Route 1, Box 39 Kimberly, Idaho 83341 April 5, 1973

Miss Tessa J. Dalton 1123 Monroe Street Denver, Colorado 80206

Dear Miss Dalton:

Thank you for your letter of March 23rd and please excuse the tardy reply but we have just returned from a trip to Mexico and are now trying to get current with correspondence.

I have read Mr. Mitchener's manuscript with great interest. It is apparent that he desires to emphasize the skill, intelligence and artistry of the Folsom people. With this I heartily concur but find that, technologically, the description of the manufacture of the Folsom point is incorrect. My students say I am a severe and critical editor but, in the long run, this has paid off for them by not subjecting them to ridicule and criticism from others. I am sure Mr. Mitchener wants his fiction to be based on fact so have made some pretty drastic changes and suggestions.

He might also be interested to know that in addition to the fluted points, Folsom man had large scrapers, gravers, awls, the bone needle, etc. He was also a mathematical genius for unwittingly he was taking advantage of the cone principle. Each detached flake is part of a cone and he was well aware of this and took advantage of this principle. I have written a paper on the cone principle and if you want a copy you can write to Idaho State University, Dept. of Anthropology, Pocatello, Idaho 83201.

First I will say that someone has given Mr. Mitchener bad advice on the making of the Folsom point. There are many techniques for making the Folsom fluted point and many stages of manufacture prior to the fluting and completion. Methods of fluting are by pressure, percussion, chest crutch and by indirect percussion - the punch technique. However, in all instances, the stages prior to fluting are substantially the same, or parallel, and in none of these first stages did Folsom man use the punch technique. He preformed his blank from the raw material into the desired shape and size by direct percussion being careful to allow enough material for the pressure work to follow. He then changed to pressure to shape the point to the desired size and form and to make the surface uniform and yet leave the median line thicker so the flute could be controlled and not spread to the margins or break off the tip. At this stage the point was ready for fluting and we now have a choice of a variation of techniques to detach the channel flake. The point can be fluted by the punch technique. by hand-held pressure, crutch pressure, or direct percussion.

When the punch technique is used, the point is inserted in a slit in a log so the tip will be supported and yet yielding. The punch is placed on the previously prepared platform in the concave section at the base and the antler punch is struck by the worker. But bear in mind that all pressure work was done prior to fluting and this is validated by a study of the Folsom points which shows no pressure flaking intersecting the flute. If any retouch work was done after the fluting it would be almost impossible to retouch the edge without intersecting the margine of the channel.

All of the fluting techniques would take too much time to describe in detail but we find at Blackwater Draw that the Folsom men used both ce. 3.3.2.1

pressure and percussion techniques to flute. I suppose it depended on their ability as to which technique they chose. Also, all Folsom points are not always fluted the entire length of the artifact - some are only basally fluted. Again, I propose that this was due to their lack of skill or, simply, laziness - or because they were learners.

Mr. Mitchener might want to go into detail a little more about Folsom man securing his raw materials. All indications are that it was quarried and this, in itself, is quite a fete. Today, I have much trouble mining material from a quarry with all the modern tools, yet he removed great blocks of material and we do not understand his exact method or what tools he used to accomplish this. It is for sure that he had to be very careful of his eyes and of cutting himself during the quarrying process - for any lithic material suitable for foolmaking is vitreous and, therefore, gives a sharp cut. Flying chips from the mining process could blind him.

We find no evidence of blades or cores at the Lindenmeier site. However, I believe it is correct to use the word blade for these were a very sophisticated people and certainly if they could pressure flake and flute they could make blades. Believe the lack of blade and core recovery is due to the fact that the site has not been completely excavated; or it could be because there was a scarcity of suitable lithic material and the toolmaker modified his blades and cores into other implements. Also, Dr. H.H. Roberts Jr. saved only the points when he excavated the site and discarded everything including hammerstones and all flakes which would have been of diagnostic value. Fortunately Judge Coffin saved enough flakes to allow us to interpret materials, tool types and techniques.

Again, about the punch technique. Folsom man would not use the punch technique to secure blades from a core to make into fluted points. It is too easy to detach flakes from a core by direct percussion to obtain blanks. The punch technique is applied to the core only when the worker desires uniform blades for precise cutting tools. A blank is just a suitable piece of material of proper size and texture. A preform has been thinned and shaped by the worker for further modification.

About the word "knap" . We derive this word from the Brandon knappers and this was due to their using a knapping hammer during the process of making gun flints and "strike-a-light" flints. They split nodules of flint with a four to six pound metal quartering hammer, then used a bi-pointed flaking hammer to remove blades. Then a flat hammer - made from a file - was used to section the blades into gun flints for flintlocks and for strike-a-light flints to be used in combination with steel to spark a fire. This last hammer used to section the blades was called a knapping hammer and from this we derive the word "flintknapping". A word I do not like, but we are stuck with it. The last of the gunflint makers was a family by the name of Snare at Brandon, England (personal communication with L.S.B. Leakey and Jacques Tixier)

Following are my suggestions:

Page IV2:

Paragraph 1 (1) Script describes arrow - giving the impression that the bow and arrow was in use. Folsom man did not have the bow and arrow. We have documented the bow and arrow at about 3,000 years ago well after the demise of Folsom man. Describes the bison as hiding. Anthropologically, we believe that Folsom people travelled in small bnads - therefore the bison would have no reason to hide. So would suggest a substitution of the word "grazing" for "hiding".

Paragraph 2 (2) "Studied a core of rock which a younger man had brought from the mountains. All evidence of materials used at the Folsom site indicate that materials were quarried and, therefore, the material brought by the man from the mountains would be a chunk of rock - not a core. A core is specially made by the toolmaker and this is really the critical stage of detaching blades or flakes. If the core is not made right, then the worker will not get blades or flakes.

(3) If and when the core is completed by the worker, it would have to be much larger than a fist to get 29 blades or flakes. For descriptive purposes let's say it must be the size of the head or a segment of the thigh to recover this number of blades.

Paragraph 4 <u>Page IV3</u> (1) Notice the continued use of the word "points". Projectile would be a better word as points indicate an attenuated tip. The Folsom point was fluted for hafting purposes and then lashed to a shaft for deep penetration and easy withdrawal. This gave the projectile point a maximum amount of strength and allowed the hunter to insert the implement at a vital point.

Page IV4 (1) Describes wedging the core between two permanent rocks and holding it in position with his two big toes. As yet no mention has been made of the worker making the core. First the worker must make the core from the raw material and this must be prepared exactly right or it will not yield blades. Core can not be held with the toes. It must not be wedged between rocks. When using the punch technique, the worker holds the core between his feet with the distal end resting on the ground for support and the proximal end exposed for striking. Wedging the core between two rocks would restrict or prohibit the rotation of the core for blade detachment.

(2) Workers did not use wedge-shaped rocks as hammers. Hammerstones are not wedge-shaped but, rather, must be ovoid and of proper texture, weight and with a certain amount of yield. A good hammerstone was highly prized by the toolmaker.

(3) There is no evidence of rock punches being used to make Folsom projectile points. If the punch was used for fluting it would be of antler. Evidence and experiments indicate that the antler punch was used only for the fluting process. The cores and blades were made by direct percussion. After this, the worker used direct percussion to preform the blank to the proper shape and size and then he carefully pressure flaked the piece down to the size of the finished product being careful to leave the median section much thicker so it would act as a ridge and allow the fluting and yet restrict the channel from spreading to the edges. Also, the projectile point had to be supported at the tip prior to fluting to prevent the tip from breaking off during the fluting of process.

Indicates the worker studies the flake to see the IV-5: Paragraph 1 Stone which has a grain was not used by the aborigines for grain. toolmaking. Grainy rock will not allow control of the fracture. Materials used for stone toolmaking must be vitreous, isotropic, free of flaws, minus a fracture plane, homogeneous and have the ability to fracture equally well in any direction. Prehistoric man was a really great geologist. He knew his materials and was very selective about choosing the right stone for the right tools. Quarry sites give mute evidence of his discarding inferior, flawed and unsuitable materials. History reveals that there was great trading of fine materials from the rocky mountains to the mound builders of Ohio. We note that prehistoric man used obsidian to make tools for surgical and other precise cutting operations and chose more tenacious materials for functions requiring more resistance to breakage. If he was holding his flake to the light and studying it, it was, no doubt, to determine if it was free of flaws. Also, at the Lindenmeier site we have evidence of Folsom man using the sophisticated process of altering his materials by the ter thermal treatment prior to flaking. Also have a paper written on this process which is available at I.S.U.

Paragraph 2 (2) Indicates blades were removed from the core by the punch technique with a series of lightning blows. The punch tech. can not be applied at this speed. Each time a blade is removed by the punch technique, the platform must be prepared and oriented over a ridge and the punch re-seated on the platform. Also, the core must be rotated after each blade removal to keep the top of the core round and receptive to further platform preparation.

(3) "Twenty nine chips flew from the stone, which on the last blow of the hammer was consumed". Should not used the word chips - should be flakes. (4) Core is never entirely consumed because it becomes too small to allow platform space to seat the punch and permit splitting the core in half. Also, at this point, the core would be so small that it would be projected with the blow. Cores were worked until there was no room left to seat the punch and sometimes they were then used as preforms and worked into other tools and often were used as wedges.

Paragraph 6: (5) Uses the word blanks. Flakes or blades detached from a core are not blanks and, freshly struck they have a keen edge and are a superb cutting tool. Have, personally, witnessed the skinning of a bear with a freshly struck flake.

(6) Stoneworkers can not hold a blade with the toes and can not chip a blade with the punch technique. The piece is too small at this point to respond to the punch technique. (7) At this stage the toolmaker would be pressure flaking and, therefore, would hold the blade in his hand - probably resting on a piece of leather to protect the hand. The blade is pressure flaked from the margin with the detached flakes falling in the palm of the hand and, therefore, the worker is unable to see the detachment and is doing it more by "feel" than by sight. The worker uses an antler time for the pressure work.

Paragraph 7 (8) At this point the work would not be zephyr-like. but, rather, calculated and controlled. (9) The worker would not toss the point carelessly to a watcher for this could result in breakage of the point or a nicked and malformed edge. CC020202

IV-6 Paragraph 1 (1) Artifacts are not "carved" but, rather, precisely flaked.

Paragraph 3 (2) Another description of wedging the point between two rocks and holding it with the toes. This is impossible.

(3) Can't use a large hammer to work a small point. Again we are now at the pressure stage of the manufacture. (4) The small protuberance mentioned was carefully prepared by minute flaking and grinding. This protuberance was the point of impact to detach the channel flake. (5) "With a quick, sharp blow he removed the median section of the projectile point. Then he carefully studied the results. re-prepared a platform at the base, seated his antler punch at the correct angle and calculated the necessary amount of force and velocity to flute the other side without breaking the projectile point" - My suggestion.

Paragraph 4 (6) Should read concave at the top rather than rounded.

Paragraph 5 (7) The statement "provide a channel for the blood to flow outward" is an old wives tale and later exploited by the Boy Scouts. The fluting channel was made and used for hafting to give the maximum amount of strength to the point and for speedy insertion and quick withdrawal. (8) A contradiction. You description of manufacture sounds simple and easily executed - yet here you say it is complex. You are correct that it is very complex and the many broken point found in the workshop attest to this. Am sure Folsom man was well aware of the complexity of fluting and was deliberate and precise about his execution.

Paragraph 6 (9) At this stage the worker is pressure flaking. The point is not placed on a flat rock but, rather, was held in the hand and pressure applied through an antler time. This stage preceeds the fluting. (10) Substitute razor-sharp for "scimitar-keen".

IV-7 Paragraph 1 (1) This was not the final stage. The final stage is the removal of two tiny diagonal flakes from the margins of the flute. This is done on both faces on both margins of the flute and is a hallmark of the Folsom points. The final stage of manufacture is the grinding of the base to prevent cutting the lashings. The indentation referred to in this paragraph is made when preparing the platform for the second fluting. (2) Also add to this description "so that the point could be fastened by means of bison sinew and adhesives to the wooden shaft of the spear". (3) Last sentance in this paragraph is incorrect. The edges were not knocked off but, rather, were carefully ground.

Paragraph 3 (4) Fluting was not subtle, but very pronounced.

XIV-56: Art: I can not agree that everything in between the Folsom point and the arch at St. Louis is mediocre. Certainly the spectacular island city of Tenochtitlan in the Valley of Mexico; the pyramids, temples and observatory in the Yucatan; the carvings at Mitla; the extraordinary city of Monte Alban including its lapidary and gold work; and the massive stone work of the Incas in Peru far exceed the arch at St. Louis. This temples and buildings will be standing long after the arch has crumbled into oblivion. Certainly the Folsom point represents a true work of art and an anomolous technique which is in a class by itself but my next choice of fine art would be those mentioned above.

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I hope I have not gone into too much detail and bored you with explanations. However, like Mr. Mitchener, I rate the ability of Folsom man with the Egyptians and the Solutreans and would like to have him depicted correctly.

I have enjoyed Mr. Mitchener's past publications and will look forward to reading this story of primitive man. I envy him his ability at writing for - as you can see - for me it is sheer agony.

With kindest personal regards,

Don E.Crabtree

Ce-3.3.2.2

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hunted, what direction the wind was in that day, how they made their arrows, where the great bison were hiding, and how many were killed before the feast where began. We are as certain of their existence as we are that Daniel Boone once are hunted game in Kentucky. All we lack are demonstrable skeletons.

In the year 9068 B.C. at the chalk cliffs west of Rattlesnake Buttes a human being twenty-seven years old, and therefore ancient and about to die, make core at this print - just a rouge share predoment of studied a core of rock which a younger man had brought him from the mountains. His practised eye assured him that it was the kind of rock he needed, a hard, flinty, gray-brown rock with one facet extremely smooth. It was about the size much he much larger than a first to obtain 27 there is there of a fist, and most of the memorable rocks he had worked with in the past, the rocks that hunters remembered with affection because of the superb spear points he had struck from them, had looked like this. He breathed deeply and felt there was a good chance this one might prove productive, too.

But before he risked breaking into the secret of the rock, he purified himself, for he knew that no man could succeed in a venture of great moment without the aid of gods. Leaving his work space---a flat area at the foot of the chalk cliff---he went to an opening between the trees and there turned his face upward and his body to each of the four compass points in turn, ending with the east from which the sun came. He engaged in no complicated ritual and uttered no rubric; he merely wished to inform the gods that he was about to engage in a project of importance to his clan and he solicited their attention. He did not grovel for assistance, because in that large area there was no better than he for making spear points, but he did max want the gods to be aware of his effort and to refrain from interfering.

He then went to the running stream that came out of the mountains to the west of the cliff and washed his hands, applying some of the water to his as face. Now he was/ready as he would ever be.

As he walked back to his work area he was indistinguishable, except

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for his dress, from other men who would occupy this land ten thousand years later. He walked erect with no ape-like bending at the waist. His arms did not dangle and his head was not massive in proportion to the rest of his body. There was no conspicuous ledge of bone above his eyes and his hands were, as we shall see, beautifully articulated.

His face was somewhat heaveir than those which would follow and the cheekbones markedly more pronounced. His eyes had a slight slant, brought with his people from Mongolia, and his skin was several shades darker than that which was to come later; it inclined, perhaps, more toward red than to yellow, and in this respect was quite similar to the men who would follow.

He had a working vocabulary of twelve or thirteen hundred words, none of which would be intelligible even a short time after his death, for in this respect much change was in process. He had considerable powers of thought, could plan ahead, could devise tactics for hunting which required cooperative movements carried out at spaced intervals, and he knew a good deal about animals, the nature of women, how to rear children and how to lay by enough food in good periods so that he would have something to eat in time of famine. He worked hard and understood that if he got ahead in his production he would have time for his own enjoyment.

He did not take himself too seriously; he was not lugubrious even when talking to his gods. Often he burst into laughter when his children or the grandchildren of his friends did something ridiculous. From time to time, in the making of points on which his clan depended for their existence, he had intimations that he was an artisan, a man trained to accomplish, and such a feeling came over him now.

'If I get a good start, ' he told his apprentice, who must soon be making the points himself, 'I can strike...' and here he held his ten fingers aloft twice.

What a tremendous sentence to have come from the mouth of a primitive man: How totally compelling in its complex range of thought! A man at the beginning inder grund + profilmed and opposed for staking conducted concept could produce children of history who could utter such a complicated concept could produce children of for whom anything would be possible.

If is a word of infinite intellectual significance, for it indicates actions not yet completed but with the possibility of alternate outcomes. To get a good start implies memory of bad starts and how they differed from the good; it implies also that there will be consequences stemming from the good start and that they will be consistent with such consequences in the past. The incompleted sentence <u>I can strike</u> is the sum of man's experience on earth, the promise of completed action in accordance with known desires. And the twenty fingers held aloft is an advance in mathematics so profound----an abstract number without as yet a name---that all subsequent analytical thought will be based upon it. To visualize twenty points as being obtainable from a round core of rock, and to have a number for them and to recognize that that number relates to the digits of the hand is an accomplishment of such magnitude that it must have required man most of the two million years he had so far lived on earth to assemble the experience that would justify such a sentence.

The artisan who prepared to strike the rock that day had all the innate capacities that men who followed him on this spot would have; the only thing required to produce a complicated society would be a sufficient passage of time and the patient accumulation of memory. But this man had something else which would always be precious in whatever epoch that followed: he had an innate sense of proportion, design and beauty, and the degree to which he had these qualities would never be surpassed by any men who followed him on this spot.

Coughing twice, rubbing his fingertips on his chest, he took the roundish flint core and wedged it between two permanent rocks, holding it in position *hammeralmes are not wedge Shaped*, with his two big toes. He then hefted several other wedge-shaped rocks which he used as hammers, testing each in turn until he found one that felt properly *smell* balanced. Then he picked up a slim-pointed rock shaped like a chisel and tried *much wedge function* the state of the several like a chisel and tried *much wedge shaped was used of words being words for arther*

it. He was ready.

The

The first tap of the harmer against the chisel knocked off a corner of the

flinty rock, and he lifted this against the light and studied it for several minutes, holding it at various angles so that he could see the grain Stare which has a grain was not used by abrigues for boloching. What happened next astonished the helper who watched. With a series

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of lightning blows, coming so rapidly that the helper could scarcely see the he purch tech saw not be upplied at this speed but time a block of movement of the hummer, the artisan struck the chisel faster than a woodpecker ridges the purch resson for the last strikes a dead limb. Twenty-nine chips flew from the stone, which on the last blow of the hammer was consumed. - it becomes to smeet to allow pletform page to purch the artisan struck the helper vertically consumed barries there is never entirely consumed barries there is never entirely consumed barries the artisan stopped, dropped the hammer, threw his head back and laughed. the flow. - (see letter further delays)

Holding himself under the armpits he scratched and winked at his helper. 'Good, eh? They gathered the chips and the artisan continued laughing as he studied
each one. Three he discarded as offering little promise for further work. They would never make satisfactory points, but the other twenty-six had obvious
possibilities. Properly developed, they might produce little masterpieces.
Piling them in a heap he rose and walked around them admiringly. Then he called other members of the clan to come see what good luck he had had that day.

Like him, they walked around the pile of potential points and assessed them approvingly. One man, a notable hunter whose spears had started the death of several bison, grabbed at one shimmering blade and cried, 'This one for me!' The artisan took it, studied it from all angles and said, 'Good, good.'

When the celebration of the good flints was over, the artisan and his helper proceeded with the critical job of converting these planks, useless in *Utality a new choice the leveling these planks*, useless in their present form, into workable points, and it was here that the extraordinary a support solling urflement quality of this workman manifested itself. He took one of the blanks and and hold a blad with these case chops black with the purchtack, wedged it with his toes against a large flat rock. Then, hefting a rather (this strong the balanche would be present spling away minute fragments would held the balanche would be present spling any minute fragments would held the the instance of the began chipping away minute fragments when he had worked for about an hour, exhibiting a fellecary of touch instant of a way going the book of the sector of touch instant of a sector by the calculated of control of satisfaction, and tossed the point carelessly to a watcher, who showed it to friends. It was muld methods the print carelessly for this could result in would methods the sector of the sector of the sector of the sector would methods the sector of the sector of the sector of the sector when he had worked for about an hour, exhibiting a delicacy of touch instants of a sector of the sector of t

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superb, well shaped, balanced, carved in all areas and lined by very sharp edges. Any huntsman who had lived in Africa or Asia during the preceding two million years would have cherished this point.

IV-6

But the artisan was not satisfied. Grabbing it roughly from his friend, he did an amazing thing. Afour, this tech is impossible

He wedged the finished point, this work of rare perfection, between the two rocks and held it with his toes. Reaching for a large hammer and a deli-

cately pointed tip of deer horn, he placed the latter against a small protuberwhich was carefully prepared by minute floping & grinding ance he had left at the base of the point. With a quick, sharp blow he knocked removed the median section of the projectile. Then he carefully studies the away one entire side of the point. Without pausing to inspect the result, he results, he prepared a platform at the base specifics and a pumphat flipped the flint over, swung the hammer again and knocked off the other side. the comest angle & calculates they necessary amount for force took releasing to flute the atter side without marking the projectile have a

beautiful leaf, rounded at the top, tapering slightly at the base. What made it different from any that had gone before was the fact that with the sides of the flint knocked away, the two faces were concave to such a startling degree that there was scarcely any stone left in the middle. The point was fluted, thick at top, bottom and sides, but leaf-thin down the long middle.

This meant that if the spear struck a bison, the sharp point and sides could enter the hide with a minimum of resistance, and when it was seated, all wives tale. Huten channel was meedfor hafting to give moder, provide a channel for the blood to flow outward. At this stage of the artisan's amount of strength work the point was a marvel of engineering, something so brilliant in conception

and so complex in execution that it constituted an intellectual miracle.

But that was not all! The artisan now placed the point on a flat rock This is pressure flaking. Was not placed and flat rock, but rother and with the sharply pointed antler he began firmly pressing against the flint mus held in the hand a pressure applies through an antheotics, also around the edges, not knocking it or hammering it in any way, but applying this stage pressure. Bit by bit the flint yielded to the pressure and flaked off, until the total edge of the point was not merely sharp, it was scimitar-keen. He handled it so deftly and with such apparent ease that he seemed to be working not in hard flint but in some soft and yielding substance like bison suet.

the platfarm for the second flating. The final stop is the He had one more trick. With a fine insolence which would have terrified what any watcher who had begun to value this point as a precious gem---which it was finth --- he placed it on a stone and with a fairly heavy hammer knocked a large indentation into the base, so that the point could be fastened by means of bison sinew to the his denear to the wooden shaft of the spear. Then quickly he knocked off bith lages were not proched off but were carefully the sharp edges, about this indentation so that bison thongs would not be cut in hallmark ground. Falson when they secured the point to the spear. Print

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At three separate intervals he had completely finished the point, all parts of it as well as he could, and three times he had gone beyond to knock isgiand to away some of his most meticulous work seeking to improve upon some detail culling the la which to another might seem trivial. Mexamid In the midst of any process he could have leapfrogged to the next, but he refused because he enjoyed his work and knew it was good. Now that it was finished, he tossed it aside almost contemptuously, as if to say, 'I can do as well next time.' Then he laughed raucously, scratched himself again under the armpits, and picked through the lades anks to find another good one.

That spearhead, named later a Folsom point, with its good design, its exquisite workmanship and its subtle fluting would be the finest work of art ever to be produced in the Centennial region. Men of a later day would have lathes at their disposal and electric drills and computers to assist them in finding exactly the right design, but they would produce nothing which for beauty, utility and fine execution would match this Folsom point. Held sideways it seemed like a wafer, so thin did the fluting make it. Viewed head on it was streamlined with uncanny perception. Viewed flat it reproduced the lovely lanceolate form of nature, and when lashed to the end of a spear it could penetrat like a bullet.

It was beautiful like a sunset in the mountains, or like a sonnet of Petrarch's or like the falling of a robe in a canvas of Piero della Francesca. It came at the dawn of history in Colorado and would never be excelled.

Ce. 5. 2.

XIV-56

It is strange that the area we are dealing with has done so little with art. From the Missouri River to the crest of the kockies **ENAMENTS** few public buildings have been eredted with imagination and fewer still with any sense of western beauty. Towns have been laid out in drab patterns and then encouraged to deteriorate in taste. Occasionally a highway will have been well engineered, as if **thus** a man's motor car were obviously more important than his home, but even this is often done at the expense of natural beauty, which would have been better had the highway not come through at all.

Only two works of art standout in this region, the Folsom point engineered with such ohvous love by primitive man eleven thousand years ago, and that/graceful arch along the waterfront at St.Louis. Everything in between is mediocre.

The more one studies the Folsom point the more convinced he becomes that it was the creation of a true artist, a man/whenwexemperimed by practicality and executed by love. It is perfectly obvious that when these points were completed in such form that they could kill a mastodon, the man making them went on to make them beautiful as well. They are as graceful/as butterfuly wing, as lethal as a thompson machinegun. Above all, they are beautiful, as if mere practicality were never enough. They set a high standard for all of us who followed, a standard we rarely met.

It is appropriate that the one great modern work of art in the west should stand one the levee at St.Lauis where so many of the powerful men and women of the west disembarked on their way to destiny. That arch is truly a memorial to the spirit that founded Centennial, and perhaps it is better that it stand at St.Louis, for here it reminds everyone coming west of the/mpirix that mominates the area into being.

That the city of St. Louis had the nerve to build such a monument remains a miracle; that somehow they came up with the right design and enough money to pay for it is a permanent tribute to the leaders. MA had it been put to a popular vote it would surely have been defeated on the grounds of 'Who needs an arch?' Luckily it was built and today it inspires KM all who live in what used to be The Great American Desert. signs of hope that an will develop

Tere are/sexexession intermediate artistic sensibility/in the South Paatte territory. At the University of Colorado a couple of young architects have come up with designs which catch the best of the old mining structures, and they look handsome against a backdrop of mountains. In Denver the new art museum is a daring thing, just what a western city ought to be doing. And some ranches out on the drylands are evolving a fine, solid, low-slung type of building. Things may be better in the future.

But the/standard for the area is still the neon cross which an neterprising *CLORES* mortuary has erected, **bundleds** of feet high, across the face of **bundleds** south of *C* Denevr. Each night it commands the **bundleds** Rockies so that citizens who wish to see the mountains can enjoy the **bundled** this flashing symbol. 'It looks real good,'

Art