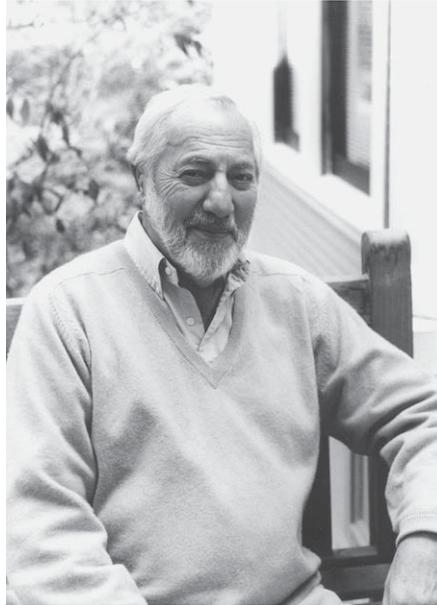


In Memoriam



The measure of a man: Seymour (Gig) Levine (1925–2007)

We pause to reflect on the passing of Seymour (Gig) Levine, an energetic and prolific scientist who made many pioneering contributions. If asked to comment on his most important accomplishments, Gig certainly would have listed off many of the seminal papers among his 400+ publications (Levine, 1957, 1971, 2005). But even higher on the list would likely be the numerous international and collaborative projects he fostered (Ursin et al., 1978) and the dozens of students and fellows he trained. He was someone who truly enjoyed the social aspects of our enterprise: from tutoring a young scientist about the nuances of the HPA axis to challenging the senior speaker unaware that a conceptual or empirical point might actually have been resolved decades earlier. Gig's insightful commentary (as well as his periodic bark) will be missed whenever there is a gratuitous Q&A session after a talk.

Gig and the late George Solomon were among the first to document that early rearing conditions had a lingering impact on the immune competence of adult host (Solomon et al., 1968). He is appropriately considered to be one of the founding fathers of the “early experience” concept, which led to the radical paradigm shift that changed how we look at infancy and the developmental antecedents of adult

behavior and health (Levine, 1957, 1962, 1967). In many different innovative ways, this research demonstrated how separation and even brief handling experiences affected later emotionality and cognitive ability, and especially stress reactivity (Levine, 1971). He had an abiding interest in the pituitary–adrenal system and contributed significantly to our current views on how the brain regulates endocrine functioning (Levine and Lewis, 1963; Levine and Mullins, 1966). These findings laid the foundation for the exponential growth in cortisol studies conducted today. Long before we knew about hypocortisolemic states like PTSD, he had showed that changes in adrenal secretion could be bidirectional (Levine and Coover, 1976). Less well known is that he continued to collaborate on many human studies up to the present, ranging from the influence of prenatal conditions on infant outcomes to the evaluation of abnormal hormone responses in autistic children and cancer patients (Corbett et al., 2006; Obel et al., 2005). He remained remarkably productive until the very end of his life, and exuded just as much enthusiasm about these new projects as when younger. He was an active participant and guiding force in the NIMH-sponsored *Early Experiences and Glucocorticoid Network* (Dozier et al., 2006).

Because of his sometimes gruff exterior, many did not get to know his softer side nor have the opportunity to appreciate the incredible lengths to which he would go to help a friend, student, or even a colleague just met. A complete list of scientists nurtured during the heyday of his laboratory at Stanford University far exceeds the allowable length of this memoriam. Most also probably don't know that he was a member of the stoic generation who fought so heroically during WWII. Gig did not willingly discuss storming Utah beach on D-Day or getting wounded at the Battle of Bulge. He far preferred to talk about his graduate training at New York University (Ph.D., 1952) or his experiences as a Ford Foundation fellow with Professor Geoffrey Harris (1960–1962) or how the discovery of 'hormone releasing factors' first galvanized him to conduct research on neuroendocrinology and later on developmental psychobiology, a subdiscipline almost synonymous with his name (Levine, 1966, 1971).

In science we like to say that if we "have seen further, it is by standing on the shoulders of giants" (Newton, 1675). Gig certainly enabled us to view many new horizons and to summit quite a few previously unclimbed peaks. He was a citadel of knowledge and we are better for the time he shared with us. Gig will be missed every time someone forgets there was great research done before the pdf file. But his spirit will always be with us whenever we experience the excitement of starting up a new collaboration, share the joy of making a discovery with a colleague, and especially when we welcome a new student and fellow into our lab. For Gig, all of these aspects of science were inter-related. Those who had the wonderful experience of being a part of the Levine lab left as far better scientists than when they first arrived. They were also introduced to his love of opera and baseball and shared in the special warmth of his family. Gig is survived by Barbara, his loyal wife of 58 years, and by his three children (Robert, Leslie, and Alicia)

and four grandchildren. For those who wish to do so, memorial contributions can be made to the Navajo Health Foundation or the Yolo Hospice.

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