Reclaiming the Individual From Hofstede's Ecological Analysis— A 20-Year Odyssey: Comment on Oyserman et al. (2002)

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D. Oyserman, H. M. Coon, and M. Kemmelmeier (2002) challenge the stereotype that European Americans are more individualistic and less collectivistic than persons from most other ethnic groups. The author contends that this stereotype took firm empirical root with G. Hofstede's (1980) monumental publication identifying the United States as the most individualistic of his then 40 nations. This empirical designation arose because of challengeable decisions Hofstede made about the analysis of his data and the labeling of his dimensions. The conflation of concepts under the rubric of cultural individualism plus psychologists' unwarranted psychologizing of the construct then combined with Hofstede's empirical location of America to set a 20-year agenda for data collection. Oyserman et al. disentangle and organize this mass of studies, enabling the discipline of cross-cultural psychology to forge ahead in more productive directions, less reliant on previous assumptions and measures.

First to enter is the master—Book of Han by Pan Ku (A.D. 32–92)

The heroic integration of research on individualismcollectivism by Oyserman, Coon, and Kemmelmeier (2002) touches on some issues that have exercised me considerably over the last quarter century of doing cross-cultural social/personality psychology. I take this opportunity to comment on one of these issues: the freeing of our discipline from the intellectual shackles of Hofstede's (1980) intellectual achievement. I believe that we cross-cultural psychologists have long been held in thrall by Hofstede's essential contribution and that many continue to misunderstand what he did, wrestling with the ghosts of his legacy instead of developing cross-cultural psychology in more productive directions. Those directions include identifying individual-level constructs whose strength and connections with other constructs need to be examined across cultural groups; linking the strength of these individual constructs to socialization practices and institutional processes, which vary across cultural groups; examining the importance of extraindividual factors, such as norms, roles, and aspects of language, in generating social cognitions and behavior; and searching out novel constructs, processes, and theories explaining human social behavior from the repository of non-Western cultural traditions (Smith & Bond, in press).

This reflection focuses on the first of these directions and begins by considering why cross-cultural psychologists have spent the last 20 years reaching the disciplinary conclusion about individualism—collectivism described by Oyserman et al. (2002). By understanding this laborious process, I hope that the field can move forward more adroitly in the 21st century.

Hofstede's (1980) Nation-Mapping

Hofstede is an organizational sociologist with an engineering background (see Hofstede, 1997). As research director at IBM in the mid-1960s, he had access to its employee survey, which surveyed equivalent, stratified samples of its workers in more than 40 countries. This survey included 32 items that Hofstede (1980) described as work goals or values. For each of his (initially) 40 nations, Hofstede computed an average score for the endorsement given by each nation-sample to each of those 32 work-related values. He then produced a correlation matrix for these 32 average "nation-values." This matrix was factor analyzed, yielding three factors, the largest of which was subdivided. This procedure yielded four dimensions by which nations could be described in terms of their factor score on each of the four dimensions. Hofstede had mapped the values of nations much as former Dutch explorers had mapped the geography of terra incognita.

Hofstede's (1980) Herculean achievement was to provide the social sciences with an empirical mapping of 40 of the world's major nations across four dimensions of culture, integrating these results with previous theorizing and data about national cultures, dimension by dimension. Social scientists were galvanized, and in the ensuing 20 years, Hofstede has become one of the most widely cited social scientists of all time (Hofstede, 1997). Cross-cultural psychologists like myself felt ourselves unleashed because we now enjoyed an empirical justification for considering our samples of subjects to be drawn from nations with different positions on one of Hofstede's four dimensions. In part because of its distinguished lineage in the social sciences, that dimension was usually individualism—collectivism.

Nation-Level Individualism—Collectivism

One wonders how the last 20 years of cross-cultural psychology would have differed if Hofstede (1980) had not made a number of crucial choices. The first was to label one of his four factors, *individualism-collectivism*. Six nation-values, in this case work

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goals, constituted the factor. Personal time, freedom, and challenge were added together to define and constitute the individualism end of the dimension; use of skills, physical conditions, and training were added together to define and constitute the opposite end of the bipolar factor. The first three work goals bear obvious relations to individualism as that multifaceted construct has been discussed in the literature of the social sciences. How the last three work goals described anything resembling collectivism was, however, a mystery to many.

Those three work goals constituted a bipolar contrast to the three individualistic items. Given linguistic conventions and theoretical comparisons developed in previous sociology, the temptation to label the contrasting three work goals as *collectivism* must have been overwhelming. I suggest that this labeling of a bipolar contrast drawn at the national level has structured our subsequent thinking about this construct as a bipolar contrast at the individual level.

I find it intriguing that Hofstede's (1980) decision at another choice point may have deeded us this contrast. Factor analyses of raw value scores yield factors with values all loading positively on their prime factor. Hofstede, however, had first standardized his 32 nation-values within each of his 40 nations to eliminate any acquiescence bias that may have distorted a nation's resulting position on the extracted factors. This procedure yields both positively and negatively loading items, thereby creating bipolar contrasts in the resulting factor loadings. Hofstede subsequently found that the extent of a country's acquiescence bias correlated with its score on one of his four dimensions, power distance. As Hofstede argued, it makes sense that persons socialized into a hierarchical social system should be inclined to agree with most things associated with authority, like items in an employee survey.

Thus, a nation's degree of acquiescence has a meaningful relationship to one of the extracted dimensions and may encapsulate important cultural distinctions. Had Hofstede (1980) not standardized the 32 work-related values within each nation, the subsequent nation positions may well have been the same as they were following his standardization. Indeed, my collaborators and I found that standardizing our Chinese values in 22 different nations made no difference in the resulting country positions when compared with results from the nonstandardized solution (Chinese Culture Connection, 1987). So, had Hofstede not standardized his nation-values within each nation, thereby generating bipolar dimensions, the contrast of collectivism against individualism might never have influenced our subsequent work.

The United States and Individualism

Nonetheless, these six particular and perhaps peculiar work goals, three positive, three negative, were combined to yield scores for each of the 40 nations. By happy chance, the United States was located at the extreme of the dimension, the very exemplar of Hofstede's (1980) individualism. The United States is the center of the world as far as the production of social science (Featherman, 1993) and empirical psychology is concerned. Consequently, it constitutes the contrasting culture against which most crosscultural comparisons are made. Many literate, scholarly essays had long been a part of our disciplinary corpus, contrasting some cultural system with the American cultural system and using the

contrasting concepts of individualism-collectivism to frame that discussion (e.g., Hsu, 1953).

A plethora of cross-cultural research began to emerge after the publication of Hofstede's (1980), *Culture's Consequences*, framing comparisons between American results and those of other cultures, usually Asian, in terms of individualism—collectivism. Given the richness of this concept, authors found this an easy argument to cast. The findings were cooperative too, given the elasticity of the conceptual contrast and the standard operating procedure of using only two cultural groups and then comparing the average score of American respondents with that of respondents from some non-Anglo Saxon nation.

Few psychologists read Hofstede's (1980) detailed methodology closely. Most forgot that Hofstede had extracted the dimension of individualism-collectivism by subdividing the larger first factor that emerged from his initial 40-nation factor analysis. Hofstede labeled the other subfactor power distance, with an individualismcollectivism and power distance correlation of -.67. On this dimension of power distance, the United States was not located in an extreme position, with 14 countries showing lesser power distance. Had Hofstede stayed with his original three-factor solution and its strong first factor, it seems most unlikely that the United States would have been first among his 40 nations. More likely it would have been Israel, Ireland, Denmark, Great Britain, or Australia. Even if Hofstede had persisted with the label individualismcollectivism, would we still have enjoyed the efflorescence of cross-cultural studies on this cultural concept had the United States not been its prime exemplar?

The Puzzling Position of Japan

As Oyserman et al. (2002) remind us, Japan is perhaps the most intensely studied exemplar of the collectivist cultural extreme, certainly by cross-cultural psychologists. It was, however, not the obvious choice for a contrast using Hofstede's (1980) taxonomy because 16 of Hofstede's 40 countries are even more collectivistic than Japan. On power distance it was 22nd, close to the United States's 15th position. Again, this closer inspection of Hofstede's results suggests that had Hofstede left his first factor intact, Japan and the United States would have been cultural neighbors, not distant contrasts. Indeed, a two-factor solution (Bond, 1996) to a more recent multicultural study of values (Schwartz, 1994) puts Japan and the United States in almost the same exact position from among the 37 countries in the array! Therefore, one might well ask why Oyserman et al. evinced such surprise in their readers when they convincingly demonstrated, as have Takano and Osaka (1999), that Japanese are often more individualistic, not less, than Americans? Using hindsight, we never should have been so surprised.

Psychologizing National Individualism-Collectivism

Hofstede's (1980) four-dimensional mapping of national values met a growing academic hunger for structure concerning culture. Previously, cultural contrasts in the social sciences had often seemed tendentious, Procrustean, and ideological. By contrast, Hofstede had deployed the full scientific armamentarium of analytical techniques to 116,000 questionnaires gathered from matched samples in 40 nations, repeated twice, in 1967 and 1971.

He then positioned these 40 nations on his four dimensions and supported this dimensionalizing with a daunting array of supportive theory and findings culled from his extensive knowledge of the social science literature. I submit that social psychologists were mesmerized by this "fearful symmetry" and all too willingly ignored anomalies and the fine print.

Many overlooked Hofstede's (1980) division of his first factor, embraced his location of the United States as the highest of the 40 nations on individualism, accepted his characterization of countries high on the six work goals as validly defining a contrast between individualism—collectivism, and then proceeded to commit the ecological fallacy of regarding Americans as the world's most individualistic persons. Hofstede (1980) had warned readers about this flaw in logic. The ecological fallacy occurs when an association among nation-level variables (ecological indices) is assumed to apply to individuals. Such a fallacy would be perpetrated, for example, if readers assumed that the six work goals defining nation-level individualism—collectivism in Hofstede's analysis would likewise define individualism—collectivism at the individual level.

If one could legitimately do so, it would be a simple extension of Hofstede's (1980) results to conclude that because the United States was first in nation-level individualism and last in nationlevel collectivism, Americans are therefore more individualistic and less collectivistic on average than persons from any other country. Social scientists may not do so. As has been shown by many authors (e.g., Hofstede, Bond, & Luk, 1993; K. Leung, 1989; Shweder, 1973), the pattern of correlations at the national (or organizational or group) level is not replicated at the individual level. Even though some forcefully argue that there is pressure within the social system for an individual organization of value groupings to align itself with a national organization of value groupings (Schwartz, 1994), in practice such isomorphism does not occur. Nation-level constructs are not logically or empirically constituted the same way as individual-level constructs, convenient as it would be.

Unpackaging Individualism Psychologically

Many cross-cultural psychologists were alert to this fallacy and struggled to ladder Hofstede down from the national to the individual level. If one could identify an equivalent construct measuring individual-level individualism, then one could begin examining relations between this individual-level individualism and other relevant variables within a number of national groups to see if these relations were culture-general or culture-specific. Psychology could then move toward creating universal theories that were empirically grounded in findings from a number of different cultural groups.

In fact, Bosland (1985), an associate of Hofstede's, tried to examine the associations among the Hofstede (1980) work goals at the individual level across 10 of the Hofstede nations. He found it impossible to extract a metrically equivalent grouping or set of groupings at the individual level from so many different cultural groups. Metrically equivalent groupings of items into constructs are necessary when one wants to compare individuals and individual processes across different cultural groups (Van de Vijver & Leung, 1997). Procedures for assessing equivalence have been developed for comparisons across two cultural groups, such as

Cronbach alphas for item groupings and coefficients of congruence for factor structures. However, when these criteria are extended beyond two cultural groups, it becomes very difficult to achieve the levels of metric equivalence normally judged to be adequate in two-culture comparisons.

I, for example, pooled and factor analyzed balanced data sets of values from 22 nations, extracting two factors (Bond, 1988). These two factors, however, accounted for only 13% of the common variance. That would seem a paltry amount in a monocultural factor analysis, but how else should one assess such a level of commonality across 2,200 persons from 22 different cultural groups? What should the percentage of accountable variance and the distribution of alphas or of coefficients of congruence look like across persons from such a large set of constituent cultural groups? Cross-cultural psychologists had no statistical ways to assess this question.

Confirmatory factor analysis required a standard solution against which the other solutions could be compared. But in multicultural data sets, which culture was to provide the standard solution? The historical operating procedure had been to export a test of some construct usually developed in the United States and use the scoring scheme developed there as the standard. That procedure was labeled *imposed etic* by Berry (1969) and smacked of intellectual imperialism because it implied that the United States and its people could be used to define the organization of the psychological world. When culture was the object of scientific inquiry, however, openness to all cultural possibilities was a sine qua non. Every culture's voice must be equally privileged.

Hofstede (1980) in the Context of Psychological Discovery

Hofstede (1980) provided a richly textured description of what he deemed to be the components of each of his four cultural dimensions. The inclusion of each component was justified by a host of theoretical underpinnings and validational evidence from national indexes. This cataloging of components provided fodder for eager instrumentation by cross-cultural psychologists (e.g., Triandis et al., 1986), just as Hall's (1976) work on high- and low-context cultures later did for studies of communication across cultures (Gudykunst et al., 1996).

Such concerns about instrumenting individual-level comparisons became ever more pressing with the publication of Markus and Kitayama's (1991) seminal article on independent and interdependent self-construals as organizing constructs in motivation, emotion, and cognition. Their article stimulated the development of measures for independent and interdependent self-construals (e.g., Gudykunst et al., 1996; Singelis, 1994). Comparisons of Japanese and Americans on these sorts of measures yielded the surprise noted by Oyserman et al. (2002) that Japanese were sometimes more individualistic and sometimes less collectivistic than Americans. Given the discipline's history with the construct of individualism—collectivism and Hofstede's (1980) by now widely known results, it is perhaps understandable that most of us were surprised by these findings. We expected the Japanese to be less individualistic and more collectivistic than the Americans.

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Comparing Nations in Their Level of Psychological Individualism

Oyserman et al. (2002) have content-analyzed the themes found in the multitude of tests developed for individualism and for collectivism at the individual level. Their seven individualism and eight collectivism content domains underscore the complexity and richness of this construct as it has been operationalized in the social sciences. These categories are numerous and their operationalized constructs are correlated with one another to varying degrees. There is a keen need to deconflate and integrate these various measures conceptually. Perhaps, as Oyserman et al. surmised, it will be concluded that the omnibus labels individualism and *collectivism* are too broad and inclusive to be retained. Instead, the discipline will move toward developing theories and conducting research on more focused aspects of individualism or of collectivism. My guess is that the field will in fact abandon these two overfreighted constructs altogether and move toward narrower theories of culture based on more specific constructs.

Any one of these constructs could be used to map the psychological world in terms of average level of a construct in a nation's population, just as Hofstede (1980) mapped the national world. The difficulties will be, first, ensuring adequate metric equivalence for the construct across the populations in the national groups included. Achieving such assurance may require the development of new criteria about what constitutes equivalence and how to test for it, as mentioned earlier (see Van de Vijver & Poortinga, 2001, for a recently developed approach). With equivalent constructs available, however, the field will be well positioned to test for universal relationships and move toward developing universal theories of social behavior (Smith & Bond, in press).

A second challenge will be to confront the consequences of the heavy reliance noted by Oyserman et al. (2002) on Likert-type scales to assess declarative self-knowledge. One such consequence is the possibility that various response formats will affect the resulting positioning of the typical person from various national groups. Recent research on this problem by Chen, Lee, and Stevenson (1995) has demonstrated that Chinese tend to use more moderate responses but that such a moderation bias does not affect the positioning of the average response of persons from the national groups. Clearly, counterbalanced test items must be used to ensure such an outcome. Some tests, such as those for values, invite a different form of bias, the acquiescence bias, but as mentioned above, this bias must itself be examined for its possibly useful revelations about culture's influence on psychological processes.

Subterranean Cultural Influences?

The above fine-tuning of measurement formats may, however, distract the field from a more momentous problem. As Cohen (1997) has pointed out, cultural influences on behavior may be more pronounced precisely where they are less accessible:

But, because they are either so over-learned (or were never explicitly taught in the first place), they may bypass conscious processing altogether. Our verbal reports and judgments are most clearly tied to conscious levels of processing, and so they may never get connected with the cultural rules embedded in our preconscious. (p. 126)

Our reliance on verbal scales to assess declarative self-knowledge may be disenabling the field from tapping into the more profound reverberations of socialization through a collectivist or individualist cultural system. For example, the characteristics of holistic perception and responsiveness to the field theorized to distinguish collectivists from individualists may be more accurately and validly assessed by using tests designed to tap these less conscious processes (see e.g., Abel & Hsu's, 1949, use of Rorschach tests). There has been a resurgence recently in the use of implicit (McClelland, 1985) and at-a-distance (Winter, 1996) measures of personality, many developed out of the earlier psychoanalytic perspective. Despite improvements in the reliability of their scoring (see e.g., Winter & Stewart, 1977), they have yet to be used in cross-cultural work.

I expect that their use to measure aspects of individualismcollectivism would yield greater predictive power than Oyserman et al. (2002) pointed out is found with the denotative, declarative measures for self-assessment currently in vogue. At least, they may provide additional, nonoverlapping sources of outcome prediction. This improved predictability may include those topic areas frequently studied at present, such as degree of externality in attributions or directness of communication style. They may be even more powerful predictive tools in areas of study that have emerged out of collective cultural concerns, such as interpersonal relatedness (Cheung et al., 2001) or relationship harmony (Kwan, Bond, & Singelis, 1997). The emergence of these more social constructs from collectivist cultural traditions raises the possibility of using differently focused measures, such as ratings of others (Bond, Kwan, & Li, 2000), and different sources of ratings, such as ratings by others (S.-K. Leung & Bond, 2001), for tapping into collectivist processes at the individual level. Surely one of the liberations gained from studying collectivist cultures is to move past the intellectual constraint of the subjectivism arising out of the individualistic cultural legacy (Sampson, 1981).

Conclusion

In science, as in other endeavors, we as psychologists proceed "through a glass darkly" with ever so human a frame. There seems to me an inevitability in our halting progress toward our current appreciation of how individualism—collectivism is represented at the psychological level: Hofstede (1980) proposed, and we eagerly disposed. The magnitude of his achievement and our need for structure about culture often persuaded us to blind ourselves to important logical and procedural details. Inattentiveness to these details set us on a merry chase but has resulted in our spending considerable time disentangling intellectual puzzles and resolving apparent paradoxes.

I believe that some dawning discoveries have emerged from out of this energetic deployment of intellectual curiosity: Individualism—collectivism at the level of nations is not the same as individualism—collectivism at the level of individuals, either conceptually or operationally; individualism and collectivism may be conceptualized and measured as separate, not necessarily bipolar, constructs at the individual level; the omnibus constructs of individualism and collectivism are multifaceted, permitting many different operationalizations; attention to intellectual developments in psychology from collectivist cultures may provide the field with valuable approaches to understanding and measuring individualism and collectivism at the individual level; and this measurement may not be best achieved by relying on explicit,

paper-and-pencil measures of declarative self-knowledge. That is a useful yield; it is time to reap the harvest.

Every wall is a door.—Ralph Waldo Emerson

References

- Abel, T. M., & Hsu, F. L. K. (1949). Some aspects of personality of Chinese as revealed by the Rorschach test. *Rorschach Research Exchange and Journal of Projective Techniques*, 13, 285–301.
- Berry, J. W. (1969). On cross-cultural comparability. *International Journal of Psychology*, 4, 119–128.
- Bond, M. H. (1988). Finding universal dimensions of individual variation in multicultural studies of value. *Journal of Personality and Social Psychology*, 55, 1009–1015.
- Bond, M. H. (1996, August). Integrating across multicultural studies of value. Paper presented to the 26th International Congress of Psychology, Montreal, Canada.
- Bond, M. H., Kwan, V. S. Y., & Li, C. (2000). Decomposing a sense of superiority: The differential social impact of self-regard and regard-forothers. *Journal of Research in Personality*, 34, 537–553.
- Bosland, N. (1985). The cross-cultural equivalence of the power distance, uncertainty avoidance, individualism, and masculinity measurement scales (Working paper). Den Haag, the Netherlands: Institute for Research on Intercultural Cooperation.
- Chen, C. S., Lee, S. Y., & Stevenson, H. W. (1995). Response style and cross-cultural comparisons of rating scales among East Asian and North American students. *Psychological Science*, 6, 170–175.
- Cheung, F. M., Leung, K., Zhang, J. X., Sun, H. F., Gan, Y. Q., Song, W. Z., & Xie, D. (2001). Indigenous Chinese personality constructs: Is the five factor model complete? *Journal of Cross-Cultural Psychology*, 32, 397–406.
- Chinese Culture Connection. (1987). Chinese values and the search for culture-free dimensions of culture. *Journal of Cross-Cultural Psychol*ogy, 18, 143–164.
- Cohen, D. (1997). Ifs and thens in cross-cultural psychology. In R. S. Wyer Jr. (Ed.), *The automaticity of everyday life* (pp. 121–131). Mahwah, NJ: Erlbaum.
- Featherman, D. L. (1993). What does society need from higher education? Items, 47, 38–43.
- Gudykunst, W. B., Matsumoto, Y., Ting-Toomey, S., Nishida, T., Kim, Y., & Heyman, S. (1996). The influence of cultural individualism– collectivism, self-construals, and values on communication styles across cultures. *Human Communication Research*, 22, 510–543.
- Hall, E. T. (1976). Beyond culture. Garden City, NY: Doubleday.
- Hofstede, G. (1980). Culture's consequences. Beverly Hills, CA: Sage.
- Hofstede, G. (1997). The Archimedes effect. In M. H. Bond (Ed.), Working at the interface of cultures: 18 lives in social science (pp. 47–61). London: Routledge.
- Hofstede, G., Bond, M. H., & Luk, C. L. (1993). Individual perceptions of organizational cultures: A methodological treatise on levels of analysis. *Organization Studies*, 14, 483–583.

- Hsu, K. L. K. (1953). Americans and Chinese: Two ways of life. New York: Abelard-Schuman.
- Kwan, V. S. Y., Bond, M. H., & Singelis, T. M. (1997). Pancultural explanations for life satisfaction: Adding relationship harmony to selfesteem. *Journal of Personality and Social Psychology*, 73, 1038–1051.
- Leung, K. (1989). Cross-cultural differences: Individual-level vs. cultural-level analysis. *International Journal of Psychology*, 24, 703–719.
- Leung, S.-K., & Bond, M. H. (2001). Interpersonal communication and personality: Self and other perspectives. Asian Journal of Social Psychology, 4, 69–86.
- Markus, H., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98, 224– 253.
- McClelland, D. C. (1985). How motives, skills, and values determine what people do. *American Psychologist*, 40, 812–825.
- Oyserman, D., Coon, H. M., & Kemmelmeier, M. (2002). Rethinking individualism and collectivism: Evaluation of theoretical assumptions and meta-analyses. *Psychological Bulletin*, 128, 3–72.
- Sampson, E. E. (1981). Cognitive psychology as ideology. *American Psychologist*, 36, 730–743.
- Schwartz, S. H. (1994). Beyond individualism/collectivism: New dimensions of values. In U. Kim, H. C. Triandis, C. Kagitcibasi, S. C. Choi, & G. Yoon (Eds.), *Individualism and collectivism: Theory, method, and applications* (pp. 85–119). Thousand Oaks, CA: Sage.
- Shweder, R. A. (1973). The between and within of cross-cultural research. *Ethos.* 1, 531–545.
- Singelis, T. M. (1994). The measurement of independent and interdependent self-construals. *Personality and Social Psychology Bulletin*, 20, 580–591.
- Smith, P. B., & Bond, M. H. (in press). Honoring culture scientifically when doing social psychology. In M. A. Hogg & J. Cooper (Eds.), Sage handbook of social psychology. Thousand Oaks, CA: Sage.
- Takano, Y., & Osaka, E. (1999). An unsupported common view: Comparing Japan and the U.S. on individualism/collectivism. *Asian Journal of Social Psychology*, 2, 311–343.
- Triandis, H. C., Bontempo, R., Betancourt, H., Bond, M. H., Leung, K., Brenes, A., et al. (1986). The measurement of the etic aspects of individualism and collectivism across cultures. *Australian Journal of Psychology*, 38, 257–267.
- Van de Vijver, F. J. R., & Leung, K. (1997). Methods and data analysis for cross-cultural research. Thousand Oaks, CA: Sage.
- Van de Vijver, F. J. R., & Poortinga, Y. H. (2001). Structural equivalence in multilevel research. Manuscript submitted for publication.
- Winter, D. G. (1996). *Personality: Analysis and interpretation of lives*. New York: McGraw-Hill.
- Winter, D. G., & Stewart, A. J. (1977). Power motive reliability as a function of retest instructions. *Journal of Consulting and Clinical Psychology*, 45, 436–440.

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