

# ICWA LETTERS

Since 1925 the Institute of Current World Affairs (the Crane-Rogers Foundation) has provided long-term fellowships to enable outstanding young professionals to live outside the United States and write about international areas and issues. An exempt operating foundation endowed by the late Charles R. Crane, the Institute is also supported by contributions from like-minded individuals and foundations.

## TRUSTEES

Carole Beaulieu  
Bryn Barnard  
Richard Dudman  
Peter Geithner  
Kitty Hempstone  
Thomas Hughes  
William E. Knowland  
Samuel Levy  
Stephen Maly  
Mildred Marcy  
Peter Bird Martin  
Joel Millman  
Carol Rose  
John Spencer  
Edmund H. Sutton

## HONORARY TRUSTEES

A. Doak Barnett  
David Elliot  
David Hapgood  
Pat M. Holt  
Edwin S. Munger  
Richard H. Nolte  
Albert Ravenholt  
Phillips Talbot

**The Institute of Current World Affairs**  
THE CRANE-ROGERS FOUNDATION  
4 West Wheelock Street  
Hanover, New Hampshire 03755

ASA-22 1997  
EUROPE/RUSSIA

*Adam Smith Albion is an Institute Fellow writing about the republics of Central Asia, and their importance as actors within and without the former Soviet bloc.*

## Sardoba Hunters, Part I

TASHKENT, Uzbekistan

July 17, 1997

By Adam Smith Albion

### THE WHEEL AND THE BUCKET

Had you been taking the air on the Labi-Hauz, Bukhara's fine central plaza, one star-encrusted evening in July 1997, you might have observed the weary tread of two grimy and sunburnt travelers heading for the outdoor teahouse.

The first of the pair was a small Uzbek man in his early forties. His feet were heavy, but he still managed to give the impression of scurrying. Fatigue had somewhat dampened, but could never douse, his abundant nervous energy. A sharp nose and chin added to his ferret appearance. He wore his hair short-cropped. His skinny frame was bundled in a thickly padded cotton robe, or *to'n*, that reached to his knees. As he talked, his hands rotated restlessly in the wide sleeves of the *to'n* like the shafts of an electric mixer.<sup>1</sup>

At that moment he was speaking and gesturing with great animation. His tone was disputatious. His companion, noticing how the little man had been bathed in sweat all day, had rashly suggested that a padded robe was a willfully perverse choice of dress when the noonday temperature topped 115 degrees. Angrily, he disagreed. During the altercation, the elaborate politeness demanded by Central Asian etiquette was forgotten. He hated to be challenged, whatever the subject — so however minor the point or small the stakes he always defended his corner with the scrappy determination of a polecat or (more to the point) a frustrated academic, which is what he was.

"Far from being *willfully perverse*," he was insisting acidly, "a more reasonable and comfortable mode of attire would be impossible to imagine. Our ancestors, who developed the *to'n*, bequeathed it to us as the most appropriate costume for Uzbekistan's semi-desert. In this, as in so many other things, they proved a good deal wiser than today's degenerate generation, who think the answer to sunshine is Western-style shorts.

"Of course the *to'n* induces heavy perspiration," he continued, "but it is precisely because I *did* perspire so profusely that the layer of sweat enclosed me in a kind of evaporative cotton refrigerator, and kept me cool and fresh all day."

His companion, admittedly, was neither cool nor fresh. He did *not* move quickly, and scurrying was out of the question. In fact his lanky body drooped like a willow-tree. Sartorially he merited no special attention; he was dressed in standard Uzbek garb: a black-and-white striped shirt, long black trousers and a *tubyeteika* (skullcap). But his eyes were blue and his Caucasian features did not

<sup>1</sup> How do you pronounce "to'n"? These apostrophes appearing in strange places conform to newly adopted Uzbek transliteration rules from Cyrillic to the Latin alphabet. An apostrophe after a vowel means "long vowel." So "to'n" is approximately "ta-awn." (apostrophes also can appear after "g" indicating a kind of gargle.)

conceal his exasperation at having the superior wisdom of the ancients rehearsed for his benefit for the twentieth time that day.

Certainly the sages' alleged know-how had momentarily failed them when they had prescribed a brimless skullcap for a sun-drenched country, and the popularity of heat-absorbing black fabrics was simply unaccountable. At any rate, this combination had afforded *him* no relief during a punishing afternoon on the Karshi steppe.

These two, who had come to the Labi-Hauz to replenish their strength after a long drive, were Assistant Professor of Archeology Asror Nizomov of Tashkent University and myself. After six days on the road together our relationship had grown rather frictional.

However, once established on a raised wooden bedstead (*krovat'*) at the teahouse, we felt marginally less hostile toward one another. The Labi-Hauz is the serenest spot in Uzbekistan, arranged graciously around a large reflecting pool fringed with mulberry trees. Under its balmy influence, the contentious mood died away. The moon floated on the dark surface of the pool, as it must in all the best oriental settings, and I let my thoughts float with it.

Asror meanwhile pounced on the group of *oqsoqols* or "white-beards" sitting on the next *krovat'*. Since a teahouse is always the medium for local news and gossip, he set about interrogating the old men about neighboring farms and villages (*qishloqs*): What was the condition of their wells? How salty had the water become nowadays? Had anyone turned up any old drainage canals during this year's plowing season? Were there any stone or brick remains in the vicinity that might be related to ancient systems of irrigation? And finally, the prize of prizes: had they ever come across, or detected traces of, any *sardobas*?

It was characteristic of Asror to turn first to *oqsoqols* for information in this way. It seemed that the typical Central Asian respect for elders had merged in his mind with a form of "ageism" — a conviction that no one under sixty really knew anything. Thus his method of research often consisted of wandering around fields haphazardly interviewing anyone who looked old enough to have grandchildren, whereas my instinct would have been to make a bee-line to someone more official — say, the administrator of a collective farm.

On one occasion, precisely this situation arose. On my insistence, we were driving to one such farm, the Amir Timur sh/x (*i.e.*, *shirkat xo'jaligi*, or "collective farm") near Jizzak, to make inquiries about an aqueduct we had heard about in the area. Suddenly Asror spotted an *oqsoqol* resting on his stick at a bus stop. Naturally, he brought the car to a screeching halt.

Conversation with the old gentleman was rather slow

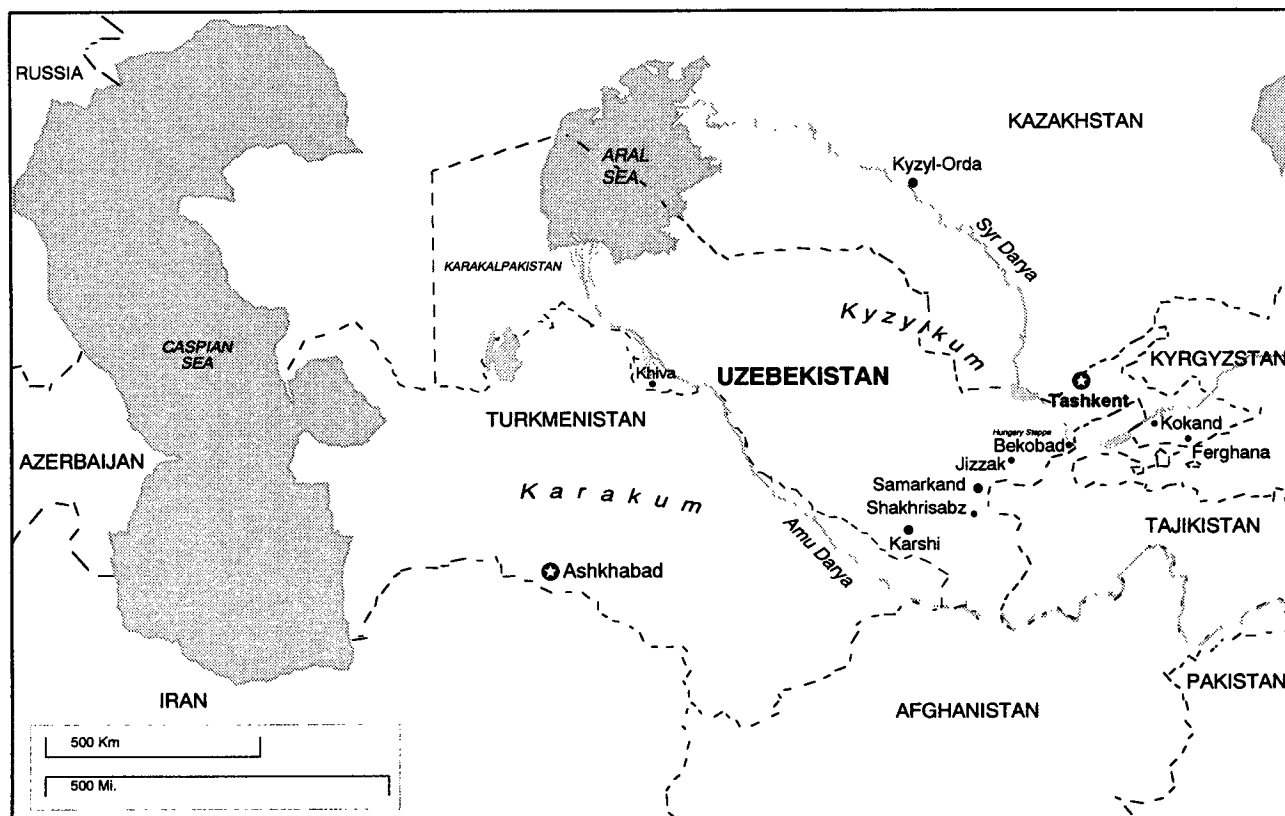


*Asror interrogates an oqsoqol*

but, I must confess, ultimately fruitful. The directions he provided to the aqueduct proved accurate, and what's more he threw in his recollections of how it was restored in the 1950's: the Soviet authorities forced all the able-bodied young men from the local *qishloqs* (himself included) to labor for three days without pay. The privilege of knowing that they were building socialism presumably took the place of an emolument. Thus Asror and I were saved the need to go to the farm. We probably saved two hours in this way, since transporting our informant only took us five kilometers out of our way, and we were not required to submit to the elaborate hospitality that the farm functionaries would surely have felt obliged to provide for us, and that we would have felt obliged to enjoy.

Asror's view of the Uzbek past was an extension of his elaborate respect for the *oqsoqols*. Simply stated, he revered the old. Old ways were best, since custom was the treasury of centuries of tried and tested ideas. Folk wisdom, which he had imbibed with his *qishloq* upbringing, was an unfailing source of pleasure to him. He reeled off dubious recipes for insomnia, snake-poison antidotes, love potions and cures for impotence in such detail that I grew convinced, rather uncharitably, that he had tried them all.

One day he took us miles out of our way to pay his respects to a shaman woman who was the living embodiment of folk wisdom. She functioned as the county doctor. Her fame was solidly rooted in her purported success in treating local children (including Asror's) for a mysterious, widespread ailment that contracted the glottis and rendered breathing difficult. In her front garden half-a-dozen anxious parents awaited their turn, comforting their wailing infants. Her method of treatment consisted of forcing two fingers liberally coated in a brown jelly deep down the child's throat, then reciting some spells, and rounding off the exercise with



a prayer and good spanking. For this service she charged 10 *sum* (\$0.07). I helped myself to the jelly when her back was turned. It was a beef-stock concoction that tasted like Britain's Marmite.

Shamanism survives as a remnant of pre-Muslim religion throughout Central Asia, where various forms of syncretism are not uncommon. Asror did not consider his adherence to this form of "alternative religion" to be in any way at odds with his sincere faith in Islam. Our progress was regularly punctuated by prayer stops, when he would lay out his mat by the roadside while I waited for him crouched in the shade of one of the saxual bushes that dot the desert-steppes of Central Asia. He eschewed liquor, and he knew his Koran. At the mausoleum of sheikh Shamseddin in Shakhrisabz I saw him roundly scold a holy man sitting on the door-stoop mumbling versus from the Koran for money. It seems he jumbled up the Arabic words and ruined the efficacy of the blessing — not too surprising after years of rote repetition, although countless pilgrims and casual visitors had presumably never noticed. Asror paid him anyway, though.

In sum, Asror's system boiled down to this. Traditional (that is to say, "handed-down") practices, illuminated by Islam, offered the Uzbeks a coherent and comprehensive body of knowledge and instruction on how to live a good

life. Under the onslaught of the modern world, the Uzbek spirit was decaying.

To label him a conservative, or a "fundamentalist," or even a retrogressive old fogey, does not quite capture the man. The problem is that quixotic campaigners against the "march of progress" and "the tide of history" are not paid much mind nowadays in the West. Belief in a Golden Age is not trendy, and people do not like it when Harold Bloom tells them they have spiritually declined. Perhaps a century ago Utopian philosophers could limn a happy past, evoke societies that lived in better equilibrium with the Ground of Being, and escape ridicule. But to do so today smacks of obscurantism and wishful thinking. So I began to think of Asror as an "Uzbekophile" in the quasi-mystical sense that Dostoyevskii and Kireyevskii were "Slavophiles." Whereas they were Orthodox and morally opposed to Western notions of "innovation" (*zamorskaya khitrost'*), he was Muslim and deeply distrustful of Soviet conceptions of progress and "improvement."

Like them, he was a terrific romanticizer of the past. Consequently he disliked anything readably traceable to Soviet influence. In this vein, his lecture on the practicality of padded cotton robes had picked up one of his favorite themes: the solid good sense that previous generations had displayed in managing their daily lives.<sup>2</sup> Set against that were the imported practices of the Russians, dog-

<sup>2</sup> Shorts, trousers for women, Soviet-style apartment blocks, vodka and viticulture (introduced by Russian colonists in the last century) were all bees in his bonnet.

matically grafted onto Uzbek society without proper consideration for local conditions.

As I mentioned, the idea that material development is linked to spiritual degradation is not very popular among our prosperous capitalist nations. But there is one issue that *does* bring out whatever is left in the West of the Utopian temper. It flushes out the last of the West's quixotic mystico-idealists, and gets them about as exercised about the fate of modern culture and society as Asror. The issue I refer to is the destruction of the natural environment. Greens, Greenpeaceniks, parkies (*i.e.* defenders of national parks), Gaia-ists and eco-catastrophists all bat around ideas relating environmental and cultural decay in ways Asror would find familiar.

The gravamen of his charge against Communist "progress" was the ruination of the water table in Uzbekistan, accompanied by the likely disappearance of the Aral Sea. The Uzbeks and their ancestors had learned to live on the difficult, dry country that Providence decreed for them by developing rational irrigation practices and conserving water. These practices were the economic base for their culture and traditions.<sup>3</sup> Now a so-called progressive Germano-Russian crackpot ideology had engineered an ecological catastrophe that had thrown the Uzbeks (and their neighbors, especially inhabitants of the Uzbek autonomous region of Karakalpakstan, abutting the Aral Sea) into *disharmony* with their land and unbalanced everything. Hence it was not surprising that traditional life was losing its roots, since their ground was dying beneath them.

He pushed his notion of *disharmony* to an extreme. At Tashkent University, where he lectured soberly and factually on the history/archeology of irrigation and water-resource management in Central Asia, he kept his philosophical propensities in check. However, he taught an additional extension course at the Conservatory, where he made his views connecting cultural to ecological disintegration explicit. He propounded the idea that good music was a manifestation of a healthy environment. Consequently, a contaminated environment was bound to produce degenerate music. Plants nurtured in wholesome soil bloomed and prospered, he pointed out, while plants watered in filth and garbage grew up etiolated and sickly — a fair summary of his opinion of The Smashing Pumpkins.

Illustrations of this thesis included Asror's performing traditional songs to his own accompaniment on a two-stringed *dutar*. By his own admission, his students at the Conservatory, glued to their Walkmans, became increasingly resentful and gradually dwindled away.

(Their loss! Personally, I have enjoyed pondering this outré proposition. *Musica sana in corpore sano* — why not?

I imagine that Beethoven's *Pastoral Symphony* and Richard Strauss' *Alpine Symphony* would have been composed differently in an age of chemical pollutants and acid rain, not to mention Chopin's "Raindrop" prelude. Debussy's *La mer* loses a lot if the ocean waves are roiling with garbage. Asror's theory is crazy, of course. That is not its main failing! Alas, it is not eccentric enough. All good theories in metaphysics (and physics) are kooky at base. The physicist Wolfgang Pauli used to say that there are some ideas that are so bad they are *not even* wrong. Asror's students were offended but not outraged. If only he had been less timid and come forth with a really absurd argument — say, that every good tune is part and parcel of the Program Music of the Universe — *then* the exercise might have yielded something truly profound, even Pythagorean.)

Taking all the foregoing into account, when Asror mentioned that he was setting out on a field trip around Uzbekistan's steppes and oases, I judged that he would be an intriguing enough companion to be worth a week of my time. Nor was I wrong. We fought like cats and dogs, but we were never bored. The objective of the expedition was, of course, to investigate past methods of storing and distributing water, his professional bailiwick. "And then you will appreciate how wise our ancestors were," he promised. So much, then, for the background to Asror.

\* \* \*

Back on the Labi-Hauz, Asror's interview with the *oqsoqols* was drawing to a close. Overhearing the parting formalities, I reluctantly roused myself from lunar reveries and turned to face him. He was busying himself with the teapot. He looked disappointed.

"What did you find out?" I asked.

He shook his head. "No *sardobas*, Adamjon."

"I'm sorry."

We sat in silence for a few minutes contemplating the pool. It was obsidian black and very still, until a group of boys across the plaza stripped to their underwear and shattered the tranquillity by plunging in with shouts and laughter. Then Asror's thoughts broke the surface as well — it was inevitable that the proximity of a well-arranged body of water should move him to speech sooner or later — and he exclaimed enthusiastically:

"Now, the construction of a pool (*hovuz*) — that's an interesting subject! Would you like to hear how a *hovuz* is made?"

"I would, very much, later," I replied weakly.

<sup>3</sup> His assumption that culture was a superstructure built on an economic foundation was, ironically, a consequence of his latent Marxism. Cf. remarks on Marx and below.

Asror was pleased. "I will give you a very good lecture on both kinds of pools. There are *hovuz* for people, and *molhovuz* for livestock. It will make an important section in your field-book, Adamjon!"

Lectures were a regular feature of the trip. He took his job as my hydrology mentor seriously and found it difficult to disengage himself from a didactic habit of mind. So his preferred method of instructing me was to stage improvised lectures at odd moments. Archeological ruins made favorite pulpits, for they gave him stones from which he would peer down on me and expatiate on the subject at hand. The notes I took during these lessons, supplemented by whatever jottings I compiled in the course of our journey, comprised what he called my "field-book."

As we were leaving the Labi-Hauz, he made a striking observation. We were passing beside the Nadir Divanbegi madrasa, its dazzling mosaic portal dimly visible above us. The other buildings of central Bukhara's grand architectural ensemble loomed behind the trees. They stood as an impressive testament to medieval Uzbek (and Tajik) culture. He stopped and said, "And what made all this possible?"

The question was rhetorical, so I let him go on: "Why were they able to build a marvelous city like this? Because they irrigated the oasis and brought water here. That permitted society to sustain itself, so then people could congregate and diversify and build. For civilized life depends on water. Civilization dawned in Mesopotamia because the Babylonians learned to draw rich, muddy water from the Euphrates and irrigate their land. And what made *that* possible? — I think about it sometimes. How did irrigation begin? What is the simplest irrigation device?"

"A canal?" I hazarded.

"No, Adamjon! A canal is a very sophisticated construction. Try digging one and you will see. The simplest irrigation device is a *bucket*. Don't laugh! If you remind me, I will give you a very full and interesting lecture on buckets," he added without irony. "You bring your bucket to the river, fill it with water, carry it to your field and tip it over the crop. That is the essence of irrigation. And irrigation is the origin of civilization..."

"That is why it is an error to maintain that the first great human invention was the wheel. The wheel was an afterthought! Mesoamerican cultures managed without it altogether. But the bucket — that is fundamental. From this we must conclude that mankind's founding genius was the inventor of the bucket."

Now *here* was an idea crazy enough to merit serious

attention, and I copied it to the head of my field-book.

## HYDRAULIC CIVILIZATIONS, FROM MESOPOTAMIA TO MARS

One half of the world's population lives by the seashore or along rivers and estuaries. This fact is a simple reminder that human collective life is highly dependent on direct, reliable access to water. The other half of humankind is required to be more creative about finding ways to bring water to them. One of the first devices for delivering fresh water was the *shaduk*, a leather bag hanging from a pole, still encountered in Egypt. So perhaps the invention of the bucket really was a crucial leap forward at the dawn of world history. I leave this point to the anthropologists to debate. However, Asror's associated speculation, relating the rise of civilization to the development of complex forms of irrigation technology, is not new.

The well-known thesis of Karl Wittfogel's book *Oriental Despotism* (1957) may be right, and it may be wrong. I incline to the latter view, but this in no way diminishes my pleasure whenever I read it.<sup>4</sup> Wittfogel's ingenious argument runs as follows. The first flourishings of civilization were, as far as we know, in Mesopotamia and Egypt. These were riparian societies where cultivators relied on irrigation. But irrigation must be a community activity. Since a canal never waters only one individual's field, no man is an island. The planning and maintenance of irrigation works requires collective effort and a coordinated workforce. In ancient times these functions could initially be organized at the village level. But it was not long before projects grew to encompass several villages, with the attendant need for new administrative bodies to oversee the work.

It is not hard to see how these bodies multiplied and consolidated to become governments. Government's original purpose was to force peasants to keep an extensive irrigation system running — the despotism of the book's title. However, as the agrarian base grew a surplus of food was produced. The excess made possible the formation of towns, where non-cultivators could pursue diverse professions — merchants, soldiers, scribes: civilization, in other words. And the rest, of course, is History.

Wittfogel's elegant theory is an account of the genesis of prehistoric hydraulic civilizations — complex hierarchical orders that evolved from a need for careful water management. (The theory has inadequacies: how, for example, does it explain Mesoamerican and Peruvian societies where irrigation was much less important?) True or not, however, the thesis is a valuable heuristic device for focusing attention on water and irrigation systems as literally the fountainhead of many world civilizations — in China, Persia, India, the Near East and

<sup>4</sup> Many of the best books are wrong. Wittfogel's has its place on my shelf among Pirenne's *Mohammed and Charlemagne*, Lenin's *State and Revolution* and Schrodinger's *What is Life?*

Central Asia. It also sets the mind thinking about the role rulers play in administering, developing, and occasionally by their negligence ruining those systems. Needless to say, one of the examples I have in view is Central Asia's experience under the USSR.

One notable correspondence between Moscow's imperium in Central Asia and Wittfogel's version of oriental despotism was the way Soviet authorities mobilized mass labor to maintain the irrigation infrastructure. All important undertakings relied on "people's construction." The term was a euphemism for toil without pay. Despite the fiction that enthusiastic peasants participated voluntarily, the *corvée* was of course backed up by force. The restoration of the aqueduct mentioned above by the *oqsoqol* was one example of "people's construction."<sup>5</sup>

Even before the communists, though, a *corvée* system had been established in Central Asia to ensure the upkeep of irrigation. I mean the annual *hashar* (see below) when peasants were press-ganged to clean out their lords' drainage canals. In fact, from the lords' point of view, one of the main reasons for the otherwise inexplicable existence of peasants was to dredge their canals. It is a matter of common notoriety that the monarchs of Central Asia paid more attention to their horses than to their subjects. Peasants, after all, were merely chattel whose taxable labor supported the khan's courts (and stables). Farmers cultivated the fields on his sufferance since, strictly speaking, only he had the right to own land.<sup>6</sup> Thus the *only* regular intercourse that the peasantry had with their princelings were (1) the musters to work on the water channels, (2) visits by tax-farmers, (3) visits by procurement agents scouting for the lord's harem.

The lord's holdings naturally stood out for being rich and well irrigated. Hence the saying: "A pauper's land is traversed by a road; but a canal flows across the land of a prince (*bai*)."<sup>7</sup> However, canals require cleaning, espe-

cially drainage canals, which need a good scouring every year. The demand for peasant labor was cast as a call to an *hashar*. The *hashar* was a traditional village institution in Central Asia before the khans (and later the communists) coopted it for their own ends. The *hashar* meant mutual cooperation, whereby members of one family or one community turned out to help each another complete a significant building project. Like a barn raising, the event was treated as a festivity, topped off with the traditional feast of *plov* and dancing after the work was done.

Once applied to widespread irrigation work, the *hashar* became a sort of annual All-Oasis Drainage-Canal Cleaning Party. However, pitching in as part of a village-wide holiday is quite different than trudging to work on behalf of your *bai*. It is a distinction implicit in Wittfogel: service to one's community vs. service to an impersonal overlord. The ballooning of obligations encompassed in an *hashar* parallels the process by which village economies are harnessed together to cope with a growing irrigation infrastructure, and the reins of power are slowly but surely gathered into the hands of a faceless state.<sup>7</sup>

Thus the *hashar* was an institution already in place for the Soviets to exploit when they arrived. They greatly expanded its scope. "People's constructions" of all sizes became known as *hashars*. Even the rebuilding of Tashkent after it was leveled by an earthquake in 1966 was labeled an *hashar*. However, the most famous of them all was probably the construction of the Great Ferghana Canal. In the summer of 1939 — *i.e.* when the spring crops had been sown and the autumn harvest still some way off — 180,000 predial Uzbek and Tajik laborers were assembled and handed spades. Their task was to dig a canal 269 kilometers from the bank of the Syr Darya river to the Ferghana valley. They set to work buoyed by love of socialism and displaying Stakhanovite feats of endurance that became the stuff of (official) legend. The work was completed in 45 days.<sup>8</sup>

<sup>5</sup> A related duty, unpaid of course, imposed on Soviet citizens was "people's picking" (my phrase) whereby city folk, especially students, were bussed into the fields for two months and obliged to pick cotton. Those who refused were not punished physically — this was white-collar forced labor, after all; they were threatened with demotion at work or rustication from university.

<sup>6</sup> Actually this "right" flies in the face of both *shariat* (Koranic law) and *adat* (Muslim local custom). They enunciate a less autocratic, even Lockean principle — that land rightly belongs to whoever irrigates it, adding his labor to make it more fertile. However, jurists at the monarch's court made the clever argument that land might *belong* to whoever irrigates it, but the ruler retained sole legal *title* to it — a linguistic sleight-of-hand of the sort that has made lawyers hated everywhere.

<sup>7</sup> Marx referred to *hashars* as "public works" and explicitly linked them to the workings of despotic ("Asiatic") government. Since irrigation was a basic necessity "in the East," he wrote, "where civilization was on too low a level and where the territory extended over too vast an area to be conducive to voluntary associations, [irrigation] made the intervention of government, with its centralizing powers, imperative. Hence arose the economic function that all Asiatic governments were forced to undertake, particularly the function of organizing public works" ["British Rule in India," in K. Marx and F. Engels, *Sochineniya* (Moscow 1957), vol. 9, p. 132]. Many of Marx's insights prefigure Wittfogel, whose very arguments that social hierarchies/governments were superstructures determined by an economic foundation, incorporate Marxist assumptions.

<sup>8</sup> The director of *Sredazgiprovodkhllopok* (the institute coordinating irrigation and land-reclamation work throughout Soviet Central Asia) keeps photographs of the Ferghana *hashar* in his office like a talisman. Was it such an extraordinary achievement? The numbers, after all, imply that each person dug at the rather unheroic rate of three centimeters per day. On the other hand, just standing outdoors is a feat in Uzbekistan during the summer, not to speak of toiling for 45 days. Perhaps in the final analysis, the most impressive element in the story is the part we take for granted: that a totalitarian state could muster at will 180,000 people and chain them to a project for as long as required.



A more humdrum *hashar* was one that maintained the Sokh river irrigation fan in east Uzbekistan. Asror's fossicking around even turned up an ancient *oqsoqol* who recalled how his father had been assigned to work there in the thirties. Twice a year in early spring and late autumn the peasants were forced from their fields to labor on the main canals and dikes. These fed the smaller arteries that watered their own land. The semi-annual obligation was known (in Kokand dialect) as *payishkan*, meaning "swollen heels/ worn down feet." For, as the villagers used to say in their no-nonsense way: "If your feet aren't worn down and your heels don't swell up, you won't get any water from the Sokh."

\*\*\*

*Be thou glad, oh thirsting Desert; let the desert be made cheerful, and bloom as the lily; and the barren places of Jordan shall run wild with wood.*

—Isaiah xxxv,1

*If I were called in /To construct a religion/I would make use of water.*

—Philip Larkin

SUV — HAYOT MANBAI: "Water is the Source of Life." This truism is proclaimed in giant letters above the *To'sinsoi* ("Cross-beam Brook") dam north of Samarkand. One also hears it repeated in ordinary conversation, for it has the force of a proverb in Uzbekistan. I am informed there are equivalents in all the languages of Central Asia. A competing adage, equally widespread, is "Bread is life." But there cannot even be bread without water.

The Central Asians have not gone so far as to make a religion out of water, but it still carries deep emotional resonances. Water, like bread, has a sacrosanctity about it (one must never place bread on the table upside-down, for example) which suggests that these staples are considered less a *right* than a *privilege*.

One expects water to be taken seriously wherever it is scarce, and its importance is taken for granted by agricultural people everywhere. Nevertheless, here water elicits feelings of respect and gratitude — even in the cities (particularly in the cities, I should say, where it is often shut off) — that have vanished in our own blasé culture. Of course, everyone gets lyrical at times about bubbling brooks and April showers and the rolling main. But I ask those who say grace before they break bread: Do you also remember to thank the Lord for your glass of water?

Much of Central Asia is dry indeed. Topologically, the region is an immense bowl hemmed in by mountains and highlands. As a result, its rivers tend to run down the sides of

the bowl and collect toward the middle. This is where the area's irrigated lands are concentrated. The majority are on the territory of Uzbekistan. Here, too, most of the oases are to be found — green, life-supporting islands scattered among steppes that are flat and featureless save for a brief flowering in springtime, and two merciless deserts, the Red and Black Sands. It is not coincidental that each of the pre-modern hubs of civilization — Samarkand, Tashkent, the Khanates of Khiva and of Khokand, and the Emirate of Bukhara — define one of the major oases. This is the background for another venerable Central Asian saying: "Where the water ends, the land ends" — habitable land, that is to say.

Between these centers plied caravans of merchants, bands of pilgrims, nomads, bandits and very rarely individual travelers, all negotiating the scorched land as best they could. One Chinese adventurer named Chan-Chun described how he crossed the Syr Darya river in 1221 and found himself confronted by 100 kilometers of steppe extending southwest, absolutely devoid of grass or water. He was obliged to make the passage at night.<sup>9</sup> Armies also traversed the steppes all too regularly, since the various Central Asian principalities were continually at war. They never seem to have done much damage to one another, though.<sup>10</sup> Their best defense proved to be the empty wastes that buffered them by presenting too many logistical problems to a putative invader. The terrain protected them not only from themselves but also, for a while, from the encroachments of the Russian empire. Khiva's remote location served it particularly well: five separate Russian expeditions failed to capture it — or even reach it — before it was taken at last in 1873.

Not surprisingly, many Central Asian poems, songs, epics and fairy tales celebrate the day when the desert will be made to bloom. The classical Chaghatay poet Alisher Navoi's verse-epic *Farhad and Shirin* (1484), told in 5,600 rhymed couplets, is the most distinguished treatment of this theme. The story's fame extended well beyond Central Asia; it was popular in the Middle East and other arid lands. The narrative takes place on that very portion of steppe that Chan-Chun encountered, the notorious "Hungry Steppe"<sup>11</sup> between Tashkent and Samarkand. The plot, in summary, runs as follows:

Farhad, a poor stonemason, glimpses the face of a beautiful princess in a magic mirror and searches the world to find her. One day he arrives in Begovat [modern-day Bekobod], a city on the Hungry Steppe, where the trees and vegetation are sickly and stunted for lack of water. He learns that the niece of the sultaness has offered herself in marriage to whoever can bring water to their land. He tries to help the townspeople smash a canal out of rock, but they fail.

<sup>9</sup> *Vekhi vremyon*, ed. E.V. Rtveladze (Tashkent, 1989), p. 45.

<sup>10</sup> The notable exception was the Bukharan Emir Nasrullah's capture of Kokand in 1842.

<sup>11</sup> So nicknamed, not affectionately, by the early Russian scientific expeditions (*Golodnaya step'*). To Uzbeks it is the Mirzachol steppe (*Mirzacho'l cho'li/sahrosi*). Its area is about one million hectares (2.5 million acres).

Watching from a tower is the princess. She is Shirin, the girl of the mirror. Observing Farhad's superhuman strength, she falls in love with him.

One day the Shah of Persia comes to Begovat to seek Shirin's hand. When he is refused, he threatens to raze the city with his army, but Farhad defends it single-handedly. The Shah resorts to a ruse. He proposes to win Shirin by irrigating Begovat from the Syr Darya river. Farhad sets out into the steppe to compete with him, literally moving mountains in order to build a dam to divert the Syr Darya. But that night the Shah visits Shirin and bids her look out onto the plain. He has laid out a long trail of rush mats, which look like a river in the moonlight. Shirin is fooled into believing the steppe is irrigated, and the wedding is conducted forthwith. The wind brings Farhad the news, and he rushes back to Begovat in despair. It is now morning; the Shah's trick has been discovered; Shirin runs out to meet Farhad. But they cannot reach one another — they are separated by a huge torrent of water flowing from the dam Farhad has made. Stricken with grief that he is too late, Farhad turns into a rock, while Shirin literally dissolves into a stream of tears.

Some five hundred years after Navoi, the hero's legendary accomplishment became reality. Today over 300,000 hectares of the Hungry Steppe have been irrigated. Farhad's fame lives on: two canals and one dam on the Syr Darya are named after him.

The choice of name is significant — more than a passing allusion to a charming story. Soviet strategists were not ignorant of the hold that water had on the imagination of Central Asia. If the Soviets could extend irrigation in the region, the benefits that would accrue to them would be two-fold: (1) *economic*, by increasing the cotton crop, but also (2) *psychological*, by impressing on local populations that the age-old dream of watering the steppes had been achieved at last through communism. Thus irrigation brought the communists prestige; its propaganda value was such that Lenin called it "the backbone of Soviet power in Turkestan."

Immediately after the Civil War (1919-22) Soviet engineers set to work on the irrigation system. Not surprisingly, one of the first areas they focused on was the Hungry Steppe.<sup>12</sup> They were modern-day Farhads, new supermen about to tackle the impossible. Farhads had been a stonemason; were not they representatives of the working class too? He had come from afar to save Begovat; their ministrations would bring prosperity to local people far and wide. Surely, then, their monumen-

tal undertakings could not fail to win over Central Asia, just as Farhad's Herculean vigor had impressed and won the heart of Princess Shirin?

Somewhere it all went wrong. "Soviet Communist rule has bequeathed a legacy of unparalleled widespread environmental degradation, impoverishment, and mismanagement. This may prove to be one of history's bitterest condemnations of Soviet socialism — its wanton treatment of nature."<sup>13</sup> The monomaniacal drive to raise cotton production in Central Asia led to over-irrigation and waterlogging. Crop-dusting planes dumped pesticides and herbicides over fields (and cotton-pickers) in such careless abundance that they badly polluted the watertable between the Amu Darya and Syr Darya. Mineralization of the Amu Darya is so high that the tea in Bukhara is salty. By the time the river reaches Khiva the tea is almost undrinkable. Excessive diversion of water from the rivers feeding the Aral Sea has shrunk its volume by two-thirds since the 1960's. Saline dust storms whip across the exposed seabed, poisoning land as far off as Kyzyl-Orda in Kazakhstan and contributing to desertification. And on the alkaline wastes of that dead sea live Karakalpaks, once fishermen, battling typhoid, cholera, anemia and hepatitis, and looking forward in some cases to an average life expectancy of forty-two.

But the road to hell is paved with good intentions. In the corridors of the irrigation institutes and faculties of hydraulic engineering one encounters some of the brightest, most dedicated and sagacious people anywhere in the country. Gennadii Tsurikov, Technical Director of Sredazgiprovodkhlodok, inspired me with genuine excitement and interest in his life's work. This was no small feat considering the unpromising legend on his business-card: "Drainage Project of the Uzbekistan." But one quickly gathers from his encyclopaedic knowledge of water that he has participated in every major irrigation work in Central Asia. It seems there is no canal he has not dug, no dam he has not erected with his own hands.

"The Kashi Main Canal — that was an engineering challenge. Our source of water was obviously the Amu Darya. We had to build a cascade of pumping stations delivering 175 cubic meters of water per second to a height of 132 meters. So many technical problems to overcome, new approaches to be thought out... But in 1973 we had done it, and water spilled onto the Karshi steppe for the first time. After that we knew we could take on the Jizzak steppe. There the water had to be raised up to 178 meters, and the required flow was greater too, 180 meters per second. But the power was readily available — we could hook into the Jizzak electric power station nearby... My! Those were good days!" Nowadays

<sup>12</sup> A small start had already been made under the Tsarist regime, including the construction of two canals, the Emperor Nicholas I (completed 1898) and the Romanovskii (1913). But the Soviet attack on the steppe was much more concerted.

<sup>13</sup> *Central Asia: Its Strategic Importance and Future Prospects*, ed. Hafeez Malik (New York: St. Martin's Press, 1994), p.161. I recall reading a few years ago that the Academy of Sciences in Moscow judged 16% of the landmass of the ex-USSR — i.e. 3,577,998 square kilometers — an ecological disaster area.



there are no subsidies for grand projects. There is not even any money to repair the irrigation network in place, which is consequently falling to pieces. And ever since perestroika destroyed Soviet discipline, no one will work on an *hashar* any more for free, for sheer love (or fear) of socialism and Stalin!

When present-day realities crowd in on Mr. Tsurikov, he sits in his office as glum as a bear with a sore head. How did it happen? Was it hubris? Or the folly of technocrats caught up in their grand fantasies? Had he and his colleagues been simply overborne by zeal to dominate nature whatever the costs? They had been educated to believe their science permitted them to reshape nature to their requirements. But it turned out that the world was crafted before Soviet irrigation, and seemingly upon a different design. How were they to know? The level of environmental awareness had been very low — *political* consciousness had been high, and there were Five-Year Plans formulated in Moscow to fulfill! Accurate information on the ecological situation was compiled by departments quite separate from Mr. Tsurikov's and was closely guarded, especially when the forecasts were pessimistic. Anyway, predicting the future hadn't been his job; he was best as an on-site trouble-shooter addressing the needs of the moment.

Thus, like an artillery officer educated to perfection in the science of ballistics and tactics at the Military Academy, proud of his practical grasp of surveying and ordnance, and eager to serve his country, he took up his position on the battlefield and fed the cannon and fired it, taking a keen pleasure in the accuracy of his sightings and his fluent reloading, and only much later when the battle was over and the smoke was clearing did he look up and observe all the carnage he had wrought.

I find myself wondering what an historian of the far, far remote future — for whom the twentieth century is as dim a memory as Mesopotamia is for us today — will make of all this.

Imbued with the specificity of our times, we piously hope our descendants recognize the originality of our achievements, the uniqueness of our civilization. So it is always galling to be reminded that, viewed from a suitably distant perspective, all human history looks pretty much the same. Ancient dynasties with bewildering names and numbers rise and fall — we yawn and turn the page. Just as today's art-lover shrugs over the difference between an Egyptian Old Kingdom statue and New Kingdom statue, although they were carved over two thousand years apart, I fear my scholar of primitive Earth history will take the long view of the environmental catastrophe in Central Asia and not bother too much about the nice distinctions. She (or it?) will probably shrug over it as just one more of those occasions when a localized human civilization created a microclimate so hostile to itself that finally it wiped itself out.

Her lecture on the ecology of the Earth — delivered, I fully expect, at the University of Syrtis Major on Mars — might begin like this:

The collapse of human societies for ecological reasons, through the misapplication or overextension of the latest technologies, happened repeatedly in history although every time the attendant disasters were decried as "unparalleled." Anthropogenic devastation of the environment brought down the Harappans in the Indus valley around 3000 BC, wrecked Petra in classical times, killed off Teotihuacan and other classical pre-Columbian cultures in the tenth century AD, and had ruined much of the Sahel belt across Africa by the twentieth...

Turning to so-called hydraulic societies, it is a cruel irony that the cradle of civilization itself, Mesopotamia, was laid low in large part by inadequate drainage, waterlogging, and salinization of the soil. The famous city of Ur and the great Sumerian Empire itself suffered greatly because of the build-up of noxious salts wrought by irrational irrigation. They who lived by water, died by poor management of it. Another center of hydraulic civilization, Central Asia, crippled itself fatally through over-irrigation, massive salinization exacerbated by chemical pollutants, and soil erosion due to mismanagement of water inflows to the vanished Aral Sea. Projects to replenish the water by diverting rivers from Siberia proved elaborate pipedreams. The region's governments were too poor and incompetent to act decisively. Ultimately none of the richer nations were willing to bail Central Asia out; international agencies were too underfunded to make much impact and eventually pulled out. The land became increasingly unfertile and uninhabitable, beginning with Karakalpakistan, and populations migrated away or were ravished by disease until by 2300 much of the area between the Amu Darya and Syr Darya rivers had reverted to desert wastelands bearing only the faint imprints of ancient canals — much like the remains of canals here on our native Mars.

But here I desist; for when an ICWA fellow's speculations start trailing, liana-like, so far down the corridors of history that they are no longer Current, or even World, it is time to apply the pruning shears.

The ecology of Uzbekistan already too far gone to right itself — the heart of Central Asia destined to desertification in a couple of hundred years! Is this the author's love of absurd ideas asserting itself? The snuffing out of the Harappans and Sumerians and Petrans and Palmyrans — *that* is the sort of thing that used to happen to *other* societies, whose archeological sites we enjoy visiting and taking pictures of, while listening to the guide's curt description of their demise ("forest clearance and destruction of topsoils... salinization... ultimately unsus-

tainable") with astonishment that our ancestors had been so unwise. *We* are different.

But if I had ascended a Sumerian ziggurat around 2500 BC, I wonder if the atmosphere *would* have been so different from the sinking feeling that wafts through the corridors of Sredazgiprovodkhlopok. The priests of the ziggurat, responsible for placating the irrigation gods, probably sat in their offices, as glum as Mr. Tsurikov, and talked about the old days. If asked for an ecological forecast, they might have replied to me as laconically as he did: "Just trying to hold steady." But what upturns for the

better could seriously be expected? The Pharaoh of Egypt was offering too little financial aid, and positively too late. Nevertheless, did the priestly Sumerians in their ziggurat ever seriously contemplate the possibility that their civilization might come to an end? No, of course not!

For the concluding narrative of Professor Nizomov's peregrinations in search of sardobas, the author's transcription of his "field-book," and some illumination as to what a sardoba is, the reader is respectfully referred to ASA-23, "Sardoba Hunters, Part II." □

## Fellows and their Activities

**Adam Smith Albion.** A former research associate at the Institute for EastWest Studies at Prague in the Czech Republic, Adam is studying and writing about the republics of Central Asia, and their importance as actors within and without the former Soviet bloc. A Harvard graduate (1988; History), Adam has completed the first year of a two-year M. Litt. Degree in Russian/East European history and languages at Oxford University. [EUROPE/RUSSIA]

**Christopher P. Ball.** An economist, Chris Ball holds a B.A. from the University of Alabama in Huntsville and attended the 1992 International Summer School at the London School of Economics. He studied Hungarian for two years in Budapest while serving as Project Director for the Hungarian Atlantic Council. As an Institute Fellow, he is studying and writing about Hungarian minorities in the former Soviet-bloc nations of East and Central Europe. [EUROPE/RUSSIA]

**Chenoa Egawa.** An enrolled member of the Lummi Indian Nation, Chenoa is spending two years living among mesoAmerican Indians, studying successful and not-so-successful cooperative organizations designed to help the Indians market their manufactures, agricultural products and crafts without relying on middlemen. A former trade specialist for the American Indian Trade and Development Council of the Pacific Northwest, Chenoa's B.A. is in International Business and Spanish from the University of Washington in Seattle. [THE AMERICAS]

**William F. Foote.** Formerly a financial analyst with Lehman Brothers' Emerging Markets Group, Willy Foote is examining the economic substructure of Mexico and the impact of free-market reforms on Mexico's people, society and politics. Willy holds a Bachelor's degree from Yale University (history), a Master's from the London School of Economics (Development Economics; Latin America) and studied Basque history in San Sebastian, Spain. He carried out intensive Spanish-language studies in Guatemala in 1990 and then worked as a copy editor and Reporter for the *Buenos Aires Herald* from 1990 to 1992. [THE AMERICAS]

**Marc Michaelson.** A program manager for Save the Children in The Gambia, Marc has moved across Africa to the Horn, there to assess nation-building in Eritrea and Ethiopia, and (conditions permitting) availing and unavailing humanitarian efforts in northern Somalia and southern Sudan. With a B.A. in political science from Tufts, a year of non-degree study at the London School of Economics and a Master's in International Peace Studies from Notre Dame, he describes his postgraduate years as "seven years' experience in international development programming and peace research." [sub-SAHARA]

**Randi Movich.** The current John Miller Musser Memorial Forest & Society Fellow, Randi is spending two years in Guinea, West Africa, studying and writing about the ways in which indigenous women use forest resources for reproductive health. With a B.A. in biology from the University of California at Santa Cruz and a Master of Science degree in Forest Resources from the University of Idaho, Randi is building on two years' experience as a Peace Corps agroforestry extension agent in the same region of Guinea where she will be living as a Fellow with her husband, Jeff Fields — also the holder of an Idaho Master's in Forest Resources. [sub-SAHARA]

**John B. Robinson.** A 1991 Harvard graduate with a certificate of proficiency from the Institute of Kiswahili in Zanzibar, John spent two years as an English teacher in Tanzania. He received a Master's degree in Creative Writing from Brown University in 1995. He and his wife Delphine, a French oceanographer, are spending two years in Madagascar with their two young sons, Nicolas and Rowland, where he will be writing about varied aspects of the island-nation's struggle to survive industrial and natural-resource exploitation and the effects of a rapidly swelling population. [sub-SAHARA]

**Daniel B. Wright.** A sinologist with a Master's Degree in International Relations from the Nitze School of Advanced International Studies of the Johns Hopkins University, Dan's fellowship immerses him in southwest China's Guizhou Province, where he, his journalist-wife Shou Guowei, and their two children (Margaret and Jon) will base themselves for two years in the city of Duyun. Previously a specialist on Asian and Chinese affairs for the Washington consulting firm of Andrae, Vick & Associates, Dan also studied Chinese literature at Beijing University and holds a Master of Divinity degree from Fuller Theological Seminary of Pasadena, California. [East Asia]

**Teresa C. Yates.** A former member of the American Civil Liberties Union's national task force on the workplace, Teresa is spending two years in South Africa observing and reporting on the efforts of the Mandela government to reform the national land-tenure system. A Vassar graduate with a juris doctor from the University of Cincinnati College of Law, Teresa had an internship at the Centre for Applied Legal Studies in Johannesburg in 1991 and 1992, studying the feasibility of including social and economic rights in the new South African constitution. [sub-SAHARA]

# The Institute of Current World Affairs

FOUR WEST WHEELLOCK STREET  
HANOVER, NEW HAMPSHIRE 03755

## ADDRESS CORRECTION REQUESTED

Author: Albion, Adam Smith  
Title: ICWA Letters - Europe/Russia  
ISSN: 1083-4273  
Imprint: Institute of Current World Affairs,  
Hanover, NH

Material Type: Serial  
Language: English  
Frequency: Monthly  
Other Regions: East Asia; Mideast/North Africa;  
SubSaharan Africa; South Asia;  
The Americas

Chosen on the basis of character, previous experience and promise, Institute Fellows are young professionals funded to spend a minimum of two years carrying out self-designed programs of study and writing outside the United States. The Fellows are required to report their findings and experiences from the field once a month. They can write on any subject, as formally or informally as they wish. The result is a unique form of reporting, analysis and periodic assessment of international events and issues.

## ICWA LETTERS

ISSN 1083-4273

ICWA Letters are published by the Institute of Current World Affairs Inc., a 501(c)(3) exempt operating foundation incorporated in New York State with offices located at 4 West Wheelock Street, Hanover, NH 03755.

The letters are provided free of charge to members of ICWA and are available to libraries and professional researchers by subscription.

Executive Director: Peter Bird Martin  
Program Administrator: Gary L. Hansen  
Publications Manager: Ellen Kozak

Phone: (603) 643-5548  
Fax: (603) 643-9599  
E-Mail: ICWA@valley.net

©1997 Institute of Current World Affairs,  
The Crane-Rogers Foundation.

The information contained in this publication may not be reproduced without the writer's permission.