



Description/Perspective

Description is the writing complement to observation; it *renders* or gives body to the observation. Descriptions create pictures for a reader through precise and objective language organized in a consistent pattern. *Picture* is not meant in its purely imitative function nor, technically, must language be limited to words. Mathematics may be considered as a kind of language, and mathematical descriptions can render a simulacrum of phenomena through such a language. More narrowly defined, description creates a representation of the object through the particular “lens” used to observe it. This chapter will concern itself with using words as the medium for making descriptions.

Descriptions report the attributes of an object, event, or phenomenon in order to render a representation. One need not KNOW what the event is to ascertain the attributes. Given sufficient attributes, it is possible to assign the unknown an identity. But even if identity is misassigned, it is possible for subsequent investigators to correct an assessment of identity if the rendering of the attributes is comprehensive.

Audience and Purpose

Identify the audience and purpose of your description. Does your purpose call for a description of a static object and thus your description will be spatial? Do you need to describe something that takes place in time (rather than in space) and hence will require a temporal orientation? Should the reader be able to *recognize* the object you describe? To *differentiate* one form from a visual field of related forms? To *manipulate* the object you describe? To *repeat* the steps in a process? To give directions?

Assess how much *detail* is required to satisfy that purpose for your designated audience. “It’s the yellow convertible” might be sufficient detail if you toss your car keys to your friend and point to the parking lot. But

more detail, and a different kind of detail, is required to differentiate the short-term metabolic effects of Insulin-like Growth Factors (IGF) from the long term mitogenic effects in a scientific paper prepared for an expert audience.

THE STRUCTURE OF DESCRIPTION

Sense perception is multifaceted and random, and many perceptions can be made simultaneously. A single visual image, for example, presents us with a complexity of sensory data. When we observe a flower, our impression of its form, color, and position among other flowers and our impression of the clarity of the image (whether we see it on a cloudy day or a clear day) occur at the same time. But a description of this perception, as rendered in the previous sentence, requires a linear order of words that breaks the perception into parts.

We cannot write about simultaneous events simultaneously.

Simultaneous events, even at the micro-level of perception, must be differentiated, partitioned, broken up into parts, in order for us to write about them.

A description in words must be linear because we read in a linear, temporal fashion, from left to right, with one word following another. To transfer perceptions into writing, the writer must impose form and order on perceptions. Description renders perception through writing.

The order of description follows the logic of writing.

- In writing, one usually moves from general to particular.
- In description, the pattern moves from *whole to parts*.

The ordering of description is important because it makes detail coherent. The following examples will demonstrate this point.

Examples

In the following three descriptions, the writers describe the same object. Read through each of them and compare them generally. Which description offers the clearest picture of the object? Try to identify the strengths and weaknesses of each description. An analysis of their relative merit follows the last description.

Description 1

The object in general has the overall shape of a flat, five-armed star. All the visible body components are jagged and rough on both

sides, giving it the texture of rough sandpaper. It has an orange color at the top, and white and yellow on the bottom. The object is thickest at the center (about 2 cm), and the thickness decreases gradually to the tip of the arm whose thickness is about 1 cm. At the center, it has an imaginary surface of a circle about 4 cm in diameter. It weighs about 50 grams. The object has a five-fold star shape with roughly bilateral symmetry. There is a dorsal and ventral side but no noticeable anterior or posterior sides due to its symmetry. The color on the dorsal side is light orange with light orange yellow and dark red spots. In between the light yellow spheres are dots that are the size of sugar crystals which cover the whole dorsal side. The center of the object has a hole on the ventral side which is half a centimeter and half a centimeter deep. The color and structure on the ventral side is the same as the ventral side of the arms. All appendages are equal in size but different in shape. One is curved to the left and has the shape of shark's dorsal fin while the other bends approximately one and one-half centimeters up from the middle of the arm.

Description 2

The shape of the object is semi-planar five-point star which is composed of a general body mass with five extensions radiating outward from the center like bicycle spokes. An imaginary line drawn connecting the tips of the spokes (like a tire) would measure about 10" in circumference.

The star-shaped creature has a form like a hand which rests palm-down. The undersurface of this star coincides with the palm of a hand, and the "back" side corresponds to the back of the hand. While the arms radiate from the center with radial symmetry, an axis of bi-lateral symmetry could be defined if the creature were cut lengthwise in half, from tip to tip.

While the dark orange "back" side of the star reveals a consistently jagged but unbroken surface, the underside (the palm) is different. A groove runs from the tip of each "finger" to a central opening in the "palm" measuring one-half centimeter in diameter and extend one and one-half centimeters into the body mass.

Description 3

The object in front of me originated from the sea. The sea is defined to be a body of salt water that covers a majority of the earth's surface. Within the sea are many forms of life, and they live a variety of ways. This one is a starfish, which belongs to the class of echinoderms.

Description 3 would have identified the object for you if you had not been able to form an identification.

Description 1 and 2 contain roughly the same data about shape, dimensions, and physical attributes. Both descriptions attempt to accommodate two kinds of symmetry: radial symmetry and bilateral symmetry. Description 1, however, lacks an overall pattern of organization. While groups of descriptive detail can be discerned—two related sentences describing color, two sentences dealing with appendages—those groups of detail are not integrated within a larger organizational scheme.

Because the writer shifts perspective on the object—alternating details from an “above” view, from a “below” view, and from a side view—the discrete, discontinuous points fail to add up to a unified picture of the whole. The orientation to the object provides the basis of an organization to the writing; multiple, simultaneous perspectives are reflected in the need for patterned organization. While it is appropriate to employ multiple perspectives in description, they should not be employed simultaneously lest they render the effect of looking through a fly’s multi-faceted eyes.

Description 1 also modifies detail throughout the passage: Initially told the object is flat, we later learn it is 2 cm thick at the center. While the author describes color on the ventral side, gradations of color are not otherwise ascribed to a pattern of dispersal. Minor details (color) receive detailed treatment while more important information (picture of the whole) receives truncated treatment. For instance, a description of two curved arms is given, but no indication specifies which arms curve, an important consideration should flexing be a function restricted to few, not all, of the limbs. While the analogies (the surface of the creature is like sandpaper, the bend in the arm looks like a shark’s dorsal fin) are effective for these parts, a coherent picture of a single object does not emerge.

Description 2 uses two images to organize the description of detail. The analogy of the bicycle spokes gives a picture of radial symmetry while the analogy of the hand accommodates the bilateral symmetry. Particular details are given in the context of their relevance to either one or the other kind of symmetry. Quantitatively, Description 2 gives fewer specifics, but the details provided are coherently structured. *Organized detail is more meaningful than random detail.*

Description 3 is not a description at all; it is a definition. It assumes knowledge about the creature already. While Descriptions 1 and 2 attempt to explain *what it looks like*, Description 3 tells you *what it is*. A definition implicitly contains an interpretation of the data; a description *renders* the data.

In selecting and reporting details, the writer may be caught between the need for relevance and the need for comprehensiveness. Description 1 attempted to be comprehensive, but the significance of the detail was lost by its scattered rendering. It is possible for description to be both comprehensive and structured; these desired attributes are achieved by the organi-

zation of details through the writing. Discrete dissociated detail—uncontextualized detail—is meaningless.

Guidelines for Writing a Description

1. Describe the obvious

Make sure you are thoroughly familiar with your object, but do not take its identity for granted — this is a paradox. Do not identify an item as a frogfish and assume that your reader will know what such a fish is. The name identifies the object, and while identification offers a useful starting point, it does not create a picture. For instance, the Reading Selections section at the back of the book contains an extract from a treatise on epidemics by Hippocrates, a Greek physician (430 B.C.). Although Hippocrates identifies a disease as *causus*, the details he provides prevent a contemporary researcher from making a definitive identification of the disease. In contrast, Thucydides, in “The Plague of Athens” (also in the Readings), fails to identify the plague by name but his detailed descriptions are thorough enough for a modern physician to make a reasonable inference about the nature of the diseases. Because description creates a full picture, identification is not alone sufficient.

2. Use precise, objective language

- > That big ugly virus I saw yesterday . . .
- > The larval form of that moth was gross.
- > Predation is depressing.

These examples contain subjective language—*ugly, gross, depressing*—that conveys more information about individual opinion than about the topic. “That big” virus gives general descriptive words but fails to specify size: one micron, half a micron? How big? Give specifics. Use standard units of measurement.

Specify the parts for items which have parts, (what the separate parts look like, how they fit together). Be specific about size shape, color, material, color, substance, scale, dimensions (weight, height, depth, surface area, etc.), orientation of parts, orientation of your description (top to bottom, inside to outside, front to back).

For spatial descriptions, rely upon specific words for form. Even if you do not have a clue as to what you have in front of you, grossly indicate the form. From one perspective, the moon appears as a disk; from another, a sphere. Consider your perspective in determining shape and use orientation words that relate to the object. A sea urchin is spherical not circular.

Where appropriate, use words like *square, elliptical, circular, round, spherical, disc-shaped, conical, helical, spiral, stellate, serrate, chiral, achiral, symmetrical, asymmetrical, continuous, discontinuous*. If you do not know a word in this list, look it up.

Be careful in selecting the language of orientation. For example, if describing a biological organism with a spherical shape (like a sea urchin), top and bottom are problematic terms. The sea urchin lives with its mouth to the rock and its anus presented to the sea. In spatial terms, the *top* of the creature is the physiological *bottom* of its digestive system; *dorsal* (back side) and *ventral* (belly side) apply only to bilaterally symmetrical animals. Similarly, for radially symmetrical animals, terms like *left* and *right* are meaningless because no location on the animal corresponds with these words, although these words do describe the perspective of a bilaterally symmetrical observer. Assuming knowledge of the mouth and anus, one could speak of an oral/aboral axis of symmetry. Words derived from bilateral symmetry are meaningless in cases of radial symmetry; similarly, the words for two-dimensional geometrical forms subvert descriptions for three-dimensional objects.

Orientation is not simply spatial; it is categorical.

3. Use a systematic pattern of organization

Nothing is too complicated to describe. Move from whole to parts. Break the whole into parts. Then describe the parts.

Among the ways to organize your description of parts are the following three:

If you describe an object in space, use (A) a *spatial sequence*. A description from top to bottom would be appropriate to describe a skeleton. For a creature with bilateral symmetry, a description might be framed with respect to that axis, starting with proximate features and moving to remote features. A car engine could be described from outside to inside or from inside to outside.

(B) Description of an object in terms of the way that *parts come together* is another option in organizing the description. An engineer would speak of an order of assembly; a biologist would speak a pattern of development or growth. This description could be ordered from the first step through consecutive steps, or from the last step to the first. Regardless of the specific application of this concept, the pattern must be chronologically consistent.

For organic creatures, you may write about the order of assembly from the standpoint of developmental biology in terms of which structures are formed first in the development of a growing organism.

If the way that an object works is central to the description, organize your description in terms of the functional sequence.

(C) An organization of parts as they *function* requires consistent se-

quencing. The starting point for this pattern is use or operation—how something works or functions—rather than how the parts come together.

What do you do first, then second, then third? A description of a bicycle emphasizing its functional sequence (the way that one uses it) may start with a description of the whole, then move to the parts: the pedal, where pressure is applied; the gears and chain, which distribute the energy received from the pedal; then the wheels, which turn in response to the gears; and then the brakes, which stop the wheels. Notice that this order describes the functional sequence of propulsion; another sequence must be described for the whole sequence to be complete, and that would be the functional sequence in steering, an operation that occurs simultaneously with that of propulsion.

A description of the functional parts of an organism would be shaped by the needs of your discipline, whether, for instance, you were approaching this from the perspective of evolutionary biology or developmental biology.

Note: If you begin a description of an object based on the way the parts come together, do not switch to describing the way the whole works (unless the two otherwise go together). Do not switch your point of orientation until you have completed a full discussion of the one underway.

Identifying Attributes

One may describe a thing or an event by identifying its attributes. The following questions will guide you in thinking about the important data that goes into a description. These questions are meant to spark your thinking. Simply answering the questions will not fulfill the function of description because description must be organized coherently.

1. What is it?

Identify the object. Is it solid, liquid, or gas? Is it animal, vegetable, or mineral? Find some category as the basis of classification so that your reader will have a general sense of what it is. Every thing, phenomenon, or event possesses a resemblance, even if purely heuristic, to another, and therefore has a class. Even if you encountered something totally unknown, like the alien monolith found on the moon in *2001: A Space Odyssey*, you can still offer tentative identification. If your identification is incorrect—if, for instance, you identified that monolith as a religious totem rather than as a communication device—a careful description of the object's attributes should enable another researcher to revise the identification.

2. What does it do?

What is its function or use? If it is a mechanism, you can count on the fact that it was probably made for a reason. For what reason was the mechanism made?

If you are not dealing with a mechanism but with an organism, you can identify its behavior. Even a plant like a redwood tree, which takes hundreds of years to grow, moves toward the sun. This positive phototropism can be an answer to the question "What does it do?" Similarly, the behavior of certain compounds, mixtures or elements can be identified under particular conditions. How does this compound behave at STP? How does the behavior change if the pressure is doubled? If temperature is halved?

For all descriptions, be precise and objective in your description. Use standard units of measurement for weight, length, molarity, depth, volume, speed, and so on.

3. What does it look like?

Use specific language. Give a picture of the whole first and move to parts. After you have specified the orientation, use the appropriate language. *Dorsal, ventral, anterior, posterior, north, south, perpendicular to, parallel to, intersecting, tangent* to are orientation words.

Once you assign an orientation to the object, your description must unfold with respect to that orientation. Use concrete language.

- **Scale**

When you create a picture in words, give the reader a sense of *scale*. How big is it? How small? Give dimensions in standard units of measurement. A pipet is a suction device, but it can be so small as to measure a pore or so large as to measure a gallon.

Note: Depending upon your purpose and the audience, you may need to devise ways of explaining scale to your reader. For instance, you could tell a lay reader that the Blue Whale grows as long as 98 feet, but how large is a creature 98 feet long? Larger than a dinosaur? Smaller than a football field? Could you imagine a line 98 feet long? But if you were told that you could park a Volkswagen in the heart of a blue whale, that its pulmonary artery was the diameter of the largest garbage can on the market, that a baby whale gains 200 pounds a day for the first six months of its life, you would have a clearer picture of the scale of the animal.

- **Whole to Parts**

If the object has *parts*, describe the parts—after you have given a description of the whole. Pick a point of orientation, and then order the

description of parts with respect to that orientation. Your description *must* be systematic and proceed logically from the orientation. The orientation determines how the subsequent organization unfolds.

Consider the problem of cartographers. How does one render a description of the earth? If the center of the earth is identified as the starting point, the logical sequence of parts would extend from inside to outside, beginning at the center and moving toward successive spherical layers, extending to the atmosphere.

However, if the South Pole were taken as the point of reference, then the subsequent arrangement of continents and seas over the surface would progress with reference to the South Pole. In the middle ages, maps of the world were drawn with Jerusalem at the center and with east at the top, a marked contrast to the contemporary rendering of maps with north at the top. Physicians who attempt to make a diagnosis may classify symptoms from outside to inside, beginning with an evaluation of physical symptoms—demeanor of the patient, color, obvious bleeding, breaks, or dislocations—and leading to an examination of the internal problems as they are manifest through symptoms like fever, leading to a deeper probe with the taking of blood.

4. What is it made of?

Identify the material substance the best you can. While you may not know the difference between copper and brass at first glance, you can tell if the substance is made of metal rather than wood, bone, glass, or shell. If the substance is absolutely unknown to you, describe the properties of its substance. At what temperature does this substance melt, freeze, burn. Is it combustible, soluble in water, benzene? Does diamond cut it?

5. How does it work?

If the way that an object works is central to the description, organize your description in terms of the operating sequence. What do you do first, then second, then third? In a description of a bicycle emphasizing its operational sequence, start first with the pedal, where pressure is applied; then describe the gears and chain, which distribute the energy received from the pedal; then describe the wheels, which turn in response to the gears; and then the brakes, which stop the wheels.

6. How has it been put together?

Unlike the previous category, which deals with an operating sequence, this sequence deals with the way something has been put together. If you have

ever had to put a bicycle together for a younger brother or sister, you may have encountered instructions for assembly. The order of assembly differs from the order of operation. Assembly tells how you put something together; operation tells how you use it AFTER it has been assembled. A description emphasizing the order of assembly in a bicycle would start first with the frame, to which is attached (1) the handlebars, (2) seat, (3) wheels. Next comes a description of the brakes, which attach at the handlebars and at points on the wheel.

Example: *Spatial (1) and Functional (2) Sequence Combined*

The following passage offers a description of a pipet bulb. This description is called a composite (a whole made of different parts) because it emerged from a collection of student-generated writing. A class was divided into groups and each group was assigned to write a part of the description. Then separate parts of different descriptions were integrated and synthesized to produce the following.

Notice that the title specifies the contents of the report. Although the pipet bulb is used with another tool, the pipet, the pipet is not included in this description.

The purpose and the *audience* were defined for this assignment. The assignment asked the students to imagine that they had invented this object and were submitting this description as part of the petition for a patent. The audience for this paper was the U.S. Patent Office. The purpose was to provide a sufficiently descriptive explanation such that the audience would be able to decide whether this was a new and usable tool.

Notice that the sample gives both a description of the object and a description of the parts based on the way that it would be *used*. The parts were not organized in the way that they would be assembled because this concern is subsidiary to the purpose. If this description were extended, though, to include operation of the pipet with the pipet bulb, a description of the assembly of these parts would be appropriate.

Physical Description of a Pipet Bulb

Introduction

[Definition] The pipet bulb is a hand-held laboratory pump (used in conjunction with a pipet) which will extract or release liquids when pressure is applied to the bulb and certain pressure points.

[List of Parts] The bulb is composed of several parts: a large and small sphere, internal valves which correspond to external pressure points, and stems which connect the parts. **[Operating principle]** As a pump, it operates on the principle of a vacuum.

[Purpose of the object] The pipet bulb is used in the laboratory to

regulate liquid in a pipet with great accuracy. **[Purpose of the report]** The ease and efficiency of handling make this device unique among other types of hand-pumps, and for this reason we are petitioning for a patent.

General Description

[Whole to part] This one-piece, rubber tool is 20 cm long. Spatially, it may be described in two sections: the large bulb and attachments form the upper segment; the L-shaped branch and small bulb form the lower segment. See Figure 1.

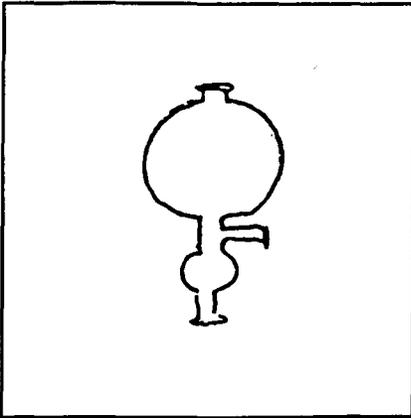


Figure 1: Frontal View of a Pipet Bulb.

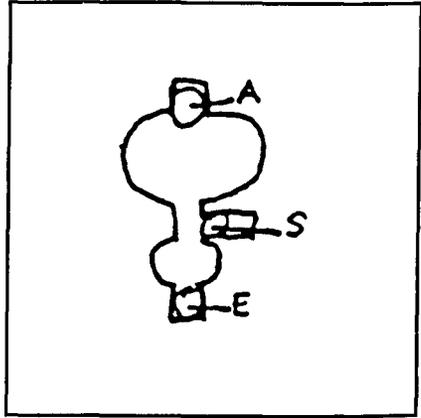


Figure 2: Longitudinal Section of Pipet Bulb.

Description of Parts

[Organization is from top to bottom and from large to small] The large sphere is 2.6 inches in diameter and acts as an air reservoir which may be emptied or filled to control the vacuum effect.

[Description of valves based on use for intake/exhaust] Air and liquid flow are regulated by the valves, labeled "A," "E," and "S." See Figure 2.

[Operation] The two-way valve, "A" (air flow), located at the upper stem which protrudes from the large sphere, regulates air intake and exhaust. Valve "S" (suction), in the lower stem 2 cm below the large sphere, regulates the uptake and expulsion of fluids from the pipette by opening or closing the passage to the vacuum in the sphere. Valve "E" (empty), located 2 cm from the branch of the elbow joint, controls the channel to the outside air.

Exercises

1. Analysis of Two Descriptions: Ostrich and Bird

The following assignment will ask you to compare two descriptions from a sixteenth century book, *On Monsters and Marvels*. *Writing Science* has asserted that good observations, rendered through proper description, retain their merit over time. You will be asked to test this assertion. Using this assertion—adequate writing retains its technically descriptive merit over time—as a hypothesis, test each instance against it in order to arrive at a definition of “technically descriptive merit.”

Ambroise Paré (1510–1590) was one of the leading French surgeons of his day. He became chief surgeon to King Charles IX, and then to Charles’s successor, Henri III. Paré is credited with two discoveries: (1) pouring boiling oil on a gunshot wound damaged rather than helped the wound, and (2) ligation (tying up veins and arteries) was a better way to stop blood flow than cauterization (applying hot irons) in the treatment of amputations. In his time, Paré was a somewhat controversial figure. Contemporary physicians, who wrote in Latin (as did all scholars, scientists, and learned men of the day), complained that Paré gave away medical secrets because he wrote in French (the common tongue), used pictures, and gave the common name for body parts. “Even women and children can understand his writing,” complained the Dean of the faculty of medicine in Paris. (Paré replied that the great authority, Aristotle, was understood in his time by women and girls.)

Paré was also famous for a book, *On Monsters and Marvels*, which represents a then-popular interest in natural history. His book on monsters emerged from his interest in human reproduction: his book begins with an analysis of birth defects. Paré uses *monsters* to describe birth defects, exotic animals, strange happenings, or oddities, curiosities, and hoaxes. Even though his subject matter might seem strange to us, we can appreciate his use of a systematic pattern of order. For the moment, put aside the minor details that might make your reading of these passages strange. Remember that this is a modern English translation of a sixteenth century French book for a popular audience. *Figure* is a term which means form; *portrait* should be understood as *picture* or *diagram*. A span was nine inches; a *doigt* equaled one-sixteenth of a foot. Words in brackets come from the translator who inserted them for clarification. After you read these extracts, answer the questions at the end.

Flying Monsters

Monster 1

This bird is called an Ostrich and it is the largest of all, almost partaking of the nature of four-footed animals, very common in Africa and Ethiopia; it does not budge from land and take to the air, and nevertheless it surpasses a horse for speed. It is a miracle of nature that this animal digests all things indifferently. Its eggs are of a miraculous size, to the point that one can make vases of them; its feathers are very beautiful, as one can recognize and see by this picture.

I do not want to fail to speak, either, of the rarity I saw, concerning the bones of the Ostrich. The late King Charles, having three of them kept at the home of monsieur le Mareschal de Rets, one of which having died, it was given to me, and I made a skeleton [i.e., skeletal diagram] of it. The portrait of which I wanted to insert here, [along] with its description.

A. The head is a little bit bigger than that of a crane, one span from the summit of the head extending to the beak, [the head] being flat, having a beak slit up to about the middle of the eye, this being a trifle round at its extremity.

B. Its neck is three feet long, composed of seventeen vertebrae, which have at each side a transverse apophysis [or process] extending downward, a good inch long, except that the first and second near the head do not have any, and are joined together by ginglymus.

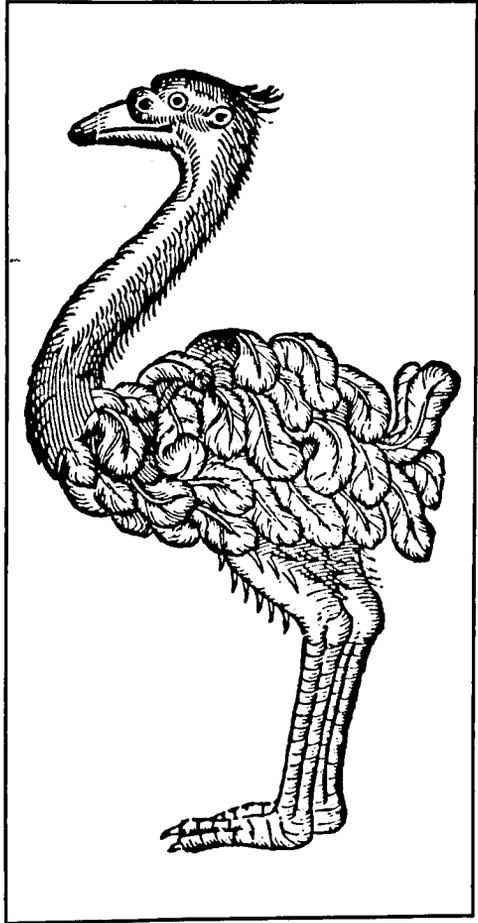
C. Its back, one foot in length, is composed of seven vertebrae.

D. The Sacrum bone is two feet long, or thereabouts, on top of which there is a transverse apophysis beneath which there is a large hole, E, then three other smaller ones, F, G, H; following which there is a box into which the hip bone is insinuated, I, producing on its lateral external part a pierced bone, K, almost at its beginning, then [it] is united; afterward, said bone forks in two [or, bifurcates], one of which is thicker, L, and the other is lesser, M, each one [being] a half-foot four fingers long; then they reunite, having—between the place where they fork and where they reunite—a hole four fingers wide, N, and longer than a span; then what bone remains is in the shape of a bush hook, or a crooked knife, wide by three fingers breadth, and six inches long, O; then at its extremity it is joined by synchondrosis.

P. The tail bone has nine vertebrae, similar to those of a man.

There are two bones in the thigh, the first of which, Q, the thighbone, is a good foot in length and thick as that of a horse, or thicker; R, the other, which follows it, is a foot and a half in length, having on top a small shank of the length of the bone, losing its pointedness near the bottom.

S. The leg to which the foot is attached is a foot and a half long, having at its extremity two claws [nails, unguis], one large and the other small; there are three bones to each claw [unguis].



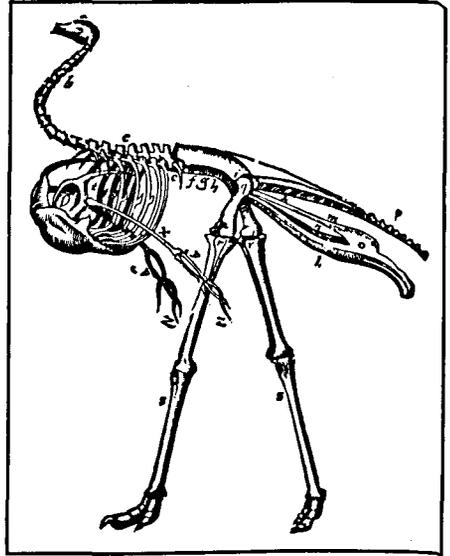
V. The bone of the Sternum is of a piece, a foot larger, representing a shield [or, buckler] to which is joined a bone that rides [on] the first three ribs, which takes the place of clavicles.

X. The first bone of the wing is a foot and a half long.

Y. Above it there are two other bones resembling the Radius and Cubitus, at the end of which are attached six bones, Z, which are at the extremity of the wing.

The entire animal is seven feet in length and seven feet and more in height, starting at the beak and ending at the feet.

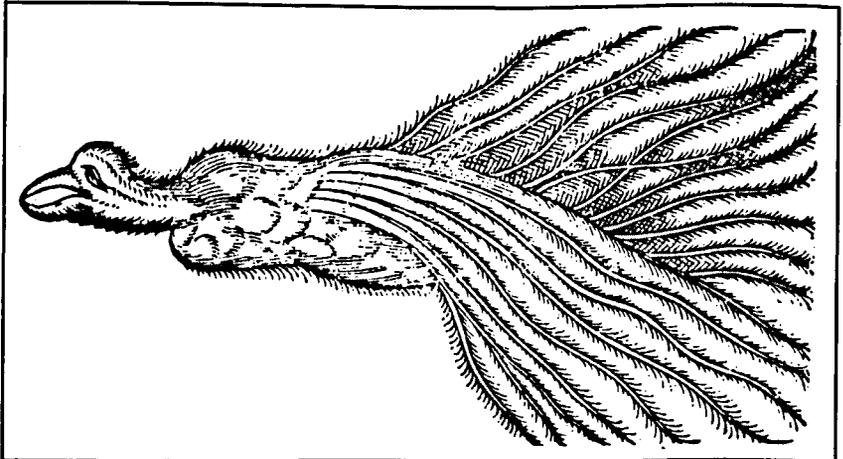
There are several other remarkable things that I am setting aside for brevity.



Monster 2

From *Monsters and Marvels*

Jerome Cardan, in his book *De Subtilitate [rerum]*, says that in the Moluccas [or, Spice Islands], one can find on land or on sea, a dead bird called Manucodiata, which in the Indic language signifies "bird of God," which one never sees alive. It lives high up in the air, its beak and feathers similar to the swallow, but adorned with diverse feathers: those which are top of the head are similar to pure gold, and those at the throat to those of a duck; its tail and wings similar to those of a peahen. It has no foot, and if lassitude



overtakes it, or else it should wish to sleep, it suspends itself by its feathers, which it twists around the branch of some tree. This [bird] flies at miraculous speed and is nourished only by air and dew. The male has a cavity on its back, in which the female broods its young. The interior of this bird, as Melchior Guillaudin Beruce describes, is stuffed and replete with fat, and he says he has seen two of them. As for me, I have seen one of them in this city, that a noteworthy man had, [and] that he held in high esteem: the picture of which you have here.

I have seen one of them, in the city, which was given to the late Charles IX; and I also keep one of them in my office, which [bird] was given to me on account of its pre-eminence.

a. How does Paré organize each description? Look very carefully at the pattern of his ostrich description; Paré's narrative description goes from A to Z; how does this correlate with points on the ostrich skeleton? Compare and contrast the organizational patterns in the descriptions of the two flying monsters.

b. Analyze Paré's use of illustration. Is one more informative than another? Why?

c. Paré claims to have seen both the ostrich skeleton and the "bird of God." Let us suppose that he is an accurate observer: he was, after all, a highly respected attendant to the King. Why does one of his descriptions go against your common sense?

Note: The Manucodiata has been identified as a bird of paradise. Both the bird of paradise and the ostrich are real creatures. This exercise should illuminate an important point. Our understanding of these birds come *through* the description.

2. Writing a Description

a. Using the technical description of a pipet bulb as a model, write a technical description of a paper clip, a bow (as in bow and arrow), a straw, a screw, a bobby pin, or a pencil.

b. Let us assume that you have just encountered a variety of a known species or discovered a hitherto-unknown star, element, or compound. Because you claim first discovery, you want to name it. Your name for the thing should observe the rules for nomenclature proper to the field. You must also write an objective description to accompany your claim to naming it. You might explain the reasons for your name in the introduction. Choose from among the following: sea urchin test, Mexican sand dollar, orchid, virus.

c. Write a complete description of a bicycle with the focus on the order of assembly. Then modify your description to focus on the order of operation.

d. Write a description of a shell which will enable your classmates to pick it out of a group of shells.

References

- Lannon, J. *Technical Writing*. Little, Brown, and Company, 1979.
 Paré, Ambroise. *On Monsters and Marvels*. Translated and introduced by Janis L. Pallister. University of Chicago Press, 1982.