# PERIODIC EMERGENCE OF GREAT POETS In THE HISTORY OF Arabia \& PERSIA, CHINA AND JApAN 

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#### Abstract

A periodicity of about 500 years has been discovered in the history of poetry and documented by means of inferential statistics. Great poets of Arabia, Persia, China and Japan emerged periodically every 500 years. Moreover, the waves of poetic creativeness in the West and in the East have been synchronous for the last 3000 years. It is a surprising fact, that this periodicity has been known already before 800 B.C. to the priests of Babylon, who ascribed it to the influence of goddess Inanna. A set of psychological symptoms typical for pubescence recurrs on a global (worldwide) scale during these historical epochs every 500 years. One possible explanation would be to search for a cosmophysical factor, which impacts the neuroendocrine system of men.


## Key words

poetry, periodicity, synchronicity, Inanna

## Background

It is a well known but unexplained fact of cultural anthropology, that the growth of culture does not appear as a continuous one, but occurs in creative outbursts or waves. Great personalities in arts and sciences were not being born isolated or scattered along the time-axis but emerged in clusters. Periods of splendid achievements have been followed by centuries of mediocrity and epigonism until the next wave of original inspiration arrived. Many historians of art looked for some underlying law, which would govern the tides and ebbs of culture. The idea, that there could be some kind of regular pattern or periodicity in history, fascinated many explorers since antiquity until today.

## Aim

To find out, whether there is a significant periodicity, which could be observed in the history of poetry in two geographically and culturally distant areas.

## Data

Three sets of famous poets - 97 of Arabian and Persian, 78 of Chinese and 54 of Japanese origin were analyzed. The Arabian, Persian and Japanese poets were living between 600 and 1900 A. D., the Chinese ones between 1200 B. C. and 1900 A. D. The data are taken from Kroeber's Configurations of Culture Growth, one of the most comprehensive and renowned works in this field. ${ }^{1}$ Kroeber also ranked qualitatively the relative importance of each poet - the very best among the best ones, like Abu Nuwas, Nizami, Li Po, Basho were marked by an asterisk. That was taken into account by ourselves by counting such poets as two. A score resulted, expressing the amount of creative activity in each country per each half century.

## Methods

Fisher's periodogram was used to search „blindly" for significant period lengths T. ${ }^{2}$ In the second step, Halberg's cosinor regression was applied to test the presence of one leading period $\tau .{ }^{3}$ It shall be
chosen with respect to the outcome of the periodogram. Results are presented as parameter point and $95 \%$ confidence estimates and in the form of graphs. Software used was made by Kubáček \& Ondrejka and Kubáček \& Valach. ${ }^{4,5}$

## Results

Periodogram revealed for Arabic and Persian poetry as the relatively most probable period length T that of approximately 583 years ( $p<0.31$ ). For Chinese poetry the most probable period length was approximately 501 years ( $p<0.27$ ) and for Japanese poetry 444 years ( $p<0.08$ ). Thus, in the periodogram only the data from Japan approach the borderline significance ( $p<0.10$ ). All three period lengths oscillate around the mean value of 509 years.

This is why the period of 509 years was taken into the cosinor computation. It was significant. In the case of Arabic, Persian and Japanese poets with $p<0.05$ and in the case of Chinese poets with $p<$ 0.01 . The acme in the estimated score of poets has been identified in all three cases close around the year 720 A. D. Accessory acmes appear in the successive time distances of 500 years back as well as ahead. Results are summarized in Table 1.

## Discussion

The obtained results are interesting in several ways. First of all, we discovered, that there exists indeed a rhythm, a regular periodicity in the history of poetry. The period length was in all three cases very similar: great poetry in the West and Near East and in the Far East recurrs approximately every 500 years (see Fig. 1).

Moreover, the waves of poetic creativity in either geographical and cultural areas are synchronous (see Fig. 2). The greatest occidental and oriental poets have been contemporaries. For instance, during the golden age of Chinese T'ang poetry in the 8th century also the best Japanese collection of poetry Manyoshiu has been compiled and the greatest constellation of Arabic poets appeared at the same time in the West and Near East. The greatest Chinese poet Li Po or Hitomaro, Akahito in Japan were contemporaries of the greatest Arabs like Omar ibn Abi Rabia and Abu Nuwas. Although the poetic achievements in Orient and in Occident are considered to be original and produced independently.

The reason why we did not include a quantitative analysis of European poetry is that there is no available list of poets from the same source. Kroeber does not list European poets explicitly, but only European „literates", including prose, lyrics, epics, historical chronicles, political and philosophical essays and all kinds of genre clumped within one list. But the pulse of European poetry seems to be synchronous with the one in the rest of the world as well. The first wave of Chinese poetry around 800 B. C. is synchronous with the greatest Greek poet Homer. The second Chinese wave corresponds to the Alexandrian-Greek poetic acme around 300 B. C. headed by Callimachus. The Japanese poetic culmination around 1200 A. D. is synchronous not only to the best Persians, but also to the Provencal troubadour song-poetry and the German minnesang. The last wave of Japanese classical poetry (tanka) around 1800 A. D. is synchronous with the European romanticism.

## Babylonian prediction

Even more surprising is the fact, that these waves of poetic creativity seem to have been predicted. Ancient Babylonians used a calendar based on the belief that seven gods (corresponding to seven „planets" in our solar system, later seven archangels in the Christian era) alternate cyclically as spirits of time. Each one of them rules the world for 72 years; i. e. one and the same deity comes to rule each 504 years again. The Babylonian goddess Inanna (identified with Venus), goddess of love and passion, returns in the years 787 B. C., 279 B. C., 225 A. D., 729 A. D., 1233 A. D., 1809 A. D. These dates result from a calendar-system known long before 800 B . C., exact dates being quoted on excavated clay tablets. ${ }^{6}$ Our inferentially statistical analysis identified this ancient rhythm ( 504 years) and its culmination (729 A. D.) surprisingly exactly (see Table 1). Greatest world poetry culminates indeed each 500 years approximately in the middle of the periods attributed traditionally to the goddess of love and beauty.

## Explanation hypothesis

All of the time-periods examined above share a common characteristics: they are periods not only of an extreme creativity in love-poetry and nature-lyrics, but also in further arts (music), of romantic idealism and exalted passions. Thorough quantitative analyses of revolution indexes in Europe and China have shown, that the same periods coincide also with the greatest revolutionary movements in history. ${ }^{7}$ The whole set of psychological symptoms - romantic enthusiasm and revolutionary tendencies, free love and refusal of authority - is typical for youth, for the time-period of pubescence. The same psychological archetype, which is characteristic during the individual development for pubescence, seems to be at work in the collective unconscious of the whole mankind every 500 years.

The changes during pubescence are connected with the awakening of sexual glands and with the achievement of new hormonal equilibrium at that time. But do we have some explanation for the recurring „global pubescence" of mankind in history? One possible direction could be to search for a global cosmophysical factor, which would be in grade to impact the neuroendocrine system of men. Similarly, a connection between solar activity and hormonal levels has been described. ${ }^{8}$

## Conclusion

A periodicity of about 500 years has been discovered in the history of poetry and documented by means of inferential statistics. Great poets of Arabia, Persia, China and Japan emerged periodically every 500 years. Moreover, the waves of poetic creativeness in the West and in the East have been synchronous for the last 3000 years. It is a surprising fact, that this periodicity has been known already before 800 B.C. to the priests of Babylon, who ascribed it to the influence of goddess Inanna. A set of psychological symptoms typical for pubescence recurrs on a global (worldwide) scale during these historical epochs every 500 years. One possible explanation would be to search for a cosmophysical factor, which impacts the neuroendocrine system of men.

## Notes

${ }^{1}$ Alfred Louis Kroeber, Configurations of Culture Growth (Berkeley, University of California, 1969), 464-5, 474-7, 525-9, 532-4.
${ }^{2}$ Ronald A. Fisher, „Test of significance in harmonic analysis", Proceedings of the Royal Society, London, Ser. A, 125 (1929): 54-59.
${ }^{3}$ Christopher Bingham et al., „Inferential statistical methods for estimating and comparing cosinor parameters", Chronobiologia, 9 (1982): 397-439.
${ }^{4}$ Lubomír Kubáček and Pavol Ondrejka, Periodogram Analysis (Bratislava, ComTel, 2001), computer programme.
${ }^{5}$ Lubomír Kubáček and Alexander Valach, Time Series Analysis with Periodic Components (Bratislava, ComTel, 2002), computer programme.
${ }^{6}$ Emil Páleš, Angelology of history. Parallel and periodic phenomena in history (Bratislava, Sophia, 2001), 660 pp. in Slovak.
${ }^{7}$ Ibid., 409-414.
${ }^{8}$ P. Merlob et al., „Foetal growth in Extreme Periods of Solar Activity in the 21-22 Solar Cycles", Journal of Foetal Medicine, 9 (1989): 1-5.

## Tables

| POETS | PERIOD-LENGTH | ACME | PROBABILITY OF ERROR |
| :--- | :--- | :--- | :--- |
| Arabic \& Persian | 583 | 681 A. D. | $\mathrm{p}<0.05$ |
| Chinese | 501 | 761 A. D. | $\mathrm{p}<0.01$ |
| Japanese | 444 | 718 A. D. | $\mathrm{p}<0.05$ |
| Average | $\mathbf{5 0 9}$ | $\mathbf{7 2 0}$ A. D. |  |
| Expected | 504 | 729 A. D. |  |

Table 1. Results of the chronobiometric analysis of the scores of 229 greatest Arabian, Persian, Chinese and Japanese poets in history. Their periodicity and acmes coincide with the time-periods of goddess Inanna in the Babylonian hieratic calendar.

Figures


Fig. 1. Periodogram resulting from a 3100-year record of half-century frequencies in the occurrence of excellent Chinese poets living between 1200 B. C. and 1900 A. D. On the horizontal axis are period-lengths (from the longest to the shortest). On the vertical axis is a function expressing statistical significance. The 500-years period is obviously dominant.


Fig. 2. Chronograms of the half-century frequencies of famous poets in the history of Arabia \& Persia (above), Japan (in the middle) and China (below). On the horizontal axis is time from 1000 B. C. to 2000 A. D. On the vertical axis is the score of creative activity in poetry. Besides the data (dots), the approximation function (middle line) with its $95 \%$ confidence (narrower) and $95 \%$ tolerance (broader) corridors is shown. Note that the rhythms of all three approximation functions are nearly exactly synchronous.

