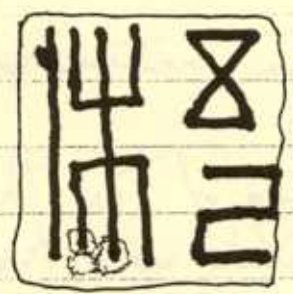


May 9, 07

Dear John,

I went back and looked at my notes on the Anau jet signet found by Fred Heibert. Some rather amazing observations may be made:



←  $\Sigma$  is found on <sup>late</sup> pre-lithic pots, (isolated in North China <sup>says the north west</sup> owners' or makers' marks, more likely owners'). I knew it from coins from around the time of the beginning of the Christian era, where it definitely means "5." However, it is already in use with the meaning "5" by the time of the <sup>Shang Dynasty</sup> oracle bones, which I told you was 1200 BCE!

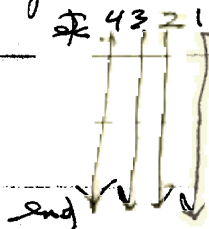
己 This graph is also found on the oracle bones and means "record, regulate; annals"

is Modern Standard Mandarin



What is incredible is that  $\Sigma$  己 (pronounced wu ji) actually means something in ancient Chinese: the five regulators of time — years, Moon/months, days, planets, and calendrical calculations. Furthermore, ~~this~~ this expression occurs in the "Hong fan" (Great Plan) chapter of the Shang Shu or Shu jing (Book of Documents), one of the Chinese Confucian classics, which is full of myth, legend, and accounts of the earliest prehistoric and historic times.

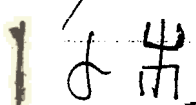
As you know Chinese Texts are read  
Thus: 4321 Start



So the signet is also  
in conformity with this ar-  
rangement.

Thus we have a numeral and an actual word.

I do not know the meaning of the third  
and final graph, but it is made up of two  
components



I view this stroke as  
symbol used to  
modify the 木, which  
would make it function rather  
like a radical ("semantic key")  
in the fully developed script.

Now this graph also occurs  
on late Neolithic pot marks  
in China - especially the northwest  
North - and on the oracle bones  
where it means "tree, wood" and  
would have been pronounced  
something like MUKS (MU is  
Modern Standard Mandarin pronunciation)

Thus, all three graphs fit well within the framework of the ~~earliest~~  
earliest known Chinese writings. However, I do not  
view them as evidence of Chinese influence at ANAN  
because the Chinese script ~~is not~~ is known until 1100 years  
~~after~~ the 2300 BCE date of the signet. Fred says  
the stratigraphy is solid and I trust him.

instead of thinking that the Anau signet inscription is a Chinese artifact, I hold that it is good evidence of an eastward ~~diffusion~~ movement of basic elements of the Chinese script. You will recall that, at Holly's writing conference, I gave other evidence for movement of script elements from the West through intermediary points toward China during the late 2nd millennium, & you were kind enough to include my argument in your report of that conference.

Tred says that his signet was almost certainly a local product, because - aside from a site near Anau - there was ~~no~~ no other source of jet for more than a thousand kilometers.

Consequently, I believe that the signet inscription (and I'm absolutely convinced that it indeed represents genuine writing) is phenomenally important because it helps to document the transmission <sup>of writing</sup> eastward.

A couple of other notes

Because 𠄎 "wood or tree" I think the 𠄎 sign probably ~~was~~ signifies some sort of ablet or record.

The signet has whole pierced through the

back of it This was probably for affixing  
it to the record book in question

- 3 Fred says he believes the room in which he found the signet was an ~~empire~~ <sup>administrative</sup> ~~or~~ <sup>ritual</sup> center that would fit perfectly with the explanation for the inscription that I have put forth above.

Finally, we ~~do~~ <sup>should</sup> not ~~need~~ <sup>to</sup> assume that these three graphs were pronounced in a Chinese fashion. Since we do not yet know the language of Anau, we have to remain agnostic about the pronunciation of the graphs there. But the meaning would remain the same at Anau as in my <sup>Chinese-style</sup> interpretation above.

Boat  
Viet

N.B. On May 25, I flew to East Asia for 5 days in Hong Kong, 2-3 days in Shanghai, and 2-3 days in Beijing. The next letter was written just before and during my flight back to the United States.



This will be a fairly long letter, but it is full of lots of important information.



礼 士 宾 馆

LI SHI HOTEL

5/VI/01

Dear John,

In a couple of hours, I will be flying back to the States and may actually finish writing this letter while I'm on the plane.

袁 錫圭

Yesterday evening I met with QIU Xigui to discuss the Anan signet inscription. His response was pretty much what I expected, but all the more startling because of how closely it coincided with my prediction.

The first thing he said was, "If we ignore the archaeological context, then I would say this inscription can't be earlier than the Western Han (206 BC - 9 AD)." This is almost exactly what I said when I first saw the inscription. That is why I pressed Fred Hiebert so hard about the dating, but Fred insisted that the stratigraphy, pottery, and everything else pegs the signet at 2300 BC. I have to believe Fred because he is

a competent (may, gifted) archaeologist, but I'm going to quiz him hard about the dating again when I get back to Penn. Professor Qiu does not know Fried and he himself is not an expert on ancient Chinese writing, so he kept suggesting that the seal must have gotten mixed up in the stratigraphy, that it somehow slipped down through the layers from above. Not only do the characters on the seal seem like Western Han forms, but the very shape of the seal itself reminds him of Western Han seals. To Prof. Qiu, it's almost unthinkable that the Anan seal inscription could date to 2300 BC, so closely does it resemble W. Han writing.

However, there's more to be said. As I pointed out in my previous handwritten letter to you all three (Qiu and I both agree that the seal, <sup>inscription</sup> consists of three characters) of the graphs were already found on the oracle bones (c. 1200 BC) and two of them (the 1st & the 3rd) occur as neolithic pottery marks. Now, it is true that the third graph (𠄎 — I am ignoring the "radical" or semantic

9

part of the graph <sup>on the left side</sup> for the moment because that is a separate problem, but will return to it later) is written as  $\ast$  on the oracle bones and on Neolithic pots, but as  $\equiv$  on the "small seal" script of the W. Han. This may be purely a result of the medium, it being natural to scratch  $\ast$  on the hard surface of a bone or pot, but relatively easy to carve  $\equiv$  into a soft stone like lignite.

I was extremely gratified when, after two minutes reflection, Professor Die identified the second graph ( $\bar{E}$ ) as  $\bar{E} j i$  which, as you will recall, is precisely how I read it several weeks ago. Because the stone has cracked off on the right side (this is evident on the top right corner of  $\Delta$ ), I am more convinced than ever that  $\bar{E}$  is actually  $\bar{E}$ .

As for  $\equiv$ , I still think that the basic part of the graph is  $\equiv$  ("tree") which means that  $\equiv$  it has something to do with plants or a plant derivative. I believe that

0  
The 1, as I mentioned in my previous letter is some sort of signfic which specifies or modifies the type of plant (or plant derivative in question). Professor Di' agrees with me, but he offers an intriguing suggestion

he would like to turn the seal upside down and read it this way



What is more, he

has a hunch that  $\text{𐎗𐎍}$  is actually  $\text{𐎗𐎍}$  (the top right part having been damaged [that is how I drew it - bottom left - in my previous communication]) and that it means something like he (grain)

Although Prof. Di' did not volunteer an explanation or translation, that would yield some such reading as "grain: record five [units]" which would certainly fit well with Fred's idea that the room in which the seal was found ~~was~~ an administrative area, instead of my "Five Regulators file/archive." My only hesitation with this interpretation of Prof. Di' is that, to the best of my recollection, the signfic for  $\text{𐎗}$  indicating different kinds of plants and

plant derivatives invariably <sup>(or at least usually)</sup> show up on the left side rather than the right (if we follow his proposal to invert the seal).

\* Prof. Qin provided one other electrifying piece of information. He had a fairly clear memory of the discovery of a nearly identical seal in — of all places — Eastern Central Asia (not only Xinjiang). That would put it smack dab in the middle of mummy country, but would also fill in the long gap between Anan (Western Central Asia) and the heartland of China. Prof. Qin says that this other seal was also made of lignite and that it bore four characters similarly arranged to the described this second seal. I vaguely recalled having seen such seal published in one of the major Chinese archaeology journals (Kaogu or Wenwu?) back in the 60s or so. You can rest assured that I will scramble to find the old report on this other seal soon after I get back to Penn.

\*\*\*

I trust that the contact information I gave you for LI Xueqin enabled you to reach him

at Tsinghua University in Taiwan where he has  
 been a resident. I have no idea what he may have told  
 you, other than perhaps that as Chinese characters  
 from a single period, the Aramaic seal graphs present  
 anomalies. Likewise, Prof. Yin says that both  
 of the Central Asia Sogdian seals look though  
 they were written by people who had contact with  
 the Chinese writing system and may have tried to  
 imitate it without getting the forms entirely  
 right. Maybe. But if Fred's dating is reliable,  
 we have to go back to the <sup>sort of</sup> explanation I offered  
 in my previous letter to you, at Holly's confer-  
 ence on writing two years ago, at a meeting of  
 the International Congress of Asian and North African  
 Studies in Toronto about a dozen years ago, and  
 in a book that I started to write two years  
 before that: <sup>Carroll (1987)</sup> namely, the flow of influence was  
 operating in the opposite direction. I have also  
 all this time been saying that the <sup>ultimate</sup> origins of  
 Chinese writing lie not in Mesopotamia or Egypt,

but that they should be intimately linked with the same complex of peoples who brought bronze metallurgy and the horse-drawn chariot during the second millennium BC. The Anan seal brings us one step closer to figuring out how all of the pieces of the jigsaw fit together.

So as not to tax your endurance any further, John, I had better bring this lengthy spittle to an end. Let me just say that, in Prof

Q (Chinese Department, Peking University) and in Prof. Li (Chinese Academy of Social Sciences, Archaeology Institute), you have two of China's very best palaeographers. Both of them see the Anan seal inscription as somehow (indeterminately) linked to the Chinese writing system. I believe that anyone who is familiar with ancient Chinese writing would find that conclusion inescapable.

No matter how this saga turns out, the Anan inscription is of tremendous significance. Whether it shows late 1st millennium <sup>BC</sup> Chinese influence on Western Central Asia or late 3rd millennium BC West Asian influence on China, it is indisputable evidence transcontinental connectedness

Best regards,  
Victor  
Vttman

P.S. Prof. Qiu is aware that I was interviewing him on your behalf and he has given express permission for you to quote him as conveyed by me in this letter. It is my impression that he does not speak English, so it might be fruitless for you to contact him directly. Anyway, his home tel. # is <sup>86-10-</sup>6375 6579. His son's e-mail is: qiuski@pku.edu.cn

P.P.S. The Xinjiang ligate seal was apparently collected without any clear provenance. According to Prof. Qiu, Chinese scholars seem to assume that it is W. Han for the same sorts of reasons he assumed that the Anan seal is W. Han (see above).  
(8)




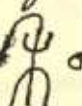


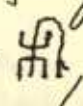

P.P.S. Almost forgot! Louisa Fitzgerald Huber wrote<sup>15</sup> a major article entitled "Pijia and Erlitou: The Question of Contacts with Distant Cultures," Early China, 20 (1995), 17-68 in which she discussed some sheet-metal vessels, including pouring vessels like the Chinese jue and drinking vessels like the Chinese gu. The site where these vessels were from, Shadad in southern Iran, is intimately related to the Bactria-Margiana complex. Dr. Huber also adduced a number of other convincing pieces of detailed evidence which point to ideas and cultural traits from <sup>Central</sup> Western Asia showing up in the seminal centers of Bronze Age China. Dr. Huber is a researcher of long standing at Harvard. Her address is 20 Prescott St. / Cambridge, MA 02138. If you need them, I can send you additional contact information and a copy of her article.

All of these things add up!

Time to board the plane.

### Additional notes

1. The Western Han forms of the graphs referred to by Prof. Piu are called the "Small Seal" script. They were also current during the latter part of the 3rd c. BC. As the name suggests, this style of writing is particularly associated with seals.
2. I need to look at more photographs of the Anau seal and, hopefully, the object itself which Fred may bring back from Turkmenistan. (He had it here last

year, but I did not get to see it.) One thing I'd be most interested in scrutinizing carefully is the extent of the damage on the bottom left corner. Remember that in my letter of May 9, I drew the "plant" character as , indicating that the stone had been chipped away at the edge. Prof. Qiu thinks that the graph may actually have been  or, more precisely in his inverted orientation, . Now, this gets really interesting, because archaic forms of the graph for 禾 (hé ["grain"]) may appear thus,  or, in extreme cases, even  or . The little extension near the end of the straight line "significant" on the right side would then perfectly match the detail of the spike at the end of the stalk. The only difficulty here is that the inverted form of the graph has the spikes bending over to the right , whereas <sup>nearly</sup> all of the archaic forms of the Chinese graph have it bending to the left. This is not an entirely insuperable problem, however, because oracle bone graphs occasionally flip over <sup>symmetrically</sup> on a left-right axis. I have actually seen oracle bone forms of the graph for 禾 written as , but they are relatively rare.

the heavy  
lead of  
grain  
over

\*\*

Furthermore, if there really were transmission between Anan and China — regardless of the direction it was flowing — it might have been possible for the graph to become shifted from left to right (or right to left as the case may be) on its vertical axis.

What about  $\Sigma$  and  $\Xi$ ?  $\Sigma$  is still  $\Sigma$  no matter whether inverted top to bottom or left to right — it has perfect double symmetry.  $\Xi$ , on the other hand, only stays the same when inverted top to bottom. When we flip it left to right, it goes from  $\Xi$  to  $\Psi$ . While  $\Xi$  is the normal orientation of the graph, in archaic instances, it sometimes does get written down as  $\Psi$ .

3 Dr Fitzgerald Huber tel # is 617 495 0585  
Her husband, Horst Huber, has the office tel #  
617 496 6008 & email hwhuber@fas.harvard.edu

I'll write again after talking to Fred  
Hiebert & finding the old report on the second  
lignite seal.

VHM



Dear John,

without too much trouble,

I'm happy to report that, I found the Tarim jet seal  
 old Chinese-Uyghur archaeological album that I bought  
 in a Tokyo used and rare bookshop about half a dozen years  
 ago. A photocopy is enclosed. You can see that it is basic  
 ally strikingly similar to the Anan seal.

The Tarim seal was excavated (I'd better say "found" <sup>in 1959</sup>)  
 the Chinese reports have chutai [came out of the earth] at  
 Niyä, which lies around the middle of the southern branch  
 of the Silk Road skirting the Taklimakan Desert. The  
 site lies <sup>out in the desert</sup> about 100 km north of the modern county seat  
 of Minfang. Niyä flourished from about the 2<sup>nd</sup> c.  
 BK to the 4<sup>th</sup> c. AD. It was probably preceded by  
 smaller and more ephemeral communities. By the 7<sup>th</sup> c., it  
 was completely deserted.

The Niyä seal has four characters which, in their  
 modern form, would be written as 司禾府印 si he fu  
 yin. This means roughly "Seal of the official grain store-  
 house" or, perhaps more precisely, "seal of the storehouse  
 of the officer [in charge] of grain." The characters are  
 clearly written in the small seal script, which dates to the  
 latter part of the 3<sup>rd</sup> c. BCE and would have been used  
 for seals throughout the entire time-period of the oc-  
 cupation of Niyä.

The characters for "officer [in charge] of" 司 and seal 印 are perfectly written in their small seal forms. There are only slight problems with the character for "storehouse" 廩, whose small seal form is 廩, but the character, "grain" 𥝌 aberrantly has a perpendicular line running along its right side. This, <sup>apparently</sup> cannot have been intended as the long stalk extension (reminiscent of the corresponding graph on the Anan seal) because that is obviously seen to bend to the left, which is perfectly normal for the graph in the small seal script. Chinese scholars would explain the discrepancy as due to the seal having been carved by semi-literate people far from the center of Chinese culture. Qiu Xigui, who accepted the reading of 廩 = 𥝌 ("grain") when I spoke to him in Beijing (he was working only from memory at the moment), is now more troubled by the form of the graph and is no longer certain that it really is 𥝌 ("grain"). I still maintain that it is indeed the graph for 𥝌 ("grain") and believe that the perpendicular line at the right is the result of confusion over the orientation and function of the seal inscription. This will be explained later in the present letter.

As remarked above in this letter, the Anan seal and the Nijia seal are startlingly similar. Both are made of the same material, jet, a dense variety of lignite formed by submersion of driftwood in mud at the bottom of a sea floor. Jet is actually a kind of carbon and will burn. It takes a high polish (which is why it is sometimes used

as a gemstone), a characteristic that will take on significance later in my analysis. Jet is an extremely soft stone, hence easy to carve - yet keeping sharp edges where it is incised, but also easily chipped and broken. (Both the Niyā seal and the Anau seal are damaged at the edges, especially the latter.) This fragility means that seals made of jet are not very practical for repeated impressions, certainly not as stamps on hard surfaces. Since the inscriptions on both seals are incised, they were not intended to be inked and pressed on a hard surface. Rather, they would have been applied to a soft material, such as clay or wax, that would display the inscriptions in relief. Even so, it would have been easy for seals made of jet to chip off at the edges (as happened with the Anau & Niyā seals), so one suspects that such seals were as much (or more) tokens of status they were useful marking devices.

Both seals are of almost the same dimensions (6 cm X 1.4 cm for the Anau seal & 5.7 cm [high] X 2 cm [along the sides] for the Niyā seal)

Both seals have a perforated boss on the back, which means that they could be suspended from a string. Incidentally, Indus Valley seals also have similar bosses and are made of an even softer material, steatite (also called soapstone), which can be marked with a fingernail.

Most amazingly, both seals seem to have to do with

grain administration Chinese writing system. There are thousands of graphs in the Chinese writing system. Not only do these two seals have a comparable number of graphs similarly arranged (3 for the Anan seal and 4 for the Niyā seal), it is astonishing that they share the identical graph for grain.

Considering all the possible variables for seals and seal inscriptions, we may safely declare that the Anan seal and the Niyā seal could not have arisen independently by sheer chance, but that they must be related in some fashion. This is where the difficulties begin.

Qin Xigui, in a fax of June 8 that he sent to me, had stated that "There <sup>is no doubt</sup> ~~is~~ <sup>no question</sup> that both [seals] belong to the Han Dynasty. As to whether they belong to the Western Han or the Eastern Han, it is still difficult to ~~the~~ determine. However, even if they belong to the Western Han, it must be the latter period of the Western Han." I'm pretty sure that most Chinese scholars will follow suit in interpreting both seals as essentially products of the Han Dynasty.

But wait a minute! Didn't Fred Hiebert find the Anan seal at a site that is approximately 3,000 miles to the west of the Han capital and roughly 2,300 years earlier? How can we conceivably speak of the Anan seal as a product of the Western Han Dynasty?

This is a conundrum of gigantic proportions and utmost importance. The Anan seal may be tiny (about the same size as my thumbnail), but its implications are vast. If it really dates to 2300 BC, then we will have to rethink the origins of the Chinese script. If it dates only to the Western or Eastern Han, then we will not only have to explain how it ended up in a late 3<sup>rd</sup> millennium BCE context, we will also have to explain how it travelled thousands of miles and was deposited at a site that had been completely deserted for centuries (the South Mound of Anan, where the seal comes from, was occupied only from about 3000 BCE to 500 BCE). Despite its minuscule proportions, we must take the Anan seal with the utmost seriousness, for many weighty questions concerning the development of civilization in ~~the~~ West Asia and East Asia hinge upon it. Furthermore, the Anan <sup>seal and its</sup> inscription is no longer a totally isolated find. We now have the Niya seal with which it must be compared and contrasted.

Because of the weighty consequences of the almost feather-light Anan seal, I ~~will~~ feel duty bound to pursue all pertinent issues surrounding it fully and without any preconceptions.

The first topic that must be addressed is the dating of the seal.

## The Dating of the Anau Inscription

So much depends upon the accurate dating of the Anau seal. Did the graph on it, and the very form of the seal itself, migrate from east to west or from west to east? I promised that I would press Fred very hard on the dating of the Anau seal, and I have now done so. All together, I grilled him <sup>on three occasions</sup> for a total of more than two hours. His answers have been exceptionally detailed and forthright.

I wish to state at the outset that I have the highest regard for my young colleague. He is not a rising star; his star has already risen, and deservedly so. We already know Fred's great achievements — I do not need to recount them here. Suffice it to say that I firmly believe he will become one of the most renowned archeologists of the 21<sup>st</sup> century. His discovery of the Anau seal will be counted as one of his major accomplishments.

Fred patiently explained to me his grounds for dating the seal to 2300 BCE. He started with Raphael Pumpelly's outstanding excavations at Anau a century ago. He also discussed Soviet chronology for Anau and related sites, analyzing why it is approximately five hundred years too low. Fred related the <sup>period when the south mound was occupied</sup> <sup>(where the seal was discovered)</sup> <sup>to the period of occupation for the north and east mounds.</sup> His dating of the level where the seal was found is securely determined by the types of pottery and bronze artifacts at the same level, plus four <sup>dates</sup>. The dating of that level to 2300 BCE is solid.

I then raised with Fred the sensitive issue of the possible intrusiveness of the seal into the 2300 BCE level. After investigating the matter in exhaustive, almost excruciating detail, I must conclude that the possibility of intrusion is virtually nil. Some of my reasons for coming to this conclusion are as follows:

Fred and his crew were already 2½ meters down in their shaft. All the way down they were finding clean levels with perfectly coherent assemblages. The 2300 BCE level where he found the seal had a particularly good floor with the walls <sup>of a room</sup> and a road out front.

2. Unlike his Soviet and post-Soviet colleagues who move kilometers of earth with their bulldozers and backhoes, Fred was doing intensive, American-style excavation. He was removing at most a spadeful of dirt at a time. What is more, Fred was sifting through the dirt that he did move. centimeter-by-centimeter

Fred was being particularly attentive to the possible presence of rodent holes, which would be the most likely cause for intrusion in this sort of situation. He was not finding any. Ditto for water erosion.

I asked Fred about the precise circumstances under which the seal came to his attention. He told me that his crew was digging corner of the room. The dirt

They removed was taken a short distance away, to a sifting <sup>screen</sup> stand operated by two local boys. They were using a <sup>(being about half an inch square)</sup>  $\frac{1}{4}$ " mesh, so the seal was caught above the screen, as it should have been. The screening was a hot, dusty job, and even though Fred kept enjoining the boys to be attentive to all bones, clay lumps, and objects showing evidence of human modification, they must have mistaken the dust <sup>laden</sup> seal for a pebble, and it got tossed out on the backfill pile. Fortunately, Fred's sharp-eyed assistant, Murad Kurbanzakhatov, spotted the seal on the pile and called it to the attention of Fred, who was standing nearby. At first, Fred was a little disappointed because he thought it might be a Harappan seal, which is not what he was expecting to find amidst ~~the~~ his otherwise independent and integral culture. Later, Fred washed the ~~stone~~ seal and put it in a collecting bag. Nice piece, but not yet a sensation. Fred and his colleagues were finding many other excellent objects during that season, so they did not make a great fuss over the seal right then and there.

I proceeded to ask Fred a most ticklish question: could Murad have planted the seal on the backfill pile? Fred respected my need to ask the question and was not indignant when I posed it. He informed me that Murad is a professional archaeologist of great experience and holding Ph.D. from St. Petersburg. There would simply be no

⑧

Motivation or incentive for him to do such a thing. And where would he have gotten a piece of such antiquity, authenticity, and appropriateness?

Furthermore, as Fred can outline much more extensively, it makes good sense for a stamp seal of this sort to show up precisely at the 2300 BCE level. Comparable stamp seals (square and with perforated bosses, though with symbolic designs rather than the sort of writing on the Anau seal) have been found for this time period in the Bactria-Margiana Archaeological Complex and surrounding areas (e.g., Pottyn Tepe). Also, says Fred, we would expect to find writing in areas peripheral to Mesopotamia and Egypt at this time. Literacy, especially in Mesopotamia, was expanding beyond the scribal class during the 2nd half of the 3rd millennium BCE. People in various places in the Middle East were experimenting with writing for their own languages.

### Further Paleographical and Philological Considerations

The script on the Anau seal seems to be of a different sort of graphic system than the isolated marks on pottery and figurines that are found scattered across the Iranian plateau during the second half of the 3rd millennium BCE. I have been noticing such signs in the archaeological literature for the past fifteen years or so. They tend to look like asterisks, stars, and so forth, plus they often have series of parallel pro

jections stemming from their main lines. The graphs on the Anou seal are simpler in construction and, furthermore, they are three in number, clearly constituting a sequence.

The Anou graph for "grain" looks a little more like Chinese bronze forms than like oracle bone forms because of the way the spike bends way over and the angular shape of the leaves and roots of the plant depicted. With the oracle bone script, there are just straight lines  $\times$ . The oracle bone <sup>forms</sup> are older than the bronze forms, but the difference in shape may be due to the media employed (wax molds for the bronzes versus the hard surfaces of the oracle bones).

The graph for "storehouse"  $\text{A} \cdot \text{T}$  had not yet been identified on the oracle bones  $\searrow$  on the Nija inscription.

The small seal form of the graph for  $\text{ji}$  ("record") would have <sup>had</sup> an added silk radical, thus  $\text{E} \cdot \text{E}$ , not merely  $\text{E}$  as on the Anou seal. This is evidence that the Anou inscription predates the 3rd c. B.C.E. Similarly, the extremely long extension of the stalk with a clearly marked spike near the end is an earlier form than the small seal  $\text{H}$ .

We now have to confront the tricky question of the orientation and function of the inscriptions on the Anou and Nija seals. I now accept Profes.

see Qiu's suggestion that the Anan seal should be viewed as  $\begin{array}{c} \text{三} \\ \text{X} \end{array} \begin{array}{c} \text{四} \\ \text{三} \end{array}$  rather than  $\begin{array}{c} \text{四} \\ \text{三} \end{array} \begin{array}{c} \text{X} \\ \text{三} \end{array}$  (the way it has been pictured in publications heretofore).<sup>⊗</sup> Now, if we look at  $\begin{array}{c} \text{三} \\ \text{X} \end{array} \begin{array}{c} \text{四} \\ \text{三} \end{array}$  in the mirror, we see  $\begin{array}{c} \text{四} \\ \text{三} \end{array} \begin{array}{c} \text{五} \\ \text{X} \end{array}$ , yielding a perfect form for he ("grain"), a perfect form for wu ("five"), and a reversed ji ("record") at what has now become the top right. This is how a raised impression would appear ~~when~~ the seal were applied to a soft, malleable material such as mud, clay, or wax. The Anan seal inscription is, thus, likely to have been engraved in reverse/mirror orientation.

The Niji seal inscription, however, is clearly engraved with normal orientation:  $\begin{array}{c} \text{司} \\ \text{未} \end{array} \begin{array}{c} \text{府} \\ \text{印} \end{array}$  (using the modern forms of the graphs for easy legibility). If this were impressed on a soft, malleable material, the resultant raised characters would be in reverse/mirror orientation. Thus, the Niji seal inscription must actually have been intended for use as a seal model/mold/pattern.

I suspect that the anomalous perpendicular

↳ So as to yield impressions in their correct orientation.

⊙ But still acceptable in its reversed form.

⊗ Prof. Qiu no longer accepts that  $\begin{array}{c} \text{四} \\ \text{三} \end{array}$  necessarily means he ("grain"). He draws the graph thus:  $\begin{array}{c} \text{四} \\ \text{三} \end{array}$ . Close examination of the available photographs, however, reveals that there is extensive damage in what I now consider to be the top right corner of the seal. The break in the central stalk and the rightward curvature of the upper  $\text{⑪}$  right arm are illusory results of the damage.

line to the right of the graph for grain (𠂇) may have been due to confusion over which direction the central stalk should bend. Note that, on the Anan seal inscription, it bends down perpendicularly all the way to the right. (47)

The term Si he fu (of official position) ~~Si he fu~~ Si he fu (Storehouse of the official [in charge] of grain) does not exist in Chinese history books or bureaucratic rosters. I believe, therefore, that the tradition of carving lignite seals having to do with grain administration was a Central Asian practice. There is no doubt whatsoever, though, that the Nija seal is carved with small seal forms of the characters that were current in ~~the~~ the heartland of China during the Han Dynasty.

### Conclusion

I do not claim to have deciphered <sup>\*</sup> the Anan script because we obviously do not have the entire script yet. One seal inscription with three graphs does not a script make! What I do believe that I have accomplished, however, is to provide a useful framework for understanding discoveries relating to this most intriguing artifact. <sup>future</sup>

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\* Since its publication in the Philadelphia Inquirer and the New York Times, Fred has received many unsolicited "decipherments" of the Anan seal inscription (2) based on numerous different languages and scripts.

# Bibliography for the Niyā seal

See Wenwu, 6 (1960); 7-8 (1962); 7 (1975); and 9 (1984).

A good summary of <sup>the relevant portions of</sup> all these articles may be found in Wang Rencong 王人聰, ed., "Xin chu lidai xiyin ji shi [Collected Explanations of Newly Unearthed Seals from Successive Dynasties]" 新出歷代璽印集釋, Xianggang Zhongwen Daxue Wenwuguan zhuankan [Special Issue of the Museum of Hong Kong Chinese University] 香港中文大學文物館專刊, 3 (1987), p. 55 and "Xin

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→ chu lidai xiyin ji lu [Collected Records of Newly Unearthed Seals from Successive Dynasties] 新出歷代璽印集錄, Ibid., 2 (1982), p. 86.