Computers and Japanese Literacy

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Nihonzin no Yomikaki Nôryoku to Konpyûta

by

J. Marshall Unger
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Watakusi wa saikin, gendai no konpyūta siyō to Nihongo ni tuite kenkyū site orimasu. Gengoqakusya mo konpyūta no nōryoku ya mondaiten ni tuite iken o happyō suru sekinin ga aru to omou kara desu.

Sate, Amerika no zen-Kōsei Kyōiku tōkan, John Gardner-si no koto de hazimetai to omoimasu. Sore wa "aizyō nasi no hihan to hihan nasi no aizyō (Eigo de iu to, "unloving criticism and uncritical love") to iu koto desu. Gardner-si wa, Amerikazin no aikokusyu no ni tuite Amerika o sukosi de mo hihan site wa ikenai to syutyō suru hito wa kangaetigai da, aizyō nasi ni syakai ya bunka no ketten o hihan bakari suru koto wa motiron warui keredo, hihan sore zitai o kiraette kokusuisyugi o susumeru koto mo syōrai no tame ni yoku nai, to imasita. Kono koto wa bokoku igai no syakai to bunka ni tai suru baai de mo onazi de wa nai desyō ka? Gengoqakusya ya rekisigaku kasia mo "aizyō nasi no hihan to hihan nasi no aizyō" to iu ryōkyokutan o sakeru yō ni sita hō ga ii to omou no desu. Watakusi wa Nihon no gengō to bunka o senmon ni site, Nihon ni tai site aizyō o motte orimasu kara koso, Nihongo no hyōkihō ya Nihonzin no yomikaki nōryoku ni

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I am currently engaged in research on contemporary computer usage and the Japanese language. Linguists too, I believe, have a responsibility to present their views on the potentials and problems of computers.

Let me begin by quoting the former U.S. Secretary of Health, Education, and Welfare, John Gardner. I am thinking of his phrase "unloving criticism and uncritical love." By this, he meant that it was wrong for proponents of American patriotism to oppose even the slightest criticism of the United States: although it is bad to dwell unsympathetically on finding fault with social and cultural shortcomings, it is equally bad for the future of society to advance nationalism and eschew all criticism. I think that this is also true when considering foreign societies and cultures. Linguists and historians would do well to avoid the twin extremes of "unloving criticism and uncritical love." As someone professionally involved with the language and culture of Japan, I have an affection for the country, but for that very reason, I wish to call into question the accepted theory of Japanese script and literacy.
As we enter the age of the so-called informational society, and as more and more ordinary people begin to use computers on an individual basis, demands on network communications, educational software, creative programming, and so on, will steadily increase. Unless we understand the present situation and history of literacy, which underlies all these applications, we cannot hope to develop a rational basis for computer usage.

The term "ideographic characters" appears so often in books on the Japanese language that one might say it has become a stock phrase of Japanese linguistics. I wonder, however, whether such things as "ideographs" actually exist. When examined objectively, all languages are fundamentally speech. Characters are not the source of the meanings of words, although they do have their social and historical aspects. For example, blind people who cannot read a single character can nonetheless speak their native tongue perfectly, unless they suffer from some other handicap. The very idea of characters totally divorced from speech is therefore meaningless. For the meaning of language emerges from the structure of language, of which writing is merely a reflection. It is particularly important that we not forget this when we consider the computers of the future.

Today, however, virtually all the personal computers sold in Japan are supposed to provide so-called Japanese information processing capabilities. But it would be more accurate to say that they provide Japanese script manipulating capabilities; moreover, Japanese
software development is not keeping up with hardware development, and is still being carried out in programming languages (such as BASIC and FORTRAN) based on English. In other words, the idea that "you can’t write Japanese without Chinese characters" is widespread even though Japan lags behind in software development. Although this kind of thinking can be found in books, such as Suzuki 1975 and Kaiho 1983, by faculty at big-name universities, it flies in the face of the common sense of linguistic science, and is contradicted by both experimental and clinical results in psycholinguistics (Paradis et al. 1985).

To put it as briefly as possible, when one is dealing with the Japanese language on computers, all that matters is that word-meanings can be understood; either kana alone or Latin letters alone are sufficient. Of course, in applications such as preparing name lists and typsetting, in which Chinese characters serve as data in their own right, there is no option but to input Chinese characters; however, for most daily tasks, there is no such necessity. Therefore, the idea that "you can’t write Japanese without Chinese characters" is not only a misconception; it is unquestionably one of the main reasons for Japan’s software problems. This has already been pointed out by prominent Japanese such as Umesao Tadao (1972) and Yamada Hisao (1984),

Yō suru ni, Nihongo o konpyūta de atukau toki ni, sono koto ga imi sae wakareba, kanagaki de mo rōmazigaki de mo zyūbun desu. Motiron, meibo sakusei, insatu nado, sunawati kanzi sore zitai ga dēta to naru baa ni wa, kanzi o nyūryoku suru hoka sikata ga arimasen ga, nitizyō no ōku no sigoto ni wa sonna hituyō ga arimasen. Sitaqatte, "kanzi ga tukaenakereba, Nihongo ga kakenai" to iu taido wa kangaetigai bakari de wa naku, sohutowea no mondai no omo na gen’in no hitotu ni tigai nai no desu. Dōyō no koto o, tatoeba Kokuritu Minzoku Hakubutukantyō no Umeeco Tadao hakusi ya Tōkyō Daigaku Rigakubu no Yamada Hisaok kyōzyū nado ga sude ni siteki site imasu ga, Nihon no seizi to bunka no sekai de wa kō sita tyūkoku o ki ni tomete iru hito ga sukunai yō desu.
Watakusi no tatibā kara mireba, Umesao-si ya Yamada-si no siteki wa akiraka ni tadassii no ni, ōku no Nihonzin ga Suzuki-si ya Kaiho-si ni sansei site iru no wa zitu ni husigii na koto desu. Sono riyo ga wakattara, gendai Nihon no syakai-gengogaku o daibu sinpo sageru koto ga dekiri no de wa nai ka to omoimasu. Watakusi wa kotosi, Kokusai Kōryō Kikin no fellow to site kono mondai nado to site ite orimasu ga, ima made ni wakatte kita koto wa tugi no tori desu.

Mazu, Nihonzin no gengo taido wa Dainizi Sekai Taisen no atc wa kanari kawatte itta to io koto no tyūmoku site itadakita no desu. Tatoeba, ima wa "Gaikokuzin wa kessite Nihongo ga masutā dekinaī" to io kangaee o motte iru hito wa ōi desyō ga, Dai-Nihon teikoku Nihon no Taiyō ni tai suru kyōiku seisaku o sukosi de mo mireba. Nihon no kokusuisyugisya de mo gaikokuzin ni mo Nihongo ga masutā dekiri si, Nihonzin de nai hito ni Nihongo o kyōsei suru no wa tōzen da to omotte ita yō desu. Mō hitotu no rei wa kokuzi kaikaku no koto desu. Genzai wa Nihongo hyōkikō o sara ni kantan ni siyō to io koe ga sukidakara narimasita ga, Meiji Nihon no owarigorō made wa, seiī ga motto housyukī datta ni mo kakuwarazu, Rōmazikai ya Kanamozikai, sara ni Monbusyō no Rinzi Kokugo Tyōsakai ya sono ato no Kokugo Singikai nado ga zutto katuyaku site ita no wa zīzitu desu. Sono 70-nenkan no zyūnbi kikan ga nakattara, Senryōgungawara no aturyoku ni özite, iwayuru tōyō kanzi to but it seems that few Japanese in the worlds of politics and culture have taken their advice to heart.

From my point of view, it is quite incredible that so many Japanese agree with Suzuki and Kaiho when the arguments of Umesao and Yamada are so obviously correct. Surely, if we could understand the reason for this, we could greatly advance Japanese sociolinguistics. I have been doing research on this problem this year as a Japan Foundation fellow, and what follows are the conclusions I have reached so far.

First of all, I think we need to pay attention to the fact that Japanese attitudes towards languages underwent a considerable change following World War II. For example, there seem to be many people who hold the belief that "no foreigner can ever master Japanese," but if we look at the educational policies in Taiwan and Korea during Japan's imperialist phase, it seems that even the ultranationalists, so far from thinking that foreigners could not master Japanese, thought it reasonable to force Japanese on non-Japanese. Script reform provides another example. Not many people are calling for more script reform today, but it is a fact that the Romanization Society, the Society for Kana Writing, the Ministry of Education's Provisional National Language Survey Committee, and its successor, the National Language Investigation Committee were active from the Meiji Period right on to the end of the Pacific War, despite a far more conservative political
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gendai kanazukai nado o tadatini kimetari dekinakatta hazudesu.

Sono go, Syōwa 20-nen goro kara Nihonzin no gengo taido ni wa ziminzoku-tyūsinsyu gi no keikō ga dandan tuyoku natte kita yō desu. Genzai no konyūta yūza no aida ni aru "kanzi o tukaenakereba Nihongo ga kakenai" to iu kangae nado ga kono keikō no hitotu to sureba, kore wa sensō o taiken sita hito bakari de wa naku, sensō o siranai hito ni mo aru kangaen na no de, sore wa haisen to iu syakai no itidekigoto kara hassei site kita hazu wa nai no desu.

De wa, Syōwa 20-nen ga dō site zyūyō na magarikado ni natta ka to ieba, watakus wa sinkyoiku seido no zissi ni yoru senzen no kyūsei kōkō no haisi de wa nakatta ka to omoimasu. Sengo wa, seito ga danzyō byōdō ni atukawareru yō ni natte, nōryoku sae areba hotondo dare de mo kōkō ya daigaku made susumeru yō ni natta wake desu. Kono koto wa senzen to kurabereba yahari kakumeiteki na henka desita. Sikamo mozi kaikaku to dōzi desita no de, Nihonzin no yomikaki nōryoku ni bakudai na eikyō o ataeta no de wa nai ka to omo'masu.

Nihonzin no yomikaki nōryoku wa senzen mo sengo mo amari tigatte inai to iu koto ga teisetu ni natte iru yō desu ga, sengo wa kanzi no siyōsū no gensyō ya onkun-yomi no seigen atmosphere than exists today. Indeed, had it not been for this period of 70 years of preparation, it is unlikely that the so-called tōyō kanzi and gendai kanazukai reforms could have been implemented so quickly in response to Occupation pressures.

It was later, from around 1945, that the ethnocentric tendency in Japanese language attitudes gradually grew stronger. To the extent that the attitude among today's computer users that "you can't write Japanese without Chinese characters" is part of this trend, it is something which belongs to those who know nothing of the war, not just those who lived through it; therefore, one cannot explain it by saying that it came from a single event, such as the surrender, which traumatized society.

What was it, then, that made 1945 a turning point? I would suggest that it was the abolition of the prewar higher schools effected by the implementation of a new educational system. After the war, students, regardless of sex, were treated equally, and almost anyone could go on to high school or university as long as he or she had the talent. This was a truly revolutionary change when compared with the prewar situation. Moreover, it took place simultaneously with script reform, and so had an enormous influence on Japanese literacy.

It is generally believed that there is not much differences between Japanese literacy before and after the war, but when one looks at the whole Japanese nation today, the
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ni mo kakawarazu, Nihon kokumin zentai o mireba, ippan no hitobito no gengo seikatu wa kanarazuku, Nihon kokumin zentai o mireba, ippan no hitobito wa hurigana ga nakereba sinbun ya zassi wa yomemasen desita si, seikai ya keizaikai no sidéya ga kansin suru yó na bunsyö de, sakubun dekiru hazu wa arimasen desita. Naze ka to iu to, senzen wa, oku no hito wa amari kanzi o yondari kaitari suru koto ga dekinakute mo ii to omowarete ita kara desu. Ippan no hitobito wa hurigana ga nakereba sinbun ya zassi wa yomemasen desita si, seikai ya keizaikai no sidéya ga kansin suru yó na bunsyö de, sakubun dekiru hazu wa arimasen desita. Sore dake no rim de mo, zenkoku no yomikaki ndryoku no heikin suizyun wa sengo ni kurabete yaya hikukatta wake desu. Zgosei wa syagakka o sotugyb site mo, k8ta zyogakka ni susumu koto wa mezurasikatta no desita. Senzen to genzai o kurabete mita toki, yomikaki noryoku wa dö kawatta desyö ka? Genzai no Nihon de wa tekirei zinkö no 95% gurai ga kókö ni haitte iru sô desu. Kókö ni yotte yõbô ni sa ga aru ka mo siremasen ga, Monbusyö wa kókö ni hairu mae ni sukuunaku to mo zyöyö kanzi gurai made wa syötoku suru yô ni to itte iru yô desu. Zissai ni wa zyöyö kanzi de ziyö ni tukaikonasenai gakusei ga ôi no de wa nai ka to omoimasu ga, kore wa seihyu no hõsin desu kara, tonikaku kizyun ni simasyö. De wa, senzen ni wa, kono kizyun no teido made kanzi ga dekiru no wa zinkö zentai no nanwari datta desyö ka? Rakkanteki ni mite mo, yahari 2-

"language life" of the average Japanese has not necessarily gotten any easier despite the reduction in the number of Chinese characters in use and limitations on character readings. This is because, before the war, it was generally believed that most people didn't have to be able to read or write Chinese characters at a very high level. The average person couldn't read newspapers or magazines unless they had hurigana (sidenotes in kana giving the readings of characters), and no one expected them to be able to write in the style approved of by the country's political and economic leaders. It was unusual for a girl to go on to secondary school, if she graduated from primary school at all; for that reason alone, the average level of literacy had to be low relative to the postwar period. And the number of boys going beyond junior high school couldn't have been more than 20%. (The justification for this estimate will be given later.)

Senzen to genzai o kurabete mita toki, yomikaki noryoku wa dö kawatta desyö ka? Genzai no Nihon de wa tekirei zinkö no 95% gurai ga kókö ni haitte iru sô desu. Kókö ni yotte yõbô ni sa ga aru ka mo siremasen ga, Monbusyö wa kókö ni hairu mae ni sukuunaku to mo zyöyö kanzi gurai made wa syötoku suru yô ni to itte iru yô desu. Zissai ni wa zyöyö kanzi de ziyö ni tukaikonasenai gakusei ga ôi no de wa nai ka to omoimasu ga, kore wa seihyu no hõsin desu kara, tonikaku kizyun ni simasyö. De wa, senzen ni wa, kono kizyun no teido made kanzi ga dekiru no wa zinkö zentai no nanwari datta desyö ka? Rakkanteki ni mite mo, yahari 2-
Tumari, senzen no syōnen syōzyō no hobō 8-wari wa genzai no gakusei hodo kanzi syūtoku no omoni ga nakatta koto ni narimasu. Kari ni, muzukasii kanzi ga oboerarenai gakusei wa, senzen mo sengo mo onazi warai datta to site mo, sengo, kōkōsei no kazu ga nanbai ni mo narimasita kara, ninzūteki ni wa kyūzō sita koto ni narimasu. Gyaku ni iu to, senzen wa itininmae no Nihongo ga kakenakatta, gakumonteki na hon ga yomenakatta site mo, senzen mo sengo mo onazi wariai datta to site mo, sengo, kōkōsei no kazu ga nanbai ni mo narimasita kara, ninzūteki ni wa kyūzō sita koto ni narimasu. Gyaku ni iu to, senzen wa itininmae no Nihongo ga kakenakatta, gakumonteki na hon ga yomenakatta site mo, senzen mo sengo mo onazi wariai datta to site mo, sengo, kōkōsei no kazu ga nanbai ni mo narimasita kara, ninzūteki ni wa kyūzō sita koto ni narimasu. Gyaku ni iu to, senzen wa itininmae no Nihongo ga kakenakatta, gakumonteki na hon ga yomenakatta site mo, senzen mo sengo mo onazi wariai datta to site mo, sengo, kōkōsei no kazu ga nanbai ni mo narimasita kara, ninzūteki ni wa kyūzō sita koto ni narimasu. Gyaku ni iu to, senzen wa itininmae no Nihongo ga kakenakatta, gakumonteki na hon ga yomenakatta site mo, senzen mo sengo mo onazi wariai datta to site mo, sengo, kōkōsei no kazu ga nanbai ni mo narimasita kara, ninzūteki ni wa kyūzō sita koto ni narimasu.

Gyaku ni iu to, senzen wa itininmae no Nihongo ga kakenakatta, gakumonteki na hon ga yomenakatta site mo, senzen mo sengo mo onazi wariai datta to site mo, sengo, kōkōsei no kazu ga nanbai ni mo narimasita kara, ninzūteki ni wa kyūzō sita koto ni narimasu. Gyaku ni iu to, senzen wa itininmae no Nihongo ga kakenakatta, gakumonteki na hon ga yomenakatta site mo, senzen mo sengo mo onazi wariai datta to site mo, sengo, kōkōsei no kazu ga nanbai ni mo narimasita kara, ninzūteki ni wa kyūzō sita koto ni narimasu. Gyaku ni iu to, senzen wa itininmae no Nihongo ga kakenakatta, gakumonteki na hon ga yomenakatta site mo, senzen mo sengo mo onazi wariai datta to site mo, sengo, kōkōsei no kazu ga nanbai ni mo narimasita kara, ninzūteki ni wa kyūzō sita koto ni narimasu.
As for postwar materials, we have the Literacy Survey of 1948. When its results were published in 1951, they were not as bad as had been predicted by some proponents of script reform, and even today there seem to be many who believe that it showed that the level of prewar literacy was actually high. If you read the survey itself, however, you will see that the conclusion is diametrically the opposite. For example:

Complete illiteracy among Japanese is extremely low, but the number of people who possess full literacy is also extremely low, only 6.2%. (p. 426.)

Questions requiring the writing of kanzi from dictation produced the poorest results, and in all groups tested produced significantly lower scores when compared with other problems. It can be said that the burden of written language for the Japanese depends largely on this skill (p. 426.)

The hypothesis, advanced by those who have studied problems of the national language and script, that "the literacy of today's Japanese is inadequate for conducting a full social life", was confirmed. . . . In
kakitori no tikara wa
itizirusuku hikuku, seizyo
na syakai seikatu ga yokyu
suru kanzi no kakitori no
tikara wa akiraka ni
huzyubun de aru to ieru.
(425 peizi.)

There is, of course, much
more, detailed data regarding
current Japanese literacy;
however, according to DeFrancis
1984 and Neustupny 1984, there
hasn't been that much change
from the situation recorded
by Scharschmidt. Graduates of
modern junior high schools, as
in the prewar period, can freely
use only about 500 characters.
Even if we assume that, over the
past 60 years, the level of
accomplishment attained by the
best students has risen, we are
talking about only a small part
of the whole population.
Shouldn't we focus, rather, on
the everyday literacy of
students selected "at random"?

One might say that, due to
the script reform of the postwar
era, the "language life" of the
average person became richer,
but the script reform did not go
far enough to alter the
fundamental difficulties of the
mixed kana/kanzi writing system.
Consequently, as the proportion
of people who received post-
primary education increased, the
number of those who experienced
problems with kanzi actually
grew larger. Indeed, this seems
to be the case not only in
Japanese language classes, but
in other subjects as well. For
example, there was a peak in the
suicide rate of 15- to 24-
From 1959 until 1970, there was
a decline; therefore, as pointed
out by Rohlen (1983), one cannot
benkyō no aturyoku ni seihirei suru to wa setumei dekimasen.

De wa, naze Syōwa 30-nen to 33-nen no aida ga tyōten ni natta ka to ieba, sono toki wa sentyū ni umareta kodomotachi ga sinsei kōkō o sotugyō suru ziki to itti site iru kara de wa nai ka to omoimasu. Sotugyō ga tikazu ni ture, singaku suru ka, yūsyoku suru ka ni mayotta koto desyō. Sensei ya oya nado wa sono sinkyōiku seido ni tuite no zyū bun na keiken ga nakatta no de, gakusei wa teki setu na sigoto ya gakkō wa doko ka to nayande mo dare ni mo sódan ga dekinatta desyō. Sore igo, zyugyō ni tuite ikenai kōkōsei no zettai sū wa huete ikimasita ga, sore ni mo kakawaru, seinen no zisaturi ga sagatta no wa, sono saisyo no ziki hodo huan o kanzinakatta kara desu.

Tada no günzen ka dō ka sirimasen ga, tyōdo sono Syōwa 32-nen wa Kindaiti Haruhiko kyōyō no Nihongo ya Oono Susumu kyōyō no Nihongo no kigen nado ga besuto-sera ni natta ziki ni atarī. "Nihongo bōmu" to iu kotoba ga sinbun nado ni yoku deta mono desu. Kokugo Singikai wa okurigana kisoku o Syōwa 34-nen ni happyō simasita ga, Monbudaizin ga Zimintōnai no aturyoku ni sitagatte sono iin no hotondo sono yokunen made ni kaete simaimasita. (Kono sisei wa Ookubo Tadatosi-si no 1971-nen no kenkyū ni kakarete imasu.) Gengo ni okeru genzai no ziminzoku-tyūsinsyuji no keikō no kizasi wa yahari kono koro kara hakkiri site kuru no desu.

The cause of this, to summarize, was the establishment explain the juvenile suicide rate by saying it reflects increasing entrance examination pressure.

Why, then, the peak between 1955 and 1958? I think it is because it corresponds to the time when children born during the war were graduating from high school. As graduation approached, those children had to decide whether to try for college or seek employment. Their parents and teachers had not had sufficient experience with the new educational system, and so the students had no one to talk about the kind of jobs or schools they could expect to get into. Later on, the absolute number of high school students who couldn't keep up with the class increased; nevertheless, the juvenile suicide rate fell off because they didn't feel as much uncertainty as existed during this initial experience.

Perhaps it was just coincidence, but it was at just this time that Kindaiti 1957 and Oono 1957 became best-sellers, and the newspapers were talking about a "Nihongo boom." The National Language Investigative Committee announced rules for okurigana usage in 1353, but by the following year, the Minister of Education, under pressure from the Liberal Democratic Party, had packed the committee (see Ookubo 1971). It was from this period that the signs of linguistic ethnocentricism become clearly visible.
The link between social policy and individual attitudes is to be found in the Japanese writing system itself. In a word, the problem is kanji. The とうや kanji reforms were not bad in themselves, nor was the liberalization of education; but the combined effects of these two changes seems to have produced an unintended result. To make an analogy, it is like an illness which gets worse because one mixes two medicines which, taken individually, would effect a cure. There is absolutely no need for an elaborate psychological theory.

To put it another way, the question of why Japanese believe that Japanese cannot be written without kanji can be given a sociolinguistic interpretation. The explanation of this way of thinking is rational, but the way of thinking itself is devoid of any scientific basis. To give an example, consider the case of Japanese who use word processors daily. There is no efficient keyboard standard. カナ- or ぽまざ-て-かんじ conversion input is easy to learn, but cannot compete with English touch typing in speed or cost; moreover, as the number of loanwords from Western languages increases, the efficiency of such input systems declines. Furthermore, conversion input is inappropriate for real-time communications. Some people think that facsimile equipment can be used in these cases, but it is hard to believe that businessmen who avoid writing letters and are constantly on the telephone will happily switch to handwritten input systems. Word processors have their points of convenience, but...
they also encourage the overuse of kanzi, errors in okurigana usage, and, so far from raising productivity, often increase labor time and stress. As if this weren’t bad enough, people who rely on word processors notice that they forget kanzi when they try to write with pencil and paper. Therefore, unless Japanese restrict kanzi input to those situations which require kanzi output, and integrate computers with the earlier handwriting technology, they will unwittingly lose the very kanzi culture they seek to preserve.

In short, I believe that Japanese will in the future have to add rōmaji to kana and kanzi in their writing system. Japanese data and programs written in rōmaji are after all just as much Japanese as those written in conventional script. In order to move into the new world of computers at the same pace as the English-speaking world, all that is necessary is giving up kanzi.

REFERENCES


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