

## **Chapter 15. Genius versus Zeitgeist**

*The preceding chapters may leave the impression that Genius is totally at the mercy of the Zeitgeist. This conclusion is unjustified on both theoretical and empirical grounds. On the theoretical side, there are several reasons why the notable contributors to psychology cannot be completely explained in terms of a sociocultural reductionism. Instead, individual and situational factors operate in a complex interactive system. Something of this complexity is illustrated in two empirical studies of the operation of the Ortgeist and Zeitgeist in the careers of great psychologists, scientists, and philosophers.*

How do the results of the previous two chapters fit with all the findings reported in Parts II, III, and IV?

After all, chapter 14 provided considerable evidence that individual creativity is influenced by characteristics of the external milieu, such as the nature of the political systems, the occurrence of war or civil unrest, and the degree of economic prosperity.

These extrinsic factors affect not only the quantity of creativity that appears in a given time and place, but also the qualitative nature of that creativity, such as the specific philosophical positions advocated by major thinkers.

To these consequences must be added the repercussions of internal factors extensively reviewed in chapter 13.

Here both the level of creativity displayed and the type of creativity manifested were shown to be the function of intrinsic developments within a particular domain of creative achievement.

Taken altogether, the results of these two chapters seem to bolster the conclusion that great psychologists are mere creatures of their times.

The Zeitgeist and Ortgeist embody the genuine creative forces in the history of psychology.

The only exception to this conclusion comes from the discussion of the multiples phenomenon.

But even here, it was chance rather than genius that was put forward as the causal agency behind independent discovery and invention.

Against the implications of chapters 13 and 14 must be imposed virtually all of the preceding chapters.

The chapters of Part II treated the cross-sectional variation in productivity and distinction, the longitudinal fluctuations in impact, and the attributes of influential products in psychology.

Permeating this entire treatment was the explicit proposition that individuals achieve greatness in the annals of the discipline.

This proposition was reinforced in Part III by the discussion of the characteristics of great psychologists – the cognitive attributes, personality dispositions, and worldviews that contribute to their long-term success.

The proposition was given added weight in Part IV, where the chapters examined the various developmental correlates of a psychologist's attainment, including family background, career training, maturity and aging.

The last chapter of this part was devoted to the nature-nurture issue, a question of patent psychological relevance.

Hence, to advance from chapter 12 to the two chapters of Part V seems like a quantum shift in perspectives on the etiology of psychology's history.

The goal of this chapter is therefore to attempt some reconciliation between these apparently contradictory viewpoints.

This reconciliation will take two forms.

First comes a theoretical discussion of various reasons why the connection between genius and *Zeitgeist* (or *Ortgeist*) does not lend itself to complete sociocultural reductionism.

Next comes a pair of empirical inquiries that reinforce the same inference.

The history of psychology cannot be reduced to sociocultural processes any more than it can be considered a pure manifestation of individual psychology.

## GENERAL THEORETICAL CONSIDERATIONS

Despite the obvious impact of the sociocultural milieu on the appearance of creative genius, a scientific psychology of psychology's history remains both tenable and important.

There are at least four bases for this continued relevance:

- the existence of substantial individual differences,
- the presence of contrasting causal effects,
- the mediation of psychological processes in sociocultural phenomena, and
- the possibility that some sociocultural phenomena are actually the effects of psychological processes.

### *Substantial Individual Differences*

As is evident in the work of Candolle (1873), Sorokin (1937-1941), and Kroeber (1944), inquiries into the creativity of large sociocultural entities all entail the tabulation of events or persons.

That is, these tabulations consist of aggregate counts like the number of discoveries or the number of scientists per cross-sectional or time-series unit.

Yet such aggregate counts overlook a very significant reality.

There exist substantial and reliable contrasts in the creativity displayed by products or individuals even when they emerge at the exact same time and place (Simonton, 1991c, 1998b).

The sociocultural factors that account for an increase or decrease in the aggregate count are silent about the variation in creativity across the units making up that aggregate.

Indeed, it is someone ironic that the greater the magnitude of creativity exhibited at the aggregate level, the more variable is the creativity displayed within the group.

This tendency emerges in two ways.

1. First, according to cross-cultural studies, sociocultural evolution seems to proceed from (a) relatively simple societies in which there are no geniuses per se and yet in which everybody is creative to (b) comparatively complex societies in which true creative geniuses appear and yet the masses lead relatively uncreative lives (Brenneis, 1990; Carneiro, 1970; Martindale, 1976). This increased heterogeneity in creativity is accentuated all the more by the massive increase in population size that accompanies this evolutionary transformation (J. Simon & Sullivan, 1989; Simonton, 1999b; Taagepera, 1979). This implies that the top-notch creators represent only a very small proportion of the entire population. According to Galton's (1869) estimate, only 1 out of about 4,000 could be considered deserving of the name "genius."
2. Second, these individual differences are not confined to the simple distinction between the producers and the consumers of creativity. As amply demonstrated in chapter 3, the cross-sectional variation in lifetime productivity is huge, far more than would be anticipated if creativity were a normally distributed trait. This is the main point of the laws of Lotka and Price (Lotka, 1926; Price, 1963; H. A. Simon, 1955). Indeed, as explained in chapter 13, the Price Law says that this productive elitism must intensify as the aggregate number of active producers increases (Price, 1963). This means that as the total aggregate number of creators increases in a given nation or civilization, the more pervasive are the individual differences in total output.

These individual differences are critical because they determine how the *Zeitgeist* specifically manifests itself.

- One example was given in chapter 13 with respect to the phenomenon of multiple discovery and invention. Because there are tremendous individual differences in total output, there also exists substantial variation in the number of multiples that any one scientist or inventor participates in. The more prolific the individual, the higher are the odds that he or she will be involved in a multiple. Because eminence correlates very highly with total output, that means that the most famous contributors will also be involved in more multiples (Simonton, 1979, 1987b).

- Another example can be inferred from chapter 7, which presents an inventory of the personality characteristics most commonly found among outstanding creators. Among the most critical of these is their pronounced tendency to be independent, to resist conformity pressures, to pursue their own path without regard to societal norms. What this implies is that the greatest creators of a given time or place may actually be those who are least influenced by the surrounding Zeitgeist or Ortgeist. There is abundant evidence that this may indeed be the case.
  - i. For instance, one historiometric inquiry that looked at the aesthetic impact of 15,618 melodies by 477 classical composers found similar results (Simonton, 1980c). The most successful compositions were those that departed most from the stylistic conventions of their day. Moreover, there was a distinct tendency for composers to conform less and less to those conventions as they matured. Sticking close to the prevailing fashions may be wise in the early years of apprenticeship, but eventually composers must strike out on their own, to establish their own distinctive stylistic voice. Those who fail to free themselves from the compositional Zeitgeist pay the consequence when the fashionable becomes unfashionable (Simonton, 1998b).

### *Contrasting Causal Effects*

Kroeber (1944) argued on the basis of the data he had collected that there was indeed a certain correspondence between aggregate levels of creative activity and individual differences in creative genius.

In particular, the greatest creators were said to appear at the high point of the configuration, when the cultural pattern reaches a climax.

Yet this conclusion was based on mere inspection of the data rather than on any sophisticated statistical analysis.

When such an analysis is actually executed, a rather more complex outcome emerges (Simonton, 1996b).

Specifically, individual differences in the eminence attained by 611 Japanese creators and leaders were scrutinized with respect to the configurations defined 1,631 lesser figures active in the same domains of activity.

The local configuration for each figure could either be a peak, a trough, an ascent, or a descent.

The most eminent did not display any tendency to appear during the peaks.

Instead, they were most likely emerge when the civilization as whole as on an upward trajectory (ascent) and less likely to emerge when aggregate creativity in the specific domain was on a downward trajectory (decline).

Furthermore, the amount of variance explained in either case was very small, namely much less than 3%.

What makes the foregoing result most remarkable is that Kroeber's (1944) conjecture does seem to hold at the aggregate level, as already discussed in chapter 13.

That is, the most famous creators of history tend to appear in the same generations of the most also-rans in the same creative domains (Simonton, 1975d, 1988d).

Moreover, the amount of variance accounted for is much higher, more in the range of 10% (Simonton, 1988d).

For instance, the correlation between the number of major and minor thinkers across 141 generations of Chinese philosophy is .50, which shows that 25% of the variance is shared (even after detrending the time series).

This may seem strange to psychologists, who are mostly used to studying individual-level phenomena. Discrepancies between aggregate- and individual-level phenomena are well known to sociologists and demographers who deal with this curiosity often (Hannan, 1971; W. S. Robinson, 1950).

To illustrate, those states of the US that have the highest economic prosperity also tend to have the highest English-language illiteracy rates.

Yet at the individual level such illiteracy is negatively correlated with personal income.

Clearly, the aggregate and individual statistics are really describing two different phenomena, the first the tendency for prosperous states to attract more immigration, the latter the tendency for the better-paying jobs in the United States to require proficiency in the English language.

To illustrate the lack of correspondence between aggregate- and individual-level effects, let us return to the case of classical music.

Although there is no doubt that the number of eminent composers in generation  $g$  is a positive function of the number of eminent composers in generation  $g - 1$ , that does not mean that the differential greatness of a composer active in generation  $g$  is a simple consequence the number of great composers in generation  $g - 1$ .

This is evident in the fate of 696 composers active from the Renaissance to the 20th century, role-model availability has much more ambivalent effects (Simonton, 1977c).

On the one hand, the more role models that were available during the developmental period of a musical talent, the sooner he or she would begin to make original contributions to the repertoire.

On the other hand, that same exposure has a negative effect on a composer's total output.

Hence, role models leave a positive imprint on early creative precocity, but a negative imprint on later productivity.

Yet complicating things all the more is the fact that the net effect of role-model availability on lifetime output is zero. This happens because total output is a positive function of precocity, yielding a positive indirect effect that cancels out the negative direct effect! Needless to say, these causal complications at the individual level have no counterpart at the aggregate level.

### *Intervening Psychological Processes*

It must never be forgotten that the creative process is ultimately housed in the human mind.

Even when several human minds are interacting to produce creative ideas – as in brainstorming sessions or collaborative research teams – it remains invariably true that single intellects are generating the ideas.

By the same token, the sociocultural environment that supports the development and manifestation of creativity must somehow operate via the individual creator.

This means that some kind of psychological process or mechanism is often involved.

Examples of such mediating processes have been mentioned in several occasions in the preceding two chapters.

That is, to explain the relation between the sociocultural milieu and the individual creator, some psychological variable was cited as the intervening cause.

- Thus, in chapter 14 the benefits of cultural cross-fertilization for individual creativity was said to operate via the cognitive effects of bilingualism as well as the behavioral effects of exposure to minorities who do not conform to majority-culture values and beliefs.
- And back in chapter 13 it was seen that Kroeber (1944) himself, following Velleius Paterculus centuries earlier, ascribed the configurations of culture growth to imitation, emulation, admiration, and envy – social learning processes that take place within individual human beings.

### *Psychologically Driven Sociocultural Phenomena*

The preceding argument may be taken one step further.

Not only may sociocultural influences operate via psychological processes, but also psychological processes may to some extent shape those very influences.

In other words, both the *Zeitgeist* and the *Ortgeist* may be partly a function of the human *Psyche* rather than the causal direction always going in the other direction.

Sorokin's (1937-1941) theory of sociocultural dynamics provides a case in point – a theory that I outlined in chapter 14.

According to Sorokin, the driving force behind the transformation of culture mentalities is the relative capacity of each mentality to solve the basic problems of life faced by each person living within that culture.

The most fundamental problem concerns how best to attain happiness.

When the sociocultural system fails to satisfy that basic requirement of human existence, pressures will emerge to replace the old culture mentality with a new one that purports to be more satisfactory.

Of course, one might argue that to some extent the psychological variables that effect the sociocultural variables are themselves determined by other sociocultural factors.

Even so, the psychological variables would still be serving a mediating function, perhaps even a role so essential that the course of history is shaped by the minds of individual creators.

One case in point is to be found in Martindale's (1990) work on stylistic change in the arts, which was discussed in chapter 13.

Although each artistic creator works within a given aesthetic tradition, he or she can only secure a reputation by producing compositions that depart from that tradition.

This pressure to be novel, even shocking, impels the artist to resort to ever more “primary-process” (or “primordial”) imagery, with corresponding consequences for the evolution of the received style.

Eventually, this continued drive toward ever more originality actually destroys the style, requiring that creators come up with a new set of stylistic conventions for creativity to continue.



## SPECIFIC EMPIRICAL INVESTIGATIONS

Judging from the considerations just presented, the individual creator cannot be completely subsumed under the sociocultural milieu.

Besides the fact that creativity exhibits tremendous cross-sectional variation even for those who are active in the exact same *Zeitgeist* and *Ortgeist*, sociocultural factors often operate at the individual level in a manner strikingly different than what is seen at the aggregate level.

In addition, not only may psychological processes provide intervening variables in the working out of sociocultural phenomena, but also some sociocultural phenomena might be the causal offshoot of underlying psychological mechanisms.

One weakness in this theoretical discussion should be apparent, however. Few of the research findings used to illustrate the various points had any immediate relevance to the history of psychology.

What holds for great classical composers, for example, may not correspond to what applies to great psychologists.

Below this deficiency is remedied by providing two extended illustrations, one using rather restricted samples of great psychologists and the other using far more exhaustive samples of great thinkers.

The first illustration concentrates on the effect of the *Ortgeist*, the second on the impact of the *Zeitgeist*.

### *The Ortgeist: Great Psychologists*

In almost every chapter of this book, and especially in chapter 5, I have mentioned results taken from an intensive inquiry into the lives and careers of 69 eminent American psychologists (Simonton, 1992b).

Despite the many findings already reported, one empirical outcome has yet to be discussed: the impact of the Ortgeist on the differential acclaim enjoyed by these individuals.

This task was accomplished using computerized content analysis, a technique that we have already exploited more than once in other chapters.

By this means the lifework of these luminaries has been gauged on the degree of focus in their research programs and the amount of primary and secondary process imagery.

It will be recalled that these content analytical measures were all based on the titles of the principal publications of the 69 psychologists (as listed in R. I. Watson, 1974).

A measure of the American Ortgeist was gauged using the same raw information.

The first step was to perform a content analysis to determine what words had the highest frequency of occurrence in the entire set of titles.

By the computer's count, the most popular words were psychology, learning, study, mental, behavior, psychological, intelligence, studies, theory, tests, and experimental.

A dictionary was then constructed of all those words that occurred at least 10 times.

This dictionary was used to calculate a weighted score of how much a particular psychologist's set of titles contained the keywords representative of all 2,281 titles by the 69 figures.

The weight was based on the word's frequency of occurrence.

Thus, the word learning, which appeared more than 150 times, was given a weight of 15.

The resulting weighted count of keywords was then divided by the total number of words in each psychologist's collection of titles.

This was then adopted as an index of each psychologist's Ortgeist fit.

Here the Ortgeist means the favorite topics of American psychologists active between 1879 and 1967.

Interestingly, the more recently born psychologists had lower scores than those born earlier in the period covered.

This secular trend probably captures the historical shift that the discipline has undergone from a relatively homogeneous field at its founding to the highly heterogeneous field that it is today. In the early days, American psychology was dominated by just a handful of research topics, whereas over time the number of topics has proliferated, especially after the Second World War. This proliferation is reflected in the increase in the total number of Divisions of the American Psychological Association.

A similar increase in substantive pluralism is seen in APA journals.

Needless to say, it has become increasingly difficult for any psychologist to be considered highly representative of American psychologists as a whole.

Even more interesting, however, are the correlations between the Ortgeist fit and three measures of a psychologist's impact on the field.

First, this content analytical measure correlates positively with the total number of a psychologist's publications that continue to be cited in recent volumes of the *Social Sciences Citation Index*.

Second, conformity to the Ortgeist is positively correlated with the psychologist's posthumous reputation, as gauged by a highly reliable and valid multiple-indicator measure that was described in chapter 3.

Third, Ortgeist fit provides a good predictor of whether or not the individual was honored with election to the APA presidency.

To tease out how Ortgeist fit compared with other predictors of contemporary and posthumous fame, a multiple-regression analysis was done that introduced other potential predictors, as well as control variables (especially birth year, to adjust for historical trends).

A snug relationship with the Ortgeist continued to make an important contribution to the prediction of both election to the APA presidency and posthumous reputation.

Only continued citations to their published work accounted for more productive power.

Hence, concentrating on the most popular topics in American psychology is a good way of ensuring both contemporary acclaim and long-term distinction.

Turning to those among the 69 who scored highest and lowest on the measure can put this generalization in concrete terms.

E. L. Thorndike, E. B. Titchener, E. C. Tolman, K. W. Spence, and C. L. Hull exhibited the best fit to the American Ortgeist among the 69.

D. McGregor, E. Mayo, C. E. Ferree, W. v. D. Burnham, and E. K. Strong displayed the worst fit.

Besides the obvious difference in name recognition, not one of those in the bottom group were ever elected to the APA presidency, whereas 3 out of the 5 in the top group received that honor – Thorndike, Tolman, and Hull.

And Titchener probably would have become president, too, had not a personal dispute with James Mark Baldwin led to his resignation from the organization.

Naturally, these provocative results are not immune from criticism.

The Ortgeist measure can only be considered a rough approximation.

For one thing, it only assessed what topics a psychologist discussed, as revealed in the titles of his or her publications.

The measure did not tap into the position taken on those topics, unlike the indicators of theoretical and methodological orientation examined in chapter 8.

Just as crucial is the fact that the period covered, from 1879 to 1967 may be too long to be considered a single coherent Ortgeist.

In terms of generational analysis, that interval covers more than four 20-year time periods.

Furthermore, no attempt was made to distinguish the American Ortgeist from other disciplinary milieus, such as the British, French, German, Italian, and Russian.

As a consequence, it cannot be said for sure whether the gauge of fit applies just to American psychology or to all psychology over that time period.

But from the standpoint of the debate that is the centerpiece of this chapter, the most critical issue is whether the demonstrated impact of the Ortgeist converts the great psychologist to a mere epiphenomenon of the sociocultural milieu.

The answer is negative.

The most consistently powerful predictor of a psychologist's impact on the field is not compatibility with the Ortgeist but rather the long-term influence of his or her publications.

Moreover, since the predictive power of the latter factor was estimated after controlling for the Ortgeist fit, the assessment of the individual's contribution is not surviving as a proxy measure of the Ortgeist fit.

Also, in earlier chapters we have provided a large number of cognitive, personality, and developmental variables that predict, either directly or indirectly, the impact of a psychologist's body of work.

This means that great psychologists achieved the largest portion of their acclaim based on their own personal characteristics, not according to the degree that they conform to the fashionable topics of their day.

In sum, the best inference to draw from this study is that greatness as a psychologist is a matter of *both* Genius *and* Ortgeist, with the former holding the advantage.

*The Zeitgeist: Great Psychologists, Scientists, and Philosophers*

G. W. F. Hegel (1821/1952) affirmed that “the great man of the age is the one who can put into words the will of his age, tell the age what its will is, and accomplish it. What he does is the heart and essence of his age, he actualizes his age” (p. 149).

Goethe (1808-1832/1952) expressed this idea more poetically in *Faust*: “What you call ‘spirit of the ages’ / Is after all the spirit of those sages / In which the mirrored age itself reveals” (p. 16).

But is this true?

Are the great men and women of intellectual history mere mirrors that reflect the times, their only claim to fame being, perhaps, that their surfaces are more polished than the other mental reflectors of the age? This question and several other closely related questions were addressed in a comprehensive study of all the thinkers who dominated the Western intellectual tradition from antiquity to the 20th century (Simonton, 1976f).

I will first define the study’s sample,  
then its measures, and  
conclude by summarizing its most critical findings.

*Sample.*

In both chapters 13 and 14 I made considerable use of Sorokin's (1937-1941) data on the fluctuations in philosophical beliefs from the time of the ancient Greeks to modern European culture.

One generational time-series analysis after another deciphered the diverse ways that the sociocultural milieu, both internal and external, shaped the course of intellectual history.

Yet statistical treatment of Sorokin's time series does not have to be confined to the aggregate level of analysis.

The appendices of his *Social and Cultural Dynamics* contain the original individual-level scores that were later aggregated into the 20-year periods.

Hence, it is possible to use these data for an analysis that is confined to individuals rather than generations.

The resulting sample is exceptionally large, for a total of 2,012 thinkers are available for study. Furthermore, these thinkers span over two millennia of intellectual history – from Thales to Karl Pearson.

In addition, the sample contains many of the key figures of psychology's history, as is evident in Table 13.2.

Included are great philosophers like Aristotle, Thomas Aquinas, and Kant, great scientists like Descartes, Newton, and Charles Darwin, and great psychologists like William James and Wilhelm Wundt.

If the Zeitgeist → genius hypothesis has any merit, its truth should be demonstrated on this group of luminaries.

### *Measures.*

The first task was to provide an operational definition of the dependent variable, namely each thinker's eminence.

Rather than just use Sorokin's (1937-1941) assessments, a composite measure was used that consisted of 10 distinct evaluations, including those provided by Kroeber (1944) in his chapter on philosophical configurations.

The next step was to define the independent variables that could enter the multiple-regression equation as predictors.

These variables fell into four groups: external factors, internal factors, *Zeitgeist* fit, and belief structure:

1. The external factors all came from variables discussed earlier in this chapter: political fragmentation, imperial instability, political instability (or anarchy), and war intensity (Simonton, 1975d). To apply these generational measures to the individual level of analysis, each thinker was assigned to a generation, according to the 40-year floruit rule. Each thinker's eminence could then be correlated with the scores on these variables in either the same generation ( $g$ ) or the preceding generation ( $g - 1$ ). The former would represent a productive-period influence, the latter a developmental-period influence. A cross-lagged analysis had been used to determine whether the relation would be synchronous or lagged.
2. The two measures of internal factors were role-model availability and ideological diversity at generation  $g - 1$ . The former was simply a count of the number of thinkers in the sample who were active in the preceding generation, whereas the latter was based on the study discussed earlier in this chapter (Simonton, 1976d). Both were considered developmental-period factors.
3. *Zeitgeist* fit was assessed three distinct ways, depending to which *Zeitgeist* the thinker was voicing. First and foremost was a measure of representativeness, analogous to the *Ortgeist* fit indicator on which the 69 American psychologists were assessed. A thinker's score gauged the correspondence between the positions taken on the seven core philosophical issues and the positions taken by most thinkers active in the same 20-year period (i.e., generation  $g$ ). Next was a measure of the degree of fit between the thinker's beliefs and the dominant positions of the following generation (i.e.,  $g + 1$ ) rather than the preceding generation (i.e.,  $g - 1$ ). This score was said to assess a thinker's precursiveness, that is, the extent to which he or she was ahead of the *Zeitgeist*. The third and last measure compared the stances taken by each thinker against the most popular positions of the early 20th century. The degree of match on the seven philosophical issues assessed the thinker's modernity.
4. The last three measures concentrated on the thinker's belief structure. The first measure gauged the breadth of positions taken. Those thinkers who treated all seven philosophical issues were the most broad in intellectual scope, whereas those who specialized in only one issue, such as just ethics, were the most narrow. The second was a measure of extremism, which was defined as the extent to which the thinker advocated positions that (a) were favored by less than 10% of all 2,012 thinkers in the sample and (b) occupied the endpoint of some scale of opinions on the issue (e.g., monistic idealism, extreme singularistic individualism, and the ethics of love). The third measure gauged the degree to which a thinker's package of beliefs could be considered consistent with how positions are generally put together by the thinkers of the Western philosophical tradition. Consistent belief pairs were identified if they both frequently co-occurred among all philosophers. Examples include skepticism and temporalism, mysticism and realism, empiricism and nominalism, and mechanistic materialism and the ethics of happiness. Although the consistency scores was based on an a posteriori determination, almost all belief pairs would have been judged consistent on a priori grounds as well. Perhaps the only exception is the linkage of fideism and hylozoism, which represents a pairing distinct to Stoic philosophers.

Besides the above four sets of independent variables, historical time was introduced as a statistical control. Specifically, the date of the thinker's generation was used to adjust for any timewise trends.

*Results.*

Table 15.1 presents the results of regressing the thinker's eminence on the 13 variables just defined.

**Table 15.1**

***Multiple Regression Analysis: Predictors of the Eminence of a Thinker at Generation g***

<b>Independent variable</b>	<b>Standardized coefficient</b>	<b>Squared semipartial correlation</b>
<b>External factors</b>		
Political fragmentation ( <i>g</i> )	.158***	.012
Imperial instability ( <i>g</i> - 1)	-.042	.000
Political instability ( <i>g</i> - 1)	-.062*	.002
War intensity ( <i>g</i> - 1)	-.008	.000
<b>Internal factors</b>		
Role-model availability ( <i>g</i> - 1)	-.118*	.002
Ideological diversity ( <i>g</i> - 1)	.022	.000
<b>Zeitgeist fit</b>		
Representativeness	-.179***	.012
Precursiveness	-.053**	.003
Modernity	.210***	.017
<b>Belief structure</b>		
Breadth	.526***	.067
Extremism	.144***	.012
Consistency	-.276***	.028
Generation (historical period)	.130***	.004

*Note.* The standardized partial regression coefficients ( $\beta$ s) come unaltered from Table 1 in Simonton (1976f), whereas the squared semipartial correlations were calculated from the *F* ratios given in the table. The squared multiple correlation for the total regression equation is .217. Adapted from "Philosophical Eminence, Beliefs, and Zeitgeist: An Individual-Generational Analysis," by D. K. Simonton, *Journal of Personality and Social Psychology*, 34, p. 637. Copyright by the American Psychological Association.

\*  $p < .05$ . \*  $p < .01$ . \*  $p < .001$ .

Collectively, the independent variables account for almost 22% of the total variance in a thinker's distinction.

Yet the predictors did not always have the expected effect.

To begin with, of the four external factors, only political fragmentation and political instability or anarchy emerged as significant predictors.

The fame of a thinker active in generation *g* is a positive function of the number of independent states in the same generation.

In addition, eminence was a negative function of the level of political instability in generation *g* - 1, indicating an adverse developmental influence.

These findings replicate what was found at the aggregate level (Simonton, 1975d), as already described in chapter 14.

On the other hand, imperial instability did not have any effect, albeit the regression coefficient was in the right direction.

This fails to replicate what holds at the aggregate level (Simonton, 1975d).

Although war intensity also had no effect, this would be anticipated according to what was found in the generational time-series analyses (Simonton, 1975d, 1976b).

In the case of the internal factors, ideological diversity had no connection with a thinker's eminence, unlike what was found using aggregate data, where this factor was linked with greater philosophical activity (Simonton, 1976d).

Even more surprising, role-model availability has a statistically significant effect, but one that has the opposite sign from what was found for generational time series representing three different world civilizations (Simonton, 1975d, 1988d, 1992a).

Once the effects of the other variables in the equation are partialled out, the most famous thinkers are most likely to grow up in times where there is a relative dearth of predecessors – an intellectual vacuum!

Already it appears from these results that the greatest philosophers, scientists, and psychologists may prove too independent, even obstreperous, to comply with our expectations.

This judgment is strengthened by the empirical findings concerning Zeitgeist fit.

Only in the case of the modernity measure does the outcome comply with expectation.

Holding everything else constant, the most illustrious figures of Western intellectual history tend to propound beliefs that show a high concordance with modern views.

For the other two measures, in contrast, the signs of the regression coefficients are negative rather than positive.

Thus, in the first place, great thinkers are less likely to be precursors of a new age, as represented by the next generation's Zeitgeist.

On the contrary, eminence is associated with being behind the times, of having beliefs closer to those of the generation of their youth.

Even more striking is the negative effect of representativeness.

It is not the truly notable thinkers but rather their obscure colleagues who are most likely to adopt majority positions.

The greatest minds are those who buck the ideological fashions of their time, who transcend rather than represent the Zeitgeist in which they must carve out their careers.

The effects for belief structure give us even better insight into what these greats are doing to earn their acclaim.

Not only are the more eminent more likely to span a broader range of philosophical issues, but also they are more likely to advocate extreme positions and to package those positions in unusual combinations.

In short, their philosophical systems are broad, yet seemingly inconsistent and extremist.

The latter finding is especially fascinating, because it fits with what was discovered about the worldviews of 54 eminent psychologists in chapter 8.

Those who had the most long-term influence on the field were those who took extreme positions on the theoretical and methodological issues that have proven most divisive in the history of psychology.



Table 15.1 provides another column of statistics that offers even more insight into the relative role of genius and Zeitgeist in the course of intellectual history.

The squared semipartial correlations inform us as to the proportion of variance that can be uniquely attributed to the corresponding independent variable.

To illustrate, the .004 squared semipartial for generation indicates that 0.4% of the total variance in a thinker's eminence can be ascribed uniquely to the historical period in which he or she was active.

Now, judging from these statistics, it should be evident that the external and internal factors account for very little of what it takes to leave a mark on Western intellectual history.

Only political fragmentation exceeds 1%, and the total unique effect of all six variables remains less than 2%.

Although the three measures of Zeitgeist fit enhance the predictive power much more – the three together contribute a bit over 3% to the predicted variation – only one of these operates in the expected manner.

Indeed, the biggest effect, that for representativeness, appears to totally contradict the hypothesis that great minds but reflect their times.

The results for belief structure harm even more the case for the Zeitgeist.

The three predictors together account for about 11% of the variance, or around half of the total predictive power.

The single most potent predictor in the entire set of 13 independent variables is philosophical breadth, which accounts for almost 7% of the variance.

To sum up, the differential impact of these 2,012 thinkers seems to be far more a matter of genius than of Zeitgeist.

Individual-level variables such as the thinker's belief system have more predictive power than do the aggregate-level variables that gauge the sociocultural milieu, whether internal or external. Even worse for Zeitgeist theory, the consequences of the sociocultural milieu at the individual level are not always compatible with what happens at the aggregate level, and sometimes the effects of the milieu are utterly inverted.

Moreover, the beliefs advocated by the greatest thinkers do not appear to be those what one would expect hear from someone trying to go along with the crowd or to embody the consensus of the majority.

Certainly the success of the greatest minds cannot be attributed to there being mere mouthpieces of their times.

Nor are they willing to adopt moderate positions or to configure their positions in a manner most friendly with the prevailing views of Western philosophy.

The image that emerges is that of individuals firmly independent, autonomous, resistant to the conformity pressures of their age.

Here the psychological disposition associated with creative genius appears to provide the driving force behind the most influential philosophers, scientists, and psychologists.

Yet why was the effect of the Zeitgeist for these 2,012 psychologists, scientists, and philosophers so different from the effect of the Ortgeist for the 69 American psychologists?

Is it because the Ortgeist and Zeitgeist measures had different operational definitions, the former based on mere topics and the latter on actual positions?

Is it because the attainment of distinction in American psychology is contingent on different factors than is the achievement of eminence in the Western intellectual tradition?

Meanwhile, it should be emphasized that the two studies do share one crucial conclusion in common.

For both samples it was the individual's actual body of work that had the biggest part in the determination of his or her acclaim.

This robust result reinforces all the more the most fundamental inference to be drawn from all the findings reviewed in Part V.

The diverse consequences of the sociocultural milieu notwithstanding, to become a great psychologist, you must indeed be the right person, and not just at the right place or the right time.