

ARCHAEOLOGY

"Very Truly Yours" — 2000 B. C.

Generations of Letter-Writers Have Written About The Same Old Things in the Same Old Way

LETTER writing hasn't changed much in 4,000 years.

Of course, lovelorn ladies in Babylonia had their sentiments written on bricks. There was no letter paper. In a quarrel, a missive could be turned into a missile quicker than you could say "Mesopotamia."

Of course, Babylonia's Cupids were messengers, not government postmen laden with assorted mail for hundreds of people on a route.

Of course, a stack of letter-bricks made no dainty ribbon-tied packet. In fact, a man who gallantly returned a maid's correspondence would likely need to hire an ox-cart. And never, never in those days did a thoughtful lover conceal a message in a bouquet and toss it lightly through his lady's window.

Beseeking Notes to Kubutum

But outer differences aside, the letter writing game has not shown much novelty since women with names like Tarish-matum sent beseeking notes to men named, for example, Kubutum.

Only chain letters are missing. The ancients seem never to have thought of those.

Women were writing to men for money, for instance, as long ago as 2000 B.C. And very well-worded letters they composed, too. A modern "gold digger" would find it hard to improve on some of the early clay-brick models.

This is strikingly revealed by the latest scholarly progress in translating clay tablets unearthed in Babylonia. Before the Semitic and Biblical Club at Yale University recently, Dr. John B. Alexander told of deciphering 61 letters chosen from Yale University's rare and valuable Babylonian Collection.

Admitting that there is a thrill in reading something that perhaps no other person has read since the original writer filed it away for reference some 4,000 years ago, Dr. Alexander sometimes lost the thrill as he translated letter after letter sent by Babylonia's business men. A large number of the clay tablets he had chosen turned out to be these routine letters. Many were almost as modern and as dull, in their form letter style, as the contents of any steel filing case in a New York skyscraper. They contained some

flashes of valuable information, shedding light on an old land famed for its big business, but not much more in scholarly returns.

But as Dr. Alexander worked his way through the ancient correspondence, he came upon a surprising discovery.

"By a sort of natural selection," he explained, "those tablets which proved more difficult remained undeciphered, while I translated those which were easier to understand. And it finally turned out that the last and most difficult letters of all were those of women!"

He added with a smile: "Perhaps this is hardly an original discovery."

The next discovery was more encouraging. If the women's letters were harder to read, they were also more interesting.

Recounting some of these feminine letters, Dr. Alexander revealed the money troubles of a woman named Tarish-matum who has been dead so long that no embarrassment can be caused her by making her letter public.

Tarish-matum was not literally a gold digger. She was merely after silver, and fairly small change at that. The shekel she begged for was an amount of lump silver weighing a fraction of an ounce. Coins were not invented in her day.

Written Ten Times: No Answer

As summed up by Dr. Alexander: "Tarish-matum writes to Kubutum begging him to send her a shekel of silver. She has written ten times and he hasn't answered her. She hasn't a single measure of meal. In the name of Pa-bil-sag (one of the gods), would he send her one shekel."

Reading between the lines in this pathetic message, Dr. Alexander finds that the hard-hearted Kubutum was illiterate, and a third person would have to read his mail to him. For the unhappy Tarish-matum added a sort of postscript not intended for Kubutum's eyes. In this note, she addressed a third person, urging him in honeyed words to use his influence to induce Kubutum to send her the shekel of silver.

Another letter read after four thousand years by Dr. Alexander, shows gold digging on a more ambitious scale, and handled in flowery language, even as the matter might be handled today.

This fair Babylonian was the helpless heroine of a save-the-old-homestead situation. Quoting poetry, she addressed the man she was appealing to as her sun, and the cedar in whose shadow she found shelter. With this clinging-vine approach, she came to the point. She must sell the home of her fathers. But, ah, well, if only there is enough to bury her that is all she will ask.

"We may well suppose," commented Dr. Alexander optimistically, "that the man addressed made the hoped for response, and the old home did not have to be sold after all."

How long ago letter writing began, and how modern the earliest letters sound, has only been discovered as archaeologists dig into the ruins and trash piles of Babylonia and Egypt. Before writing was invented, people sent messages entrusted to the memory of a runner. With the evolution of writing, the ancient civilizations were quick to apply it to their long-distance communication. But until recent years, the world had lost track of how very old the invention of writing really is.

Early Letters Were Dead Letters

For several thousand years, the world's early letters have remained dead letters, more completely lost than any postal system could misplace a communication. These old letters were already dead and buried when the Greeks came along, for one Greek historian showed ignorance by saying that Queen Atossa was held to be inventor of letter writing.

It was a bad guess, for letters written in clay in Babylonia and on papyrus in Egypt a thousand years or so before Queen Atossa was born were just waiting to be dug up. Nevertheless, down to current times, people have repeated that Greek tradition, crediting Persian Queen Atossa, wife of King Darius, with inventing systematic correspondence in the fifth century B.C.

Since scholars began eagerly translating every bit of inscribed clay or papyrus manuscript they could find, letters have disclosed that even stereotyped messages of current correspondence were thought up by the early letter writers. "I missed you Tuesday," and "love to the family" are as old as clay stationery.

The polite thought, "I hope you are well," was expressed in Babylonian days as "May Shamash keep thee healthy," Shamash being a god who dispelled evil spirits of disease.

The correct Babylonian letter writer began by naming the person addressed, even as modern writers do. Then he gave his own name, which looks like a good idea. Instead of turning the letter about and over to find out who sent it, as is part of reading a long letter today, the Babylonian learned in the first phrase who the letter was for, and in the second he discovered who was writing it. Simple and logical people, these Babylonians.

Clay envelopes were wrapped round Babylonian letters for protection and privacy. Egyptians rolled or folded and sealed their papyrus letters and addressed the outside. When a writer wanted his letter saved, the Babylonian phrase was "tuppi kil," meaning, keep my letter. Otherwise it was apt to be thrown away, like trash. It is from the trash heaps of Egypt that many ancient letters have been salvaged and read.

One love letter from a young man to his beloved, written in Babylonia about 2100 B.C., reads for all the world like letters written nowadays by people who find writing hard work. No poetry in this lover's letter, but he says a good deal on his small brick page:

"Keep Well for My Sake"

"To Bibeá, thus says Gimil Marduk: May the gods Shamash and Marduk permit thee to live forever for my sake. I write to inquire concerning thy health. Tell me how thou art. I went to Babylon but did not see thee. I was greatly disappointed. Send the reason for thy leaving, that I may be happy. Do come in the month Marchesvan. Keep well always for my sake."

Almost every type of letter written today was made use of in early times. Besides begging letters, love letters, business letters, there are thank-you notes, letters that reprove, threaten, ask questions, propose marriage, make war and patch up quarrels.

An Egyptian king's letter to a political exile, trying to lure back the troublesome courtier by promising him a first-class funeral, is not so modern. It is hard to know where to class that one.

But a letter believed almost certainly to be written by Pharaoh Tutenkhamen's beautiful young widow, proposing marriage with a Hittite prince, is an international document that might have been written yesterday, considering the way that queens still move as pawns in the game of diplomacy.

To the Hittite king in the land north of Syria, the Egyptian queen said very simply:

"My husband is dead, and I have no son. They say you have many sons. If

you would give me one of them, he shall be my husband."

The Hittite king hesitated. He sent secretaries to look into the advisability of this Egyptian marriage. The widowed queen protested the delay. What happened then is blotted out of history, and no one knows—as yet—why the Hittites failed in this chance to ally themselves with Egypt. Apparently Tutenkhamen's widow wrote no more letters. Another man seized Egypt's throne.

Letters of good advice from fathers to sons are as "old as the hills," or at least as old as Egypt's ninth dynasty, some 2200 years before Christ.

An Egyptian Lord Chesterfield

The Egyptians made a literary classic of a letter of King Akhtoi to his son, very much as Lord Chesterfield's letters to his son, written in England in the 1740s, became famous.

The Egyptian king advised in his letter: "Be diplomatic in speech, in order that you may gain your point."

The British lord wrote, 2800 years later: "Never maintain an argument with heat and clamor, though you know yourself to be in the right."

The Egyptian king recommended truth: "If thou speakest truth in thy house, the nobles who are over the land will fear thee. It shall go well with an impartially minded sovereign, for it is the inside (of the palace) which conveys respect to the outside."

Chesterfield's way of putting a similar idea was: "Nothing but strict truth can

carry you through the world with either your character or your reputation unwounded, and as you jog along you will observe that the greatest fools are the greatest liars."

Good Advice to a Son

The Egyptian king warned his son: "Be not harsh, kindness is seemly. Establish thy monument in the love of thee."

And Chesterfield, echoing this sentiment which he did not know the Egyptian father had written, said: "Politeness is kindness. If you wish to determine whether an act is polite, ask yourself whether it is kind."

Not every sentiment in the Egyptian king's letter can be matched item for item, with one similar in Lord Chesterfield's advice, of course. But the fatherly wisdom of the Egyptian foreshadowed the British father on a good many points, showing that there is not much that is new in good advice, any more than in letter writing.

Scholars who pore over the world's oldest correspondence can appreciate the joke of the modern humorist who wrote to a friend: "I received your letter last week and am still enjoying it. Yesterday I got as far as 'Junior has the dumps' or could it be mumps?"

Many a short Babylonian epistle lasts a translator much more than a week, as he returns again and again to uncertainties in the text. Besides the fact that a letter may turn out to be on any conceivable subject, and per- (*Turn to page 141*)



SOLID LITERATURE

Queer as they look, the oldest letters in the world are surprisingly modern to read.

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haps so worded as to be understood only by the writer and the person addressed, old letters are often badly damaged. In Babylonian letters this means a broken or worn-down surface, so that the wedge-shaped characters that the scribe marked in the clay when it was soft, are no longer plain writing.

So frequent was this damage in the letters that Dr. Alexander read recently, that he found scarcely a tablet in perfect condition. Careless handling by Arabs who dig up relics, and the action of the elements, are held mainly responsible for the bad condition in which the old clay-brick letters reach translators' hands today. Archaeologists can scarcely complain of the Babylonians, however, for the correspondence that is being turned out today will provide far less helpful material for future civilizations to read and wonder over. So fragile is modern paper that it falls to pieces in record vaults, and no one need worry over archaeologists reading his private letters 4,000 years hence.

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PLANT PATHOLOGY

Sugarcane Substance Fights Virus of Mosaic

SUGARCANE fights mosaic disease, one of the worst of the ills that afflicts it, with a virus-paralyzing substance it forms in the growing tips of its stalks, a stuff that seems to be somewhat analogous to the germ-fighting "anti-bodies" formed in the bodies of human beings and animals when invaded by disease. This discovery has been made by Drs. E. W. Brandes and Julius Matz, plant pathologists of the U. S. Department of Agriculture.

They found that when juice extracted from healthy tissue taken from near the growing tips was mixed with juice from mosaic-sick plants, known to contain the virus, and the mixture then injected into healthy canes, the resulting infection was much less severe than "control" infections caused by mixed virus-containing juice. The nature of the virus-paralyzing substance is still unknown; as is, indeed, the nature of the virus itself. The latter belongs to the group of disease-causers known to science as "filter-passers," be-



FILING CASES

Business men in Babylonia and other ancient civilizations handled mail orders and kept office files. This pigeon-hole file for storing papyrus records was unearthed in Dura-on-the-Euphrates, and is almost 2000 years old. (Courtesy Gallery of Fine Arts, Yale University.)

BIOPHYSICS

Plants' Fluorescent Light Clue to Photosynthesis

FLUORESCENT light, a strange luminescence given off by plants when they are subjected to ultraviolet and certain other kinds of rays, may yield a clue to the still unsolved riddle of how plants capture and use sunlight in making their own food out of water and carbon dioxide. This is the suggestion of Dr. James Franck, noted German physicist and sharer in the Nobel Prize for physics in 1925.

A plant's food-making activity and its fluorescence, Dr. Franck pointed out, are inversely proportional to each other. The greater the amount of sun-energy plants re-emit as light, the less they have to use in the tiny food-factories in their cells.

Science News Letter, August 31, 1935

CHEMISTRY

Pasteurization of Wine Recommended by Chemists

PROFITING by the favorable experience of infants in arms and others with pasteurized milk, during the interlude of prohibition, the wine industry is now ready to adopt pasteurization as a routine process in the preparation of its bottled goods.

This fact became known through a report submitted to the American Chemical Society by J. E. Goresline and E. A. Beavens of the bureau of chemistry and soils, U. S. Department of Agriculture, and Carl S. Pederson of the New York State Agricultural Experiment Station.

The object of wine pasteurization, the authors of the report explained, is not to protect customers from any lurking diseases in wine but to prevent souring and other kinds of deterioration which might give the wine an undesirable taste. At the time of harvest the grapes and stems have many bacteria, molds and wild yeasts on them. After the fermentation process in the crushed grapes has proceeded to the desired point, the further growth of yeast and other microscopic forms of life must be stopped if the wine is to remain palatable. After investigating various methods of accomplishing this, the three scientists concluded that pasteurization is the best.

Either dry wines or sweet wines of low alcoholic content lend themselves to pasteurization. They recommended heating the wine in bottles at 130 degrees Fahrenheit for twenty minutes. Higher temperatures may give the wine a "cooked" flavor.

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cause unlike the true microscopically visible bacteria it can be drawn through fine-grained stone filters without losing its capacity to cause disease.

Recent studies in Louisiana have disclosed that there are at least four varieties or strains of sugarcane mosaic, whereas it used to be thought that there was but one kind of mosaic of the cane. This situation is comparable to that presented by malaria in human beings. Malaria is malaria, but there are three species of micro-organism that cause it, and hence three kinds of malaria: a trinity of evil.

A report by Drs. Brandes and Matz was presented at the fifth triennial congress of the International Society of Sugarcane Technologists which opened Aug. 26 at Brisbane, Australia.

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The leopard has longer legs than his cousin, the American jaguar, and is probably a better runner.