

MASTER'S THESIS

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CARVING ALASKA SOAPSTONE.

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CARVING ALASKA SOAPSTONE

A
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CARVING ALASKA SOAPSTONE

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Abstract

Although the sculptor is primarily concerned with the response of the material to the chisel, and effective expression of the idea, he will at one time or another wonder what scientific facts can be known about it.

Six widely-varied samples of Alaska dimension soapstone were tested for mineralogical content, and the results were correlated with carvability as observed in actual practice, showing no reliable correlation. There are, however, many characteristics of the stone peculiar to the species, which if known and anticipated by the carver aid him in maintaining control over his sculpture.

The procedure in carving is to sketch on paper and in clay the model of the idea, to select an appropriate stone, to carve with the chisels and hammer, to polish with sandpaper under water, and to sign and exhibit the object of art with the assurance of immediacy.

Esthetically, soapstone calls for closed sculpture, being a solid, heavy, massive material. Color and pattern of the surface of the stone is more or less accidental as it can not be seen and gaged during carving. Speed, skill, and respect for one's own ability to sculpt are prime factors learned by the student sculptor as he works in Alaska soapstone.

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CARVING ALASKA SOAPSTONE

Chapter I Introduction

In making a work of art, the sculptor thinks of examining the nature of the material, that he might know the correlation between physical characteristics and carving; then he carves the stone carefully and ever more deftly, that he might produce highly skilled work in a minimum of time. he considers form in relationship to its shapes and to light, that his work may have esthetic appeal for the observer; and finally, he reviews the nature of the material, that he may make an even better use of it in the future, respecting its limitations and amplifying its features.

As there is a desire to make the material express the sculptor's idea to the fullest, there accompanies skill a need to know the material thoroughly. Chapter II is written from the standpoint of the artist searching for scientific reasons for carving characteristics discovered in Alaska soapstone while working with it. It is true that the sculptor is not so much concerned with the contents of his stone as he is necessarily involved with its response to his

chisel and its adaptability to his idea; nevertheless, a thorough knowledge of the material and an understanding of its response can promote ease and assurance in carving which otherwise would take much time and experience to acquire. A basic knowledge of the nature of the material is practically essential to the making of a good piece of sculpture.

Granted that the sculptor can never afford to become lost in his material lest it take over the idea, let him not avoid any new approach to its nature or any satisfaction of his curiosity concerning it. To leave out the scientific investigation would be to deny himself a rich source of information which so admirably serves as background material. To include the scientific study fully opens the way in sculpture to the merging of idea and material in the form of the work of art. Supposedly, the sculptor already has the idea which he can put into the material by carving away excess stone; then any further exploration of his material can surely be no less than vital.

Chapter II

Description of Material

AVAILABILITY

The specific material used for examination here and used in fact for sculptural studies at the University of Alaska since the Fall of 1963 is soapstone from the Lloyd Hill mines near Palmer, Alaska. Availability in our own state is a prime factor in choosing this carving medium. Soapstone is readily available from these mines where various outcroppings of a possibly vast bed of the rock are quarried and distributed to users in many parts of Alaska. Soapstone can therefore be purchased for carving.

DEFINITION OF SOAPSTONE

Soapstone is a common name for the soft stone that has a soapy feel. In fact, any mineral possessing a degree of hardness similar to talc has a greasy feel to the hand and might correctly be called soapstone. It is a composite of chiefly talc or chlorite usually mixed intimately with various quantities of other minerals. Originally, soapstone was synonymous with steatite, a massive talc used in block form, an example of which is French chalk. The word "steatite" originates in the Greek language, meaning, "a stone

resembling tallow."¹ The term "soapstone" is now loosely used for identifying talcose rocks containing as much as 50 per cent impurities.

The mineralogical definition of soapstone is made under the name of the species, talc. Ladoo and Myers describe the mineral as follows:

Composition. Talc is a hydrous magnesium silicate, $H_2Mg_3(SiO_3)_4$: SiO_2 , 63.50 per cent; MgO , 31.70 per cent; H_2O , 4.80 per cent. Most talcs mined commercially contain more or fewer of such impurities as quartz, calcite, dolomite, magnesite, tremolite, and iron oxide.

General Description. Talc usually occurs in soft, foliated or compact, massive aggregates, white, gray, or green in color; less often it occurs in apple-green platy, crystalline aggregates; sometimes micaceous or fibrous.

Physical Properties. Hardness, 1 to 3.5. Specific gravity, 2.6 to 2.8. Melting point, 6 in scale of fusibility, or about Seger cone 17 or 18. Index of Refraction, 1.539 to 1.589. Color, pure white, silvery white, Luster, greasy to pearly. Cleavage, in crystalline varieties, micaceous. Fracture, in massive varieties, irregular. Transparency, translucent to opaque. Tenacity, sectile to nearly brittle. Feel, greasy.

Varieties, the most common variety, commercially, is the massive, either foliated or granular, type.²

CONTENT

Mineralogical content of six samples of Alaska soapstone was determined by x-ray diffraction. Results of the tests show that three of these samples are predominantly

¹Oxford English Dictionary, The Shorter (ed. Sir James Augustus Henry Murray; Oxford at the Clarendon Press, 1965, p. 2011.

²Raymond B. Ladoo and W. M. Myers, Nonmetallic Minerals (2nd ed.; New York: McGraw-Hill Book Company, Inc., 1951), p. 531.

talc with a trace of chlorite, one is equally as much chlorite as talc, another is talc and magnesite with a trace of chlorite, and the last sample is chlorite with a minor quantity of talc.

Table of Correlation

<u>Sample</u>	<u>Constituents</u>		<u>Sculpture</u>	<u>Hardness</u>
	Major	Minor		
1.	talc	'chlorite	"Abstract"	medium
2.	talc & chlorite	'	"Horses"	soft
3.	talc & magnesite	'chlorite	"Falcon"	hard
4.	talc	'chlorite	"Wolf"	hard
5.	talc	'chlorite	"Fish"	soft
6.	chlorite	'talc	"Abstract"	medium

HARDNESS

In hardness, talc is number one on the Mohs' scale of hardness, chlorite is number 2 and magnesite is $3\frac{1}{2}$ to 5.

Mohs' Scale of Hardness

- | | |
|-------------|-------------|
| 1. Talc | 6. Feldspar |
| 2. Gypsum | 7. Quartz |
| 3. Calcite | 8. Topaz |
| 4. Fluorite | 9. Corundum |
| 5. Apatite | 10. Diamond |

The fingernail will usually scratch a mineral up to 2.5 in the scale, a copper coin up to 3, a good knife blade to 5.5, and a file up to 6. Ordinary window glass is about 5.5.

In actual practice of carving, talc and chlorite can be equally hard or soft, while magnesite is always hard.

In carving the soapstone into sculpture, number one was found to be about medium in hardness, or 3 in the Mohs' scale, while number four, containing the same type of minerals in similar proportions, was hard and very difficult to carve. Number five, of the same components, was soft. From these results, one concludes that there is no reliable correlation between mineralogical content and carvability. Generally, talc is soft, chlorite is slightly harder, and magnesite is hard as compared to the chisel; but variations in hardness and carvability make it necessary for the carver to test his choice of stone with the chisel. This variation in carvability is the factor which draws many sculptors to the quarry in search of the finest quality of stone.

Some physical characteristics and possibilities of soapstone are of distinct interest to the sculptor.

GREASY FEEL AND SMOOTH SURFACE

Theoretically, the greasy feel of the stone is caused by loose, flat molecules which quickly adjust to line up with the direction of rubbing, for theirs is the structure of a lubricant. If this theory is correct, the final sheen of soapstone is accomplished by rubbing, NOT by the addition of oil or wax. It is in polishing with the hand or cloth that rubbing seems to deposit these soft, adjustable molecules into minute crevices of the surface of sculpture

in fashioning a surface so shiny as to appear to have been drenched in oil. Soapstone is self-lubricating with a mineral which industry once used as a powder to sprinkle between tire casings and inner tubes.

OTHER DEFINITIONS

Dimension stone is a boulder as opposed to powder or pebbles. Only dimension stone is carvable.

Massive refers to the size of the crystals in dimension stone, which are so small that they can not be seen without a microscope. Soft massive stone is good for carving.

Crystalline stone is composed of crystals large enough to be seen by the naked eye. The softer crystalline stones are carvable.

Cleavage is the tendency of a crystallized mineral to break in certain definite directions when struck with the chisel.

Foliate means that the crystals are thin and separable like mica, with a tendency to split into sheets. The foliated structure is not conducive to facile carving.

Fracture occurs in the direction of the most difficult breakage. It is the surface texture obtained by breaking the rock in a direction other than that of cleavage. A rock must have a tendency to fracture if it is to be carved.

Tenacity. Sectile tenacity is the condition which exists where pieces may be carved away without falling to

powder, but still the mineral pulverizes under the blow of the hammer. Soapstone is sectile or brittle, and both are suitable characteristics for carving.

Flexible talc and chlorite will bend without breaking, and remain bent after the bending force is removed. Talc is the best example of flexible tenacity. Flexibility aids polishing.

Toughness, or resistance to impact, is NOT conducive to carving with the chisel. Chlorite tends to be tough in the direction of fracture, making it generally more difficult to carve than talc.

Flaws are natural breaks in the stone, due to movement of the earth. Similar fractures are likely to occur in the transportation of stone.

COLOR

Soapstone may be a single, solid color, but it is often multi-colored, mottled, and striated. The major color may be pale green to dark green, blue-green, olive-green, yellowish, yellow-brown, brownish, black, gray, or white. Spots are black or rust; the color rust is iron oxide. Color variations are caused by chemical and mineral content, the variation of which is normal in soapstone. The direction which a color takes beneath the surface of the stone cannot be accurately predicted.

WATER CONTENT

Soaking the absorbent, crystallized variety of stone in water softens it somewhat for carving, and is thought to reduce chipping and spalling. Soaking the softer, massive soapstone, however, will not change hardness and carvability because physical water content remains stable.

Stone hardens upon being exposed to the air, after being taken from the mine; in fact, soapstone protected indoors hardens continually over a period of years, due to loss of physical water content. This loss of water content and ensuing hardness can be rapidly accelerated by firing in the kiln. A test was made to this effect, of nine samples of soapstone by heating them in the kiln for 15 minutes at 100° C. increments and air-cooling them. The results showed a drying-out, a change in crystalline structure, and a change of color. Below 500° C., no crystalline change occurred. Excess water was driven off, but minerals remained soft. Up to 800° C., soapstone remained soft with high degree of slip. Between 800° and 840° C., water of crystallization was lost and the talc present dissociated to enstatite ($MgSiO_2$) and amorphous silica. At 900° C., conversion took place and slip was lost as soapstone became hard. Enstatite changed to clinoenstatite and silica was converted to cristobalite of definite crystalline structure. Above 900° C., fine-grained structure was lost and tension cracks appeared. The 1100° C.

sample was furnace-cooled to relieve stress, but the larger crystals promoted by grain growth still caused tension cracks.

The material not only became harder upon losing moisture, but also changed color from a soft blue-gray to a garish golden-rust, a submetallic bronzelike luster, or a color that is not especially appealing for sculpture. The mineral became too hard to carve.

WEATHERING

The flawless variety of soapstone weathers comparatively well out of doors, especially if the line of strata is parallel with the horizon. It is resistant to moisture and extreme cold as well as to acid and smoke in the air. Flaws, on the other hand, present such weathering problems in freezing temperatures that soapstone containing flaws is best used as an indoor sculpture. The same is true of the somewhat caustic crystalline variety of soapstone.

WEIGHT

Soapstone is one of the heaviest of carving stones, equalled by granite, at about 170 pounds per cubic foot.

Chapter III
Direct Carving

In the process of carving, the sculptor conceives of an idea drawn from his own experience, makes a study of the subject, makes ink or pencil drawings and clay sketches where he solves problems of form. He then chooses a stone, draws the outline of the figure with chalk on the sides of the stone, and he is ready to carve.

Materials for carving would be first of all soapstone, secondly, the sketching pad for preliminary planning, thirdly, clay for three-dimensional sketches, and lastly, marble to represent the ultimate carving material. The sculptor's tools are traditionally the chisels and hammers, the rasps, and waterproof sandpaper.

CLAY SKETCH

In preparation for carving in stone, a clay model of the object is made for the purpose of clarifying the expression of an idea in form. It is good practice to do this while the image is vivid. The method of construction is the coil, stacked and modeled, so that the figure is hollow with walls that are less than an inch thick. This model is best made large and expressive of form in space. As clay lends

itself so naturally to fine detail, one must remember that detail is incidental to form. The purpose of this step in the process of sculpture involving the clay model is to clarify form.

Now, being thoroughly familiar with the subject matter, which has consequently become alive for him through sketching, the artist selects a stone for its shape, size, color, density, weight, and carvability. The sculptor can now translate the idea into any position to fit the stone. Sketches are kept near for easy reference during carving.

CHISELS

Chisels and hammers are the chief carver's tools. The point is the stone-mover of chisels, removing chunks at each blow of the hammer. The angle of holding the chisel is more or less 45° , always slanted away from the carver. The angle is steeper for the point than it is for the other chisels, and the force of blow of the hammer is heavier. With the point, general areas of excess stone are removed, leaving a rough outline of the three-dimensional object, remembering the areas where the object touches the surface of the stone, and working from those fixed locations.

The sand bag on which the stone is laid for carving absorbs the shock of vibrations incurred in the process. It serves to prevent excess fracturing of the stone.

The type of base is considered from the beginning of carving. If the base is to be inherent, this should be flattened first, to the extent that the sculpture does not rock or tip easily. The bottom of the base is always left rough with the marks of the chisel, and usually it is covered with felt for the protection of the stand.

The next tool to use after the point, is the toothed chisel; this one more clearly defines shapes. The widest chisel practicable will facilitate carving; but the narrow chisel may be more effective in case of difficult carving. As the form begins to appear, greater care in chipping protects what the carver wants to keep.

The flat chisel smooths the surface and determines many refinements of form. Effectiveness of line and mass can be checked throughout the carving process by walking around the piece and observing high and low from many vantage points the transitions of form. Problems of form have been solved when the sculpture is good from any viewpoint and best from a particular one.

PROBLEMS

When there is a problem in chiseling, a close look may reveal the trouble and guide the carver in making a satisfactory adjustment. Perhaps a change in direction of holding the chisel is in order, or an adjustment in the force of

blow of the hammer, or the use of a smaller chisel or a differently-shaped chisel, or the sharpening of the chisel, or as a last resort, soaking the soapstone in water if it is the absorbant variety (see pages 8, 9). The loose hammer should be dipped in water so that the wooden handle will expand to fit the metal head; no one has to carve with a loose hammer.

Flaws (page 8) are a frequent condition in soapstone. Visible flaws, cracks, or seams may disqualify the stone for carving as it is, but a serious flaw may be remedied in an otherwise good piece of stone by breaking it deliberately, separating the pieces with the chisel, and forming a new shape.

A break in soapstone can be glued as successfully as any other material. Elmer's Glue-all bonds securely and it has the added advantage over other adhesives of being inconspicuous when dry. Both pieces of the break should be dry before the glue is applied. Apply liberally. Clamp the pieces tightly and allow to set twenty minutes to overnight. Carving can proceed as usual after the mend, but soaking in water should thereafter be avoided. This is considered a permanent mend, at least as secure as the rest of the stone. The only disadvantage is that the mark can be seen and known for what it is; but very seldom is anyone going to get a

measure of perfection in soapstone. The mended flaw is no more obvious than the unbroken one.

An unsightly cavity in the stone can be filled with a mixture of cement, soapstone in pieces or powder, and water. A slight shrinkage occurs in drying. Such a mend is not carvable, but it may be rasped gently and polished to a lesser degree than the natural stone. Though this mend may be obvious, it gives solidity where an unfortunate cavity is visually detracting. Mending is valid where the purpose of carving is to learn; it is **NOT** acceptable in an exhibit.

SHARPENING

It is imperative to keep the chisel sharp, in order to cut the stone clean and to avoid the occurrence of pitting or spalling. The dull chisel, in failing to cut, may have jarred loose the crystallized stone and left small holes instead of a smooth surface. The dull chisel may have left a ragged edge where soft, foliated soapstone has been torn and bent instead of cut.

Chisels are **NOT** best sharpened on a power-driven grinder because the metal could lose its temper from the heat of friction. The chisel is sharpened by hand on whetstone lubricated with water. The bevel-edge is assumed at an angle which will yield a sharp cutting edge. A tool retains its sharpness remarkably well throughout the carving of most soapstone.

RASPS AND RIFFLERS

The rasp removes the soft variety of soapstone so readily that it works well when used intermittently with the flat chisel on flat or convex areas. The chisel determines the location of the surface and the rasp smooths the chisel marks. The small, rounded rasp or riffler, will reach concavities of form which are inaccessible to the flat tools. Fortunately, this tool is not easily dulled on soapstone, and the life of its use would seem to be longer than that of a file used on metal.

Use of the rasp should be neither shunned nor overexercised. It is used primarily to smoothe, but the rasp has on soapstone some final influence on the shape of the form. Energetic use of the rasp on a soft stone can nullify nuances of form made in sculpture by a sensitive use of the chisel. For this reason, the validity of the very use of the numbing rasp is sometimes questioned, and the proper use of a good thing becomes an issue. One school of thought is loyal to the chisel in rejecting the rasp, while the other school is so taken by the powers of the rasp over a soft stone that it begins to prefer the abrasive to the cutter for the purpose of sculpting. When the effects of the rasp continue to dominate, the student is overdue for some "real" carving in a hard material such as marble.

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A good exercise to be performed for the purpose of finding the role of the rasp is to skip it once by working through the kinds of chisels from the point to the flat-edge, then polishing with sandpaper under water, trying not to rub away the chisel marks but to rub only for the fine scratches. By the time the next piece of sculpture is commenced, if the exercise has been successfully completed, the role of the rasp will be more likely to be clear.

POLISHING

Polishing is an absolute necessity in preparing soapstone sculpture for presentation to the viewer. As the sculpture emerges from the carving process, it is rough and white with dust, a condition which does not easily catch light and cast shadows. While polishing has no further control over form, it does enable the surface of form to express the stone's inherent color, transparency, and sheen.

Polishing is best done with three grades of waterproof sandpaper, ranging among the numbers 150, 220, 280, 360, 400, and 600. By all means, number 600 should be the last. Water is the lubricant, primarily, and the cleansing medium, secondarily. The stone need not be submerged in water; dipping the sandpaper or otherwise applying the lubricant to the stone will be adequate. This system is wisely used for soapstone that has been mended, as flaws or mends

have the tendency to weaken in water. Wet, powdered stone is easily wiped from the sculpture with a towel.

Running water gives the added pleasure of seeing bright colors appear in the stone as it constantly washes away the powdered stone. Such pleasure, however, should not be sought in preference to good lighting, needed for spotting tiny scratches in the surface of the stone. A bright light at the sink would be, of course, adequate. The best lighting of all is sunshine. The secret in polishing is rubbing until all scratches have disappeared BEFORE going on to the next grade of sandpaper; the next grade can not be depended upon to reach the ignored scratch!

The last step of the process is hand-rubbing; the cloth works, too: a silk cloth, a wool cloth, or an old cotton one makes the surface shine. Rubbing by hand, lastly, seems to improve the quality of color (see pages 6 & 7). It is actually by the sweat of the brow that a piece of sculpture receives a good polish.

The striking sheen and bold color of a hand-rubbed piece is richer from the beginning and is more lasting a finish than that which has been accomplished by the addition of wax or oil. For those young sculptors who are experimentally inclined, soapstone provides the makings of a heyday, for this versatile material works in combination with just

about anything: there is beeswax, seal oil, mineral oil, olive oil, vaseline, shoe polish, shoe wax, linseed oil, and clear acrylic spray paint, mat or glossy finish, for a starter. Soapstone takes a film of paint as well as the next material, whether the paint be oil base, acrylic, water color, ink, or crayola; there is no end of the list of additions to a versatile material. The range of possibility is so wide that even the experimenter may eventually prefer the natural finish to which nothing is added but attentive rubbing until the scratches disappear and the surface shines brightly in its own identifying color and texture.

SIGNATURE AND DELIVERY

Signature identifies the maker. In signing sculpture, the artist claims the piece as his own forevermore, or as long as the signature can be read, or as people remember. The signature and date on soapstone is usually expected to be found on the bottom, although some signatures are put discretely at the back. Only the boldest of sculptors signs his name or initials in front where everyone can see. This placement in front is actually no more bold than the painter's signature, which is always expected to be in front and not in back.

At the moment of completion, the energetic sculptor removes the work from the studio, puts it on exhibit, or

delivers it immediately to his patron. Immediacy in delivery banishes last-minute doubts of its worth, and eliminates the possibility of the sculptor's going back into the piece "to work it over," a tendency to be decisively ignored or at least postponed. It is good to go on, as immediacy of delivery makes room for the conception and commencement of the next piece of sculpture.

Chapter IV

Esthetics

APPROACH TO SCULPTURE

The idea is first, because the sculptor brings with him a "storehouse of ideas" when he goes in search of material. One idea is predominant at the time of the search, especially if the patron has specified it, and the idea itself is unchanging and unchangeable. That which is NOT absolute and fixed is the expression of the idea within the material. The expression of the idea has infinite possibility of variation subject to the peculiarities of the stone which the sculptor chooses.

Rarely is a stone inspiring enough to cause the rejection of the original idea and the adoption of another. Those are the conditions under which the material has become first and dominant. When the carver begins to expect the stone to select his idea and "tell" him what is in the stone, then he has become supersensitive to his material, has lost some confidence in his own ideas, and has become a slave to the shape.

Certain steps can be taken by the artist to remedy any loss of power. Observation in real life is a deliberate

advance aimed at building up a storehouse of ideas, that treasure which gives the artist confidence. Furthermore, determination to carry out one's own idea will act as the best weapon against a dominating material. It is most desirable and rather urgent that the sculptor have control over his material.

SKETCHES

Although a sculptor can carry his ideas in his head, he can also benefit from a solid background of sketching and modeling. It is good practice for the student periodically to sketch visions of ideas and to keep sketches in a notebook for future reference. The reason for such advice will be all too clear to the person who drifts into his dry period without any sketches. The mind you know is not always fertile; it has prolific fertile periods which supply more than enough ideas to last through any ensuing drouth of the imagination. It is the peculiar responsibility of the artist to record these impressions so that they will not pass by into oblivion never to return again exactly the same as NOW. In periods of drouth, reference to the sketchbook magically recalls to mind the idea, and the sculptor can proceed without loss of time, being as refreshed as if he had taken a drink of cool water.

In addition to inspired sketching, there can be deliberate research on the subject matter, and sought-after sketches can be made in the presence of the live model.

Preliminary sketches on paper constitute a valuable preparation for sculpture. Research lends the artist the assurance of authority by virtue of a recently-acquired knowledge of the subject, and this along with viewing in real life the animal or figure in motion vivifies the subject matter, enabling the artist to proceed to put life and movement into form.

Ideas become more vivid with practice, so the apprentice at sketching and sculpting might take heart and keep working. Practice in sketching and practice in sculpting makes sculptural form more and more approachable. Surely there is no one who can sculpt without thinking and performing. The eye will be known to see, the imagination to translate the idea into the image, the mind to remember, and the hand to be steady and decisive in the formulation of the idea into an object of art.

CONCEPTION OF SCULPTURE

The selection of a stone is the occasion for the conception of sculpture. Ideally, only a few minutes of looking and testing is enough time to choose a stone from the stock-pile. To choose is the purpose of looking, for the sculptor does not need merely to generalize characteristics of stone, and his testing continues groundless until it materializes into sculpture. The great choice of stone is made during testing.

This choosing occurs in the most important moment in the sculptor's life, the moment during which the conception of sculpture takes place. This ultimate moment of conception happens when the sculptor realizes that the idea can be made in that particular stone. It is a merging of idea and material, conceived within the artist's mind where it remains vivid and alive until the materialization of it is accomplished, at which time he can relax knowing that the idea can be reconstructed in its entirety by looking again at the piece of sculpture. Fortunately, first impressions CAN be retained throughout the carving process; the rest is work, if work can be defined as activity carrying out an idea.

Side effects and indications of successful conception of sculpture are manifold. For example, the chosen stone now houses something which is "asking" to be revealed. Furthermore, the stone happens to be the one which the sculptor likes best; as a matter of fact, there is no other stone at this time. He may further notice that the stone was the first one which appealed to him. He works fast on the right stone. Anticipation is high. He questions not his ability to conceive of sculpture; thus without a doubt he verifies his own choice by proceeding to a successful completion from the brief examination and selection of material.

Each one is selected not only for its technical fitness for the work in hand but also for its appropriateness to

the nature of the work.³

STYLE IN CARVING

Closed sculpture. Soapstone, being massive, heavy, and brittle, naturally promotes massive design. It calls for the positive shapes of closed sculpture as opposed to the negative spaces of open sculpture, because esthetically, the stone looks solid and heavy, and physically, its extensions are in fact fragile. Thin projections would be easily broken off, and carving through to the other side would be daring, although very much possible. Visual as well as physical care would have to be taken so as not to drop an open sculpture to the floor, neither to pick it up too suddenly for fear of breaking the piece.

Linear details. While the weight of the material would be met with positively massive design, its degree of softness curiously invites and accommodates detail. Linear details so common in small carvings are somewhat irresistible in the finest grade of talcose soapstone easily carved with a knife. The artist may have to remind himself that linear detailization in its description is less than effective as a work of art, and that rather broad areas of unbroken surfaces,

³Ralph Mayer, The Artist's Handbook of Materials and Techniques (Rev. ed.; New York: The Viking Press, 1965), pp. 603-4

varying in size, shape, depth, and direction according to the relationship of each to the sculpture as a whole and to the surroundings, are the good features of sculpture.

Multicolored or crystalline soapstone demands and gets without hesitation the stylistic treatment of broad areas where linear details could not be distinguished among the spurious patterns of color, interesting enough in themselves to attract attention and amazement from the observer. However, should the artist superimpose linear patterns on the already existing stratification pattern, the two would so compete for attention, and therefore distract from the esthetic value of the sculpture.

ROLE OF COLOR

General color of stone can be chosen by virtue of the kind of material; choice of predominant color or markings may be linked with subject matter, since every artist relates certain properties and meanings to each color. For example, predominantly green may suggest a green frog or a green lady, or it may call for a calm attitude; or perhaps a speckled pattern would be "perfect" for a fish.

The color of sculpture, which has esthetic value only before conception and after completion, is totally forgotten during carving. There is no way to control color on an unpainted stone; therefore, a preview of possible inherent color and pattern can serve only to stimulate the imagin-

ation of what might be. Form concerns the sculptor while color is a gift. The actual placement of markings and the resultant influence to form must be irrelevant to sculpting because color changes can not be seen through the stone dust in carving. Even if they could be seen, say under water, color extensions are so unpredictable as to disappear unexpectedly at the next chip, leaving the sculptor with nothing to go on in the place where he might have had form. This is why the sculptor simply forgets about color during the act of carving, and concerns himself only with that over which he has control, FORM, leaving color as the element of surprise he will inevitably receive when his full attention can be given to enjoy what has happened to the surface of his stone.

SPEED

The sculptor who makes his living by sculpting must be fast to keep the wolf from the door. By nature, direct carving is a slow process, due to the comparatively small amount of stone removed at each blow, to the intractability of the removal, and to the high cost of a tragic breakage, to say nothing of the physical effort required in the work. As speed is necessary for the making of a living, it is an aim continuing throughout the life of the dedicated sculptor bound by the deadline of patrons. Even the inherited rich do not escape its influence, for speed still competes with

death. Speed transcends skill, style, size of sculpture, etc., for it is universally desired while skill, etc., are a matter of individual taste. Speed transcends all sculptors, being in essence so incomparable to other aspects of the process of carving as to be an aim limitless enough to last a lifetime.

Speed, however, in order to be worthy of its place as the sculptor's continuing means of achievement, must be accompanied by self-satisfaction of work. Here, only with speed verified by self-satisfaction, can all other aspects of carving take their places without devouring each other; that is to say, without style becoming so important as to lead to a prostitution of the material, or without the material taking over the idea only to fall short of visual appeal.

Time is the most valuable commodity to which the human being has access. Speed can be defined, after all, as the wise use of time, assuming the course that speed is NOT frenzy, but is rather an ordered, sensible, planned, continued, successful, and enjoyed use of time. Consciousness of the value of time alerts one's attention to the wise use of it.

SCULPTOR AND SPECTATOR

What gives a man incentive to carry out his own idea? What causes a man to make a sculpture? What is different

about him that he can make sculpture and others do not? Man has a mysterious desire to make something; or more exactly, the desire is to see something; and in order to see a particular thing, he has to make it. The desire to see a particular sculpture is the sculptor's incentive to make it. Man is visual and tactical, himself; therefore, he has a tendency to create, that is to put his ideas into material, tactile form, like himself.

It is not that the sculptor has a need to work, for working is a means to an end. The sculptor's need is a desire to see, and working is the way to accomplish it. Pleasure is derived from the doing, but it is the desire to see the materialization of his idea that enables the sculptor to persist in the arduous task of sculpting.

Once he has finished a piece, he is able to see-- then he becomes a spectator, enjoying the sight of a creation. The sculptor is different from the spectator only in that he is willing to make the effort necessary to materialize his vision. The great advantage which the sculptor has over the spectator is that he gets to see what he wants to see, whereas the spectator is limited to sculpture he happens upon--another man's version of the idea. Visual appeal remains for the sculptor and spectator alike after the completion of a work of art. The sculptor feels at the sight of his work, enjoyment kin to any other spectator's feelings,

but there lingers satisfaction and a sense of accomplishment or pride at the thought of having made a thing so engaging. He has become a spectator who can do no more to the piece of sculpture, and who has not much impetus to do anything to it, for he has finished. He thus relinquishes his work for others to see, as he adopts the spectator's views.

MASTERPIECE

If he has NOT taken on the spectator's viewpoint toward a particular work, and he wishes to keep the piece in the studio for further study, then it is safe to conclude that the sculptor has not yet completely materialized his idea. A long period of time devoted to a single piece of sculpture is not to be undermined by public opinion or a deadline. History of art attests to the practice of keeping a good piece going for a lifetime, finishing others according to schedule, but maintaining the one. The painter, Leonardo da Vinci, worked 17 years on the Mona Lisa, then left it unfinished when he died, and it has ever since been looked upon as one of the esthetic wonders of the art world. To make a living, the sculptor has to declare his work finished and to send it on to the public, but there is no reason why he can not make a masterpiece in which to put his deepest convictions, if it takes him a lifetime to do so.

Likewise, the student sculptor, who feels that his work is slow, may be preparing himself for the making of a masterpiece.

Chapter V

Uses for Soapstone

Alaska dimension soapstone is a carvable material best suited for the beginning carver in the acquisition of skills and for the sculptor in the solving of problems of form by means of sketching in soapstone. It is suitable also for small commercial pieces as well as for larger serious sculpture.

STATUETTES

Small sculpture from Alaska meets a market at home and outside which could flare into a lively business for the person who enjoys working small, that is under ten inches in height or length. Alaska soapstone meets the requirements of workability, availability, and consumer acceptance.

SCULPTURE

For larger sculpture of twelve inches or over, flawless soapstone is materially suitable and available, but patrons tend to be suspicious of its durability. Somehow, they expect soapstone to be small enough to hold and feel. There may be a possibility for an Alaskan sculptor to present to the public large soapstone sculpture worthy of acceptance as a monumental indigenous material, especially if he goes to the quarry and selects his own stones.

SKETCHING

Soapstone is a good material for sketching, where the purpose is to explore the possibilities of form and to solve problems of carving in preparation for the translation of an idea into a harder monumental stone. By the time the student has solved the visual and tactical problems of a form in soapstone, he can with some assurance translate the idea into marble.

ACQUISITION OF SKILLS

Experience in the medium of soapstone gained by the use of marble-carving tools prepares the young sculptor for work in the more resistant, more uniform, crystalline material of marble, the traditional sculptor's stone. After soapstone has been the means by which the student is introduced to the heavy, solid mass, and is lent muscular coordination and the strength to persist, the young carver will feel an incomparable delight in discovering the live and vibrant material of marble.

Soapstone has been so adequate an introduction to direct carving at the University of Alaska that any other use of the stone has been secondary. Being soft yet intractable, soapstone has been found to be a bona-fide, though indulgent, carving material.

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