to discover whence one originated and how one developed. The history-writing which

then continues to register the present events throws also its backward glance to the past, it gathers traditions and legends, it interprets what survived from olden times into customs and uses, and thus creates a history of past ages. It is quite natural that this history of the past ages is more the expressions of opinions and desires of the present than a faithful picture of the past, for many a thing escaped the people's memory, other things became distorted, some trace of the past was misunderstood and interpreted in the sense of the present; and besides one does not write history through motives of objective curiosity, but because one desires to impress his contemporaries, to stimulate and extol them, or to hold the mirror before them. The conscious memory of a person concerning the experiences of his maturity may now be fully compared to that of history writing, and his infantile memories, as far as their origin and reliability are concerned will actually correspond to the history of the primitive period of a people which was compiled later with purposive intent.

Now one may think that if Leonardo's story of the vulture which visited him in his cradle is only a phantasy of later birth, it is hardly worth while giving more time to it. One could easily explain it by his openly avowed inclination to occupy himself with the problem of the flight of the bird which would lend to this phantasy an air of predetermined fate. But with this depreciation one commits as great an injustice as if one would simply ignore the material of legends, traditions, and interpretations in the primitive history of a people. Notwithstanding all distortions and misunderstandings to the contrary they still represent the reality of the past; they represent what the people formed out of the experiences of its past age under the domination of once powerful and to-day still effective motives, and if these distortions could be unraveled through the knowledge of all effective forces, one would surely discover the historic truth under this legendary material. The same holds true for the infantile reminiscences or for the phantasies of individuals. What a person thinks he recalls from his childhood, is not of an indifferent nature. As a rule the memory remnants, which he himself does not understand, conceal invaluable evidences of the most important features of his psychic development. As the psychoanalytic technique affords us excellent means for bringing to light this concealed material, we shall venture the attempt to fill the gaps in the history of Leonardo's life through the analysis of his infantile phantasy. And if we should not attain a satisfactory degree of certainty, we will have to console ourselves with the fact that so many other investigations about this great and mysterious man have met no better fate.

When we examine Leonardo's vulture-phantasy with the eyes of a psychoanalyst then it does not seem strange very long; we recall that we have often found similar structures in dreams, so that we may venture to translate this phantasy from its strange language into words that are universally understood. The translation then follows an erotic direction. Tail, "coda," is one of the most familiar symbols, as well as a substitutive designation of the male member which is no less true in Italian than in other languages. The situation contained in the phantasy, that a vulture opened the mouth of the child and forcefully belabored it with its tail, corresponds to the idea of fellatio, a sexual act in which the member is placed into the mouth of the other person. Strangely enough this phantasy is altogether of a passive character; it resembles certain dreams and phantasies of women and of passive homosexuals who play the feminine part in sexual relations.

Let the reader be patient for a while and not flare up with indignation and refuse to follow psychoanalysis because in its very first applications it leads to an unpardonable slander of the memory of a great and pure man. For it is quite certain that this indignation will never solve for us the meaning of Leonardo's childhood phantasy; on the other hand, Leonardo has unequivocally acknowledged this phantasy, and we shall therefore not relinquish the expectation--or if you prefer the preconception--that like every psychic production such as dreams, visions and deliria this phantasy, too, must have some meaning. Let us therefore lend our unprejudiced ears for a while to psychoanalytic work which after all has not yet uttered the last word.

The desire to take the male member into the mouth and suck it, which is considered as one of the most disgusting of sexual perversions, is nevertheless a frequent occurrence among the women of our time--and as shown in old sculptures was the same in earlier times--and in the state of being in love seems to lose entirely its disgusting character. The physician encounters phantasies based on this desire, even in women who did not come to the knowledge of the possibility of such sexual gratification by reading V. Krafft-Ebing's

Psychopathia Sexualis or through other information. It seems that it is quite easy for the women themselves to produce such wish-phantasies.[26] Investigation then teaches us that this situation, so forcibly condemned by custom, may be traced to the most harmless origin. It is nothing but the elaboration of another situation in which we all once felt comfort, namely, when we were in the suckling-age ("when I was still in the cradle") and took the nipple of our mother's or wet-nurse's breast into our mouth to suck it. The organic impression of this first pleasure in our lives surely remains indelibly impregnated; when the child later learns to know the udder of the cow, which in function is a breast-nipple, but in shape and in position on the abdomen resembles the penis, it obtains the primary basis for the later formation of that disgusting sexual phantasy.

We now understand why Leonardo displaced the memory of the supposed experience with the vulture to his nursing period. This phantasy conceals nothing more or less than a reminiscence of nursing--or being nursed--at the mother's breast, a scene both human and beautiful, which he as well as other artists undertook to depict with the brush in the form of the mother of God and her child. At all events, we also wish to maintain, something we do not as yet understand, that this reminiscence, equally significant for both sexes, was elaborated in the man Leonardo into a passive homosexual phantasy. For the present we shall not take up the question as to what connection there is between homosexuality and suckling at the mother's breast, we merely wish to recall that tradition actually designates Leonardo as a person of homosexual feelings. In considering this, it makes no difference whether that accusation against the youth Leonardo was justified or not. It is not the real activity but the nature of the feeling which causes us to decide whether to attribute to some one the characteristic of homosexuality.

Another incomprehensible feature of Leonardo's infantile phantasy next claims our interest. We interpret the phantasy of being wet-nursed by the mother and find that the mother is replaced by a vulture. Where does this vulture originate and how does he come into this place?

A thought now obtrudes itself which seems so remote that one is tempted to ignore it. In the sacred hieroglyphics of the old Egyptians the mother is represented by the picture of the vulture.[27] These Egyptians also worshiped a motherly deity, whose head was vulture like, or who had many heads of which at least one or two was that of a vulture.[28] The name of this goddess was pronounced *Mut*; we may question whether the sound similarity to our word mother (*Mutter*) is only accidental? So the vulture really has some connection with the mother, but of what help is that to us? Have we a right to attribute this knowledge to Leonardo when François Champollion first succeeded in reading hieroglyphics between 1790-1832?[29]

It would also be interesting to discover in what way the old Egyptians came to choose the vulture as a symbol of motherhood. As a matter of fact the religion and culture of Egyptians were subjects of scientific interest even to the Greeks and Romans, and long before we ourselves were able to read the Egyptian monuments we had at our disposal some communications about them from preserved works of classical antiquity. Some of these writings belonged to familiar authors like Strabo, Plutarch, Amianus Marcellus, and some bear unfamiliar names and are uncertain as to origin and time, like the hieroglyphica of Horapollo Nilus, and like the traditional book of oriental priestly wisdom bearing the godly name Hermes Trismegistos. From these sources we learn that the vulture was a symbol of motherhood because it was thought that this species of birds had only female vultures and no males.[30] The natural history of the ancients shows a counterpart to this limitation among the scarebæus beetles which were revered by the Egyptians as godly, no females were supposed to exist.[31]

But how does impregnation take place in vultures if only females exist? This is fully answered in a passage of Horapollo.[32] At a certain time these birds stop in the midst of their flight, open their vagina and are impregnated by the wind.

Unexpectedly we have now reached a point where we can take something as quite probable which only shortly before we had to reject as absurd. It is quite possible that Leonardo was well acquainted with the scientific fable, according to which the Egyptians represented the idea of mother with the picture of the

vulture. He was an omnivorous reader whose interest comprised all spheres of literature and knowledge. In the Codex Atlanticus we find an index of all books which he possessed at a certain time,[33] as well as numerous notices about other books which he borrowed from friends, and according to the excerpts which Fr. Richter[34] compiled from his drawings we can hardly overestimate the extent of his reading. Among these books there was no lack of older as well as contemporary works treating of natural history. All these books were already in print at that time, and it so happens that Milan was the principal place of the young art of book printing in Italy.

When we proceed further we come upon a communication which may raise to a certainty the probability that Leonardo knew the vulture fable. The erudite editor and commentator of Horapollo remarked in connection with the text (p. 172) cited before: *Caeterum hanc fabulam de vulturibus cupide amplexi sunt Patres Ecclesiastici, ut ita argumento ex rerum natura petito refutarent eos, qui Virginis partum negabant; itaque apud omnes fere hujus rei mentio occurrit.*

Hence the fable of the monosexuality and the conception of the vulture by no means remained as an indifferent anecdote as in the case of the analogous fable of the scarebæus beetles; that church fathers mastered it in order to have it ready as an argument from natural history against those who doubted the sacred history. If according to the best information from antiquity the vultures were directed to let themselves be impregnated by the wind, why should the same thing not have happened even once in a human female? On account of this use the church fathers were "almost all" in the habit of relating this vulture fable, and now it can hardly remain doubtful that it also became known to Leonardo through so powerful a source.

The origin of Leonardo's vulture phantasy can be conceived in the following manner: While reading in the writings of a church father or in a book on natural science that the vultures are all females and that they know to procreate without the coöperation of a male, a memory emerged in him which became transformed into that phantasy, but which meant to say that he also had been such a vulture child, which had a mother but no father. An echo of pleasure which he experienced at his mother's breast was added to this in the manner as so old impressions alone can manifest themselves. The allusion to the idea of the holy virgin with the child, formed by the authors, which is so dear to every artist, must have contributed to it to make this phantasy seem to him valuable and important. For this helped him to identify himself with the Christ child, the comforter and savior of not alone this one woman.

When we break up an infantile phantasy we strive to separate the real memory content from the later motives which modify and distort the same. In the case of Leonardo we now think that we know the real content of the phantasy. The replacement of the mother by the vulture indicates that the child missed the father and felt himself alone with his mother. The fact of Leonardo's illegitimate birth fits in with his vulture phantasy; only on account of it was he able to compare himself with a vulture child. But we have discovered as the next definite fact from his youth that at the age of five years he had already been received in his father's home; when this took place, whether a few months following his birth, or a few weeks before the taking of the assessment of taxes, is entirely unknown to us. The interpretation of the vulture phantasy then steps in and wants to tell us that Leonardo did not spend the first decisive years of his life with his father and his step-mother but with his poor, forsaken, real mother, so that he had time to miss his father. This still seems to be a rather meager and rather daring result of the psychoanalytic effort, but on further reflection it will gain in significance. Certainty will be promoted by mentioning the actual relations in Leonardo's childhood. According to the reports, his father Ser Piero da Vinci married the prominent Donna Albiera during the year of Leonardo's birth; it was to the childlessness of this marriage that the boy owed his legalized reception into his father's or rather grandfather's house during his fifth year. However, it is not customary to offer an illegitimate offspring to a young woman's care at the beginning of marriage when she is still expecting to be blessed with children. Years of disappointment must have elapsed before it was decided to adopt the probably handsomely developed illegitimate child as a compensation for legitimate children who were vainly hoped for. It harmonizes best with the interpretation of the vulture-phantasy, if at least three years or perhaps five years of Leonardo's life had elapsed before he changed from his lonely mother to his father's home. But then it

had already become too late. In the first three or four years of life impressions are fixed and modes of reactions are formed towards the outer world which can never be robbed of their importance by any later experiences.

If it is true that the incomprehensible childhood reminiscences and the person's phantasies based on them always bring out the most significant of his psychic development, then the fact corroborated by the vulture phantasy, that Leonardo passed the first years of his life alone with his mother must have been a most decisive influence on the formation of his inner life. Under the effect of this constellation it could not have been otherwise than that the child which in his young life encountered one problem more than other children, should have begun to ponder very passionately over this riddle and thus should have become an investigator early in life. For he was tortured by the great questions where do children come from and what has the father to do with their origin. The vague knowledge of this connection between his investigation and his childhood history has later drawn from him the exclamation that it was destined that he should deeply occupy himself with the problem of the bird's flight, for already in his cradle he had been visited by a vulture. To trace the curiosity which is directed to the flight of the bird to the infantile sexual investigation will be a later task which will not be difficult to accomplish.

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### III

The element of the vulture represents to us the real memory content in Leonardo's childhood phantasy; the association into which Leonardo himself placed his phantasy threw a bright light on the importance of this content for his later life. In continuing the work of interpretation we now encounter the strange problem why this memory content was elaborated into a homosexual situation. The mother who nursed the child, or rather from whom the child suckled was transformed into a vulture which stuck its tail into the child's mouth. We maintain that the "coda" (tail) of the vulture, following the common substituting usages of language, cannot signify anything else but a male genital or penis. But we do not understand how the phantastic activity came to furnish precisely this maternal bird with the mark of masculinity, and in view of this absurdity we become confused at the possibility of reducing this phantastic structure to rational sense.

However, we must not despair. How many seemingly absurd dreams have we not forced to give up their sense! Why should it become more difficult to accomplish this in a childhood phantasy than in a dream!

Let us remember the fact that it is not good to find one isolated peculiarity, and let us hasten to add another to it which is still more striking.

The vulture-headed goddess *Mut* of the Egyptians, a figure of altogether impersonal character, as expressed by Drexel in Roscher's lexicon, was often fused with other maternal deities of living individuality like Isis and Hathor, but she retained besides her separate existence and reverence. It was especially characteristic of the Egyptian pantheon that the individual gods did not perish in this amalgamation. Besides the composition of deities the simple divine image remained in her independence. In most representations the vulture-headed maternal deity was formed by the Egyptians in a phallic manner,[35] her body which was distinguished as feminine by its breasts also bore the masculine member in a state of erection.

The goddess *Mut* thus evinced the same union of maternal and paternal characteristics as in Leonardo's vulture phantasy. Should we explain this concurrence by the assumption that Leonardo knew from studying his book the androgynous nature of the maternal vulture? Such possibility is more than questionable; it seems that the sources accessible to him contained nothing of remarkable determination. It is more likely that here as there the agreement is to be traced to a common, effective and unknown motive.

Mythology can teach us that the androgynous formation, the union of masculine and feminine sex characteristics, did not belong to the goddess *Mut* alone but also to other deities such as Isis and Hathor, but in the latter perhaps only insofar as they possessed also a motherly nature and became fused with the goddess