Adolescent Suicide in the Federated States of Micronesia: A Literature Review

Paulette M. Coulter

Abstract

For nearly fifty years, Francis X. Hezel and Donald H. Rubinstein have been publishing essays on the topic of adolescent suicide in the Federated States of Micronesia, particularly among males in Truk/Chuuk. This paper examines the core body of this literature to chronicle the development of a theory on the topic of Micronesian adolescent suicide through its history of publication, responses, and criticisms of the theory. This essay examines the researchers' efforts to discover potential mitigating factors while also examining some of the consequences of this work, such as the worldwide collection of suicide data and the development and use of the Youth Risk Behavior Survey. Suggestions of other perspectives on culture change and suicide are offered.

Key words: Suicide, Micronesia, abandonment, anger or *amwunumwun*

The suicide of a young relative in February 2022 precipitated my choice of this topic for a literature review in the history of Micronesia. This death has exacted a toll on my kindred, being the death of one in the family's youngest generation. How does one explain the suicide of one young person? On a larger scale, how does one explain the deaths by suicide of many young people of a single generation, or several generations, in a given culture?

Work by Francis X. Hezel, S.J., and Donald H. Rubinstein has addressed the issue of adolescent male suicide in what is now the Federated States of Micronesia (FSM) for nearly fifty years. The initial publication by Hezel in 1976 presented the issue to the public and discussed 23 known cases in Truk (now Chuuk). By 1992 Hezel and Rubinstein had collected data on more than 700 cases in Micronesia (the FSM, the Republic of Palau, and the Republic of the Marshall Islands; Rubinstein, 1992b, p. 53). Six years later, Rubinstein (1998, p. 568) indicated that 1075 cases had been examined. This essay is a literature

review of materials published by Hezel and Rubinstein that address issues of suicide in the FSM; it also identifies several critical reviews of that material and questions what a next step in analysis might be.

I began this literature review with the systematic literature review performed by Mathieu et al. (2021). They began with 525 potential sources but through a rigorous process selected only 36 that were original works specifically on suicide or suicide attempts in the Pacific Islands. Of these 36, three focus on Guam, one on the Commonwealth of the Northern Mariana Islands (CNMI), and two on the FSM. These last two are Edward D. Lowe (2018), "Social Change and Micronesian Suicide Mortality: A Test of Competing Hypotheses," and Donald H. Rubinstein (1983), "Epidemic Suicide among Micronesian Adolescents," both of which I discuss below.

I also checked the section on suicide in the bibliography prepared by Rubinstein and White (1983, pp. 224-229). These entries date from 1957 to 1983; at least five have no date of publication. Other entries in the bibliography date to as early as 1922 (p. 210). Apart from works cited here, I have not investigated these sources due to time constraints. For further work I would consider some of them necessary.

Herein I examine the core body of literature on suicide in Micronesia produced by Francis X. Hezel, S.J., and Donald H. Rubinstein[1] to chronicle a focus on the development of a theory or theories of regional suicide. This topic is complex, as the history of publication, responses to and criticisms of the theory/theories, the potential mitigating factors, and the consequences of this focus on suicide in Micronesia, particularly in Chuuk (formerly Truk) in the Federated States of Micronesia indicate.

Hezel's work on suicide has been extensive. His initial report (1976) brought public attention to the issue. He later included an indigenous concept in his discussion as well as a comparative methodology (1984, 1985) and examined mental illness as a suicide cause in Palau (1987a). He provided an update in 1991. Hezel (1995, 1999) identified how his approach differs from Rubinstein's and has provided a recent update with an added dimension (Hezel, 2017). Rubinstein's earliest publications on this topic date to 1980-1981. His best-known work appeared in 1983, and

---

[1] Although the names of Hezel, Rubinstein, and Lowe occur in texts with first name as well as first name and middle initial, in-text references to them are by surname, with first and middle initials provided in the References list.

works after that date clarify or enhance aspects of his developing theory from both anthropological and public health perspectives. He provided updates as recently as 2018. In addition, I examined the criticism offered by E. D. Lowe (2018, 2019, 2020a, 2020b) and identified sources (Black, 1985; Carucci, 2019) that offer potential insights into other aspects of suicide. Finally, I looked at some of the consequences of work like Hezel's and Rubinstein's and suggest additional sociocultural factors to consider in attempting to understand suicide among young people in the FSM.

Development of a Theory through Its History of Publication: Francis X. Hezel

Francis X. Hezel (1976, 1977) issued the first alert on suicide in eastern Micronesia. At the time he was a teacher and director at Xavier High School in Truk. Hezel (1976, p. 12) aptly identified the rootedness of youthful Micronesian male suicide––specifically Trukese aged 15-30––in a rupture of the relationship with close family members over a seemingly trivial matter (p. 11 et al.), emotions associated with suicide (shame and anger) (p. 11), occurrence in urban or near-urban environments but not in outer atolls (p. 12), and in lack of attainment or control over desired material objects such as money or personal possessions (p. 13).[2] He also identified the need for parental control over access to the means of suicide (p. 13).[3]

Hezel's (1984, 1985) essays shared essential data and elaborated on earlier ideas. For example, while he earlier described the anger aspect of suicide as "retroflective anger" (Hezel. 1984, p. 198; 1985, p. 114), he now included the Trukese term and concept of *amwunumwun*, a "strategy of withdrawal or self-abasement used to show to those one must both love and obey that one is hurt by them" (Hezel, 1984, p. 200; 1985, p. 115). *Amwunumwun* is a complex of Trukese emotion that represents feelings

---

[2] Critic E. D. Lowe (2019, p. 124) finds no support for Emile Durkheim's notion of social disintegration as motivation for suicide in Micronesia; Durkheim's analysis of suicide, however, remains useful for analysis.

[3] Hezel's 1976 and 1977 publications are essentially identical except for changes in reference formats.

one may have toward someone to whom those feelings may not be vented; suicide is seen as a means of repairing the rupture of a relationship (ibid.).

Hezel summarized it this way: suicide "is the extreme form of *amwunumwun* since it means inflicting the ultimate harm upon oneself in order to compel the parents or others to recognize the damage they have done and *to repair it*" (Hezel, 1984, p. 201; 1985, p. 116; emphasis added). For ease of review, Hezel (1984) presented suicide data in three tables that compare year, age, and type of suicide by gender and show that male suicides far outnumber those of females[4] (pp. 195, 196, 199). He also identified cases of modeling and contagious or copycat suicides (Hezel, 1984, pp. 204ff; 1985, p. 119). Inclusion of the indigenous concept of *amwunumwun* indicates that, although the earliest publications received more attention outside the local communities (Hezel, 1984, p. 193), Hezel has maintained contact with the communities about which he writes. Further, he noted that indigenous adults indicated that "Trukese, like many of their Pacific neighbors, have always committed suicide, so there was no reason to become alarmed at what was simply the manifestation of an old cultural trait" (ibid.). Later he commented that the social environment seemed to condone suicide (Hezel, 1985, p. 120). By 1984 Hezel and Rubinstein began collaborating on Trukese suicide research.

Lothar Käser (2016), in his study of Chuukese personhood, identified the root word of *amwunumwun* as *mwún* and defined it as a "feeling of being overruled or rejected, of unrequited love; hurt at being abandoned" (p. 153). He elaborated:

> This emotion has a special significance for Chuuk Islanders who fear it for being the greatest cause for suicide. Suicide is practised [sic.] most commonly because people seek to avenge themselves for a

---

[4] Hezel notes female suicide attempts (1976, p. 9; 1977 p. 6; 1984, p. 195), but in general, both he and Rubinstein refer to female suicides primarily through comparison to male suicides in the ratios of 11:1, 15:1, etc. In his dissertation, Rubinstein (1979, pp. 155, 179, 196, et al.) mentions the suicide of an 18-year-old girl. Female suicides in Micronesia are mentioned most often in the sex ratios, which stress their rarity in comparison to those of males. Investigation of female socialization may help account for this difference and for suicide attempts. In the past, female socialization took place in the home, whereas much male socialization was provided in the men's houses.

stinging rebuke. The rebuker is meant to experience mwún [sic.]. The term thus conveys a very specific kind of remorse which can be triggered by the act of running away or suicide (amwúnúmwún: the action triggering mwún). (ibid; italics are absent in original.)

Käser (2016) deserves further attention to aid in understanding Chuukese personhood and culture. Suicide among Chuukese adolescent males as reported by Hezel and Rubinstein seems to be a rejection of rejection, real or perceived.

Inclusion of islands beyond Truk in the research has indicated that a minority of suicides in Micronesia occur among the mentally ill (Hezel, 1984, pp. 203, 207; 1985, p. 118). Hezel (1987a) addressed Islander suicides that result specifically from mental disorders. Commonly diagnosed disorders during 1978-1982 included schizophrenia, manic depression, paranoia, and psychotic depression (p. 14). There Hezel also cited data from White (1982, p. 94) for diagnosed mental disorders in Kosrae, Ponape, Truk, the Central Carolines, Yap, Palau, and the Marshalls for 1978-1980. Of these, 183 of 240 cases were schizophrenia, with Palau having 60 diagnoses and Truk and Yap each having 39 (Hezel, 1987a, p.14). Of the 365 suicides from these seven locations from 1960-1984, as shown in Table 3 (p. 22), only 24 were attributed to mental disorders, based on the author's own files. Eleven of these 24 occurred in Palau (ibid.). The Mayo Clinic (2022) states that although "researchers believe that a combination of genetics, brain chemistry and environment contribute to development of the disorder," schizophrenia has no known exact cause.

In "Truk Suicide Epidemic and Social Change," Hezel (1987b) argued that the "major factor accounting for the escalation of suicides has been the significant changes in the economic and authority mechanism of the Trukese lineage" (p. 290). He presented data on Trukese suicide, focusing on suicide rates from 1970 to 1985, by year and sex, by age and sex, by type and sex, by education and employment, and by troubled relationships. He also delineated patterns of suicide (anger, shame, mental disturbance; pp. 285-286). Contributing cultural influences included: a male machismo attitude, fascination with suffering, constraints on expression of feelings, need for personal recognition, and the prominence

of suicide in life (pp. 286-287). Hezel (1987b) perceived that modernization has affected suicide rates, particularly in the near-urban areas; it affected "culturally patterned responses to certain conflict situations," especially in traditional families (p. 287). He wrote, "The only significant difference between suicide victims and the general population is that fewer victims were unemployed and more in school at the time of their death" (ibid.). That is, they were not so-called "losers" or "failures," but instead may have had ongoing conflict with someone in their family to whom it would be unacceptable to express anger (Hezel, 1987b, p. 288).

Two years later Hezel (1989a) reported that Micronesian suicides declined in the latter part of that decade. His other publications from 1989 (Hezel, 1989b, 1989c, 1989d) focused on the Micronesian family, briefly in 1989b, but in 1989c and 1989d he summarized all the data collected from 1960 to 1987 (in four-year intervals) that supported his hypothesis on the relationship of family structure to adolescent suicide.[5] After a brief introduction, Hezel (1989c) reiterated the common features of Micronesian (excluding Guam and CNMI) suicide: male suicides outnumbered those of females at a rate of about 11 to 1; males 15 to 24 years old were the most common victims of death by anoxia (not asphyxiation) due to hanging; and alcohol consumption and intra-familial conflict and anger often preceded the suicide (pp. 45-51). These features differ from the more common cause of mental illness associated with Western suicide (pp. 48-49), while Palau and the Marshall Islands have more jealousy- or "love"-associated suicides (p. 50; see also Rubinstein (1989) on Marshallese youth suicides).

Hezel (1989c) updated numerical data on Micronesian suicides (e.g., p. 44). He also questioned why increases had occurred but believed they were not a matter of modern youth culture versus traditional parents because occurrence was more frequent in the peri-urban islands than in the most nearly urban and modernized areas (Hezel, 1989c, p. 54). He stated that rather than defying traditional family roles and rules, the suicides indicated "through their deaths that [suicide victims] remain bound to the conventional claims of the family over them" (Hezel 1989c, p. 54), thereby reaffirming family as the core unit of society.

---

[5] Hezel's 1989c and 1989d are essentially identical; because the latter lacks pagination, all references are to 1989c.

Because family is so important, intra-familial conflict has most often been the precipitating event of a suicide. For Trukese, the matrilineage has historically been the familial unit. In this structure, the mother's brothers disciplined her children, and the matrilineage exercised control over allocation of resources, especially land. The upbringing and education of children was spread through a group of persons related primarily to their mother, though the father also had authority (Hezel, 1989c, pp. 56-57, 59-61). With nuclearization effected in the Micronesian family through application of U.S. legal and economic systems in the islands after World War II, authority became more restricted to individual mothers and fathers, who now had to be teachers and disciplinarians within their households. This focused families' internal tension: children could not go to a favorite auntie or uncle when they disagreed with a parent, and parents could be isolated from their physical and emotional support systems (Hezel, 1989c, pp. 61-63).

Since the 1970s, monetization of the Micronesian economy, which hired more males than females, also concentrated financial power in the hands of fathers (Hezel 1989c, pp. 63-66). This added to potential areas of conflict between parents and children: children want things and believe their parents do not love them if they do not provide those things. Yet matrilineal relatives do not want to interfere in nuclear households (p. 67). This wider support system no longer exists as it once did. For Hezel (1989c) the nuclearization of households (which isolated family from the matrilineage support system) and the monetization of the economy (which reduced matrilineage control over land and other resources) have increased intra-familial stress (p. 69-70). This kind of stress may occur among other indigenous populations and influence the occurrence of suicide within them (p. 70; see also Kral 2019).

By 1989 Hezel had theorized that the development of a cash economy and consequent changes in family structures of power (increasing paternal responsibility) were reasons for increased intergenerational conflict within the family. Rubinstein (1992b) discussed this theory as "Family Change Version 1: Loss of Traditional Family Functions" (pp. 52-53).

Hezel (1989e) briefly described the many dimensions of suicide in Micronesia, without statistics. He identified seven factors that affect

suicide: breakdown of the extended family structure, loss of the lineage authority system, youth testing the love of other family members (who do not know they are being tested), romanticizing suicide, developing youth resilience, alcohol use/abuse, and intra-familial conflicts (Hezel 1989e, pp. 17-20).[6]

In *The Micronesian Counselor* of February 1991, Hezel provided a densely packed single-page summary on Micronesian suicide. In Palau, the Marshalls, and the FSM at least 42 suicides occurred in 1990, down from 48 in 1989 and 44 in 1987. The FSM in 1990 reported 25 suicides, down from 32 in 1989. Of the 25 in the FSM, 11 were from Yap, 10 from Chuuk, 4 from Pohnpei, and none from Kosrae. From 1960 to 1990, suicides in the FSM averaged about 25 per year. Chuuk showed a slow, steady decline in suicides from a peak in 1979. From 1960 to 1990, 655 suicides had occurred in Micronesia (Palau, the Marshalls, and FSM) (Hezel, 1991).

Hezel's 1995 and 1999 articles focused on issues of alcohol use and abuse, suicide, and child and spousal abuse. Of suicide, he emphasized "the weakening of the extended family system" and "argued that the monetization of the economy has largely been responsible for the breakdown of the lineage system" (Hezel, 1995, p. 8; 1999, p. 318). According to Hezel, Rubinstein focused more "on the disruption of the socialization process that has resulted from the weakening of lineage and village-level organization" (Hezel, 1995, ibid.; 1999, p. 319); this disruption increases the period of dependence of young men on their parents. Neither explanation, however, accounts for the jealousy- and love-related suicides in the Marshalls or in Palau (ibid.). In addition to identifying this difference in emphasis, Hezel (1995, 1999) also addressed local and non-local perceptions of suicide in Micronesia (p. 6, p. 315, respectively).

The title of Hezel's 2017 article for *Pacific Studies* suggested a new direction for the study of suicide in Micronesia, particularly for the FSM. This study, requested and funded by Substance Abuse and Mental Health Services Administration through the FSM Department of Health Services, gathered suicide data from 2007 to 2015 and completed a half-century database (p. 1). Hezel (2017) suggested several directions in the

---

[6] Hezel, 1989c and 1994 are very nearly but not exact duplicates. The latter provided precise headings for the seven major points.

movement of data and of people, especially the study of FSM suicides in the FSM in-migrant population on Guam (pp. 15-19), a new dimension for both the FSM and Guam, if not the whole region.[7] Within the FSM data, however, the motives of suicide remain anger, shame, and aspects of love (unable to choose between two loves, unable to marry within one's lineage) or jealousy; the predominant method remained hanging (pp. 20, 4). An increase in female suicides occurred in this period along with a decrease in the rate of suicides in the two youngest male cohorts (p. 11). Another dimension added in both study populations is that of suicide contagion *within* families and their apparent relation to internal disruptions of families (Hezel, 2017, pp. 11-15, 18-19; emphasis added). Hezel's work, which he stresses is sociocultural rather than psychological (p. 1), has focused on family and familial disruption since he first identified high suicide rates in Micronesia in 1976.

Development of a Theory through Its History of Publication: Donald H. Rubinstein

Like Hezel, Rubinstein has written extensively on the topic of suicide in Micronesia over an extended period of time. Although perhaps best known for his 1983 "Epidemic Suicide among Micronesian Adolescents," he has published on the topic of suicide in Micronesia since 1980, beginning with publication of "Micronesia's Troubled Youth" (Rubinstein, 1980a). There he identified the "psychological autopsy," a reconstructed partial biography of the victim, as a methodology for studying the significant numbers of suicides among Micronesians aged 15 to 30 (pp. 71-72). He also asked a number of questions that were relevant then and remain today as a means of analysis (pp. 72-73). Among answers to those questions, sudden anger is related to numbers of suicides, as is self-injury and "strong thought," especially as a sign of bravery among young males (p. 73). At this early date, Rubinstein (1980a) also identified the contagious or modeling effect of suicides, with the spirit of the victim approaching others through dreams (p. 74). Although suicide is not unknown in Micronesian history, the 20th century increase in suicides

---

[7] Hezel (1990) discussed Micronesian suicides on Guam, and Carucci (2019) addressed another issue of out-migration from Micronesian islands.

seems to include a decrease in a sense of belonging, loss of meaningful and productive activities for young men, breakdown of kinship networks, with increasing conflict between the young and their parents, shifts in youth ideas to Americanized individuality, issues with parental authority, and use and abuse of alcohol (Rubinstein, 1980a, pp. 74-75). This is a complex set of causes and influences that suggests anomie (normlessness) as a possible cause of suicide.

In "Suicide: A Growing Crisis for Micronesian Youth," Rubinstein (1980b) addressed suicide causes, rates, and solutions. The article was an initial report on findings and a discussion of "the fallacies of some common assumptions about the causes of suicide" (p. 11), including anomie. Data were collected from suicide death certificates and hospital and police reports for the years 1960-1980. Worldwide, suicide rates are reported on the ratio of N to 100,000; for populations of less than 100,000 and portions of populations, some mathematical adjustments are necessary. Reporting may also differ from country to country. In Micronesia (excluding Guam and the Northern Marianas), male suicides outnumbered female suicide 15:1 in this time period; median age of males was 20, and the adjusted rate of male suicides aged 15-19 was 243/100,000 (Rubinstein, 1980b, p 11). Rates of male suicides in Truk and the Marshalls increased eightfold from the 1960s to the 1970s (ibid.). Rubinstein indicated these rates and increase do not result from urbanization and are not related to mental illness but rather to impulsive anger (Truk) or love and fidelity problems (Marshalls) (p. 12).[8] He noted that many suicides have "an aggressive element, as well as a frequent appeal for caring and support" (ibid.) and that suicide rates declined as young men matured and married (Rubinstein, 1980b, p. 14), yet neither a single simple cause nor solution existed.

Other articles followed in the early 1980s (Rubinstein, 1981a, 1981b, 1981c, 1982); these work and rework his ideas and data into an ultimate publication in 1983. Rubinstein's 1982 essay is of particular interest because it is a public health investigative report. Rubinstein (1982, p. 2) referred to "loss of culture and identity" (to which suicide may not be a surprising response) and "an indicator for a set of adolescent-adaptational problems." In addition to information provided in 1980b and

---

[8] Rubinstein (1989) provides a discussion of Marshallese youth suicide.

1983, in 1982 Rubinstein pointed out that "[o]lder sons seem to predominate among the suicides," dutiful but lackluster individuals, in acts of spontaneous and unpremeditated anger––not aggression (p. 3). While elsewhere he indicated existence of a male subculture with respect to suicide, here Rubinstein stated that "[a] pervasive mood of apathy, disinterest, and inactivity" ––*but not anomie*––of these young men added to the problem (ibid.). Postwar changes to village organization and decreased support to young men through men's houses were secondary causes (ibid.), replacing the line of vertical support by a horizontal one: young men training young men in isolation from their elders (p. 4). Tertiary causes of the suicide problem, Rubinstein (1982) added, included the post-WWII increase in population, infusion of U.S. cash, and increasing dependence on the goods, services, and values this cash provided (pp. 4-5). Direct consequences of these changes included fascination with suicide, suicide pacts, an experimental attitude toward suicide, increased confusion among parents, and increased concern among communities (p. 5). Secondary consequences included official concern of governments and churches about the issues and efforts to begin developing youth programs (p. 5). Rubinstein (1982) explicitly stated, "Suicide prevention programs, as developed in the U.S. and Europe, would not be effective in Truk" because the Trukese neither psychologize their problems, nor seek extra-familial help, nor have sufficient and sufficiently trained personnel in these fields (p. 5). Potential solutions would more likely work at rebuilding intergenerational supports, developing appropriate youth activities, reshaping youth attitudes, and emphasizing "village organization and shared identity" (ibid.).

      Rubinstein's (1983) "Epidemic Suicide among Micronesian Adolescents" is both foundational and pivotal. It is foundational in that it consolidates information from the earlier papers, and it is pivotal in that it is based on the multiple sources used in the suicide research: official reports of suicides and near-suicides, case materials from the Trust Territory, "250 semi-structured interviews modeled on the 'psychological autopsy' protocol" with persons who attempted suicide, families of suicide victims, and other community members (p. 658). This study reported data that were cross-checked between interviews and official reports, aggregated data into four-year sequences for 1960-1979, and tabulated

data in charts and graphs (pp. 658-660), comparing data by number of suicides, age, sex, and location (Palau, Yap, Truk, Ponape, Marshalls). These data clearly demonstrated an increased number of suicides over time, predominance of male suicides in all locations, and the greatest number of suicides in the age ranges of 15-19 and 20-24 in Truk and the Marshalls (pp. 659-660). Peri- or near-urban areas suffered the greatest losses (p. 659). In "Epidemic Suicide" Lowe (2019) stated that Rubinstein "placed many of Hezel's observations in a human development framework" (115) and the socialization process in Micronesian societies. Already in 1980 and 1981, however, Rubinstein in 1981c (pp. 19, 24-26) had identified nearly all the principal elements of this theory and its supporting methods when he identified Micronesian suicides as epidemic rather than anomic. Previously, Rubinstein (1980b, p. 11) had explicitly outlined the method used to collect data in this and all related projects.

Rubinstein (1983) further clarified some intercultural differences in suicide rates in Micronesia. The numbers of male suicides in Truk were greatest in the age groups 15-19 and 20-24, but were also greater than all other places in the 10-14 and 25-29 age groups (p. 660). Suicides in the Marshalls included the "lover's dilemma suicide" (p. 663), wherein a young man was unable to choose between two women he loved or to whom he had obligations. These suicides were distinct from those in Truk that resulted from a rupture of family relations. Rubinstein (1983) examined suicide pacts and the influence they exert on youth in contagious suicides. Most significantly, however, he pointed out that the age groups committing suicide most often were those coming of age after WWII as "the first post-war cohort" (p. 662), when the men's houses, originally training sites and sleeping places for young men, no longer existed as they once had (ibid.). Rubinstein wrote explicitly of the "virtual extinction of the traditional men's clubhouses and functioning men's organizations, which until recently had played such a central role in adolescent male activity and social identity" (1983, p. 262). This absence left young men in an ambivalent, unstructured, and seemingly unsupported state at a time when "intergenerational relations between boys and their parents" had changed, especially in the urban and near-urban areas (p. 661). There, people were less reliant on a subsistence economy, and youth were more exposed to external values and influences

of the introduced cash economy. Where men's meeting houses remained, they seem not to have provided full support to adolescent males as earlier generation had. Other periods of disjunction have always occurred in Micronesian life, however, especially in the child's separation from the mother at age 3 or 4 (pp. 661-662). Further, Rubinstein suggested that by 1983 a slight decline in the suicide rate in the 15-24 age group might indicate an approaching end of the cohort effect (p. 662).[9]

Unfortunately, the cohort effect (Rubinstein, 1983, p. 662) did not end in the mid-1980s, as later data demonstrate (Rubinstein, 1992a, p. 204; 1998, p. 570). Data from the U.S. Department of Health and Human Services (US DHHS, 2021) later showed, however, that these rates seemed to be currently stable though relatively high, with a slight decrease in 2003-2005 (Hezel, 2017, p. 3). Rubinstein indicated in his 1998 conference report that interviews on 1075 suicide cases had been collected at that time (p. 568).

Like his 1983 paper, Rubinstein's 1992b article is pivotal. Recognizing that no simple or straightforward theory has explained the data on adolescent suicide in Micronesia, he examined Hezel's two explanations of family change: loss of traditional functions and change toward family nuclearization (Rubinstein, 1992b, pp. 52-59). He also cited the Macphersons' (1987) explanation of Samoan suicides as a matter of blocked opportunities (pp. 60-64). Rubinstein then proposed a fourth possibility: Adolescent Socialization: Changes in Structures and Goals (pp. 64-71) This proposal is directly related to Rubinstein's 1983 publication. As Lowe (2019) observed, Rubinstein thus placed the issue of suicide into the anthropological context of socialization.

Rubinstein (1992b, pp. 52-53) summarized the main points of Hezel's 1976 paper as a "Loss of Traditional Family Functions." That is, families appeared to lose cohesiveness by surrendering roles of education, behavior management, recreation, and caring for others through affection and support to agencies outside the family. They therefore lost power over

---

[9] Rubinstein (1984a) is the republication of Rubinstein (1983) as a book chapter. Rubinstein 1985 and 1987 (a conference paper republished as a book chapter) contain additional tables and figures; Rubinstein (1986) contains only three figures. Barnabas (1985) and Temarcel (1985) access versions of these tables and figures in their essays. Total text comparison of republished materials is not yet complete.

those family functions and family members. Rubinstein (1992b) noted Hezel's reasoning on the suicides as "egoistic suicide," after the Durkheim model, as a result of the weakened family bond (p. 53).

Rubinstein (1992b, p. 55) also noted a shift in Hezel's thought as Hezel began to emphasize the monetization and nuclearization of the family structure that increased parental authority and placed more stress on the parent-child relationship (Hezel, 1987b, 1989c, 1989e) that reflected a shift from lineage authority to nuclear family authority. Rubinstein (1992b) indicated that "the 'nuclearization' hypothesis seems plausible, [but] the data are still anecdotal and incomplete, and there has not yet been a systematic study showing the extent to which traditional lineage and clan organization have been replaced by a nuclear family organization in Micronesia" (p. 57). That is, ethnographic data were not sufficient to support this hypothesis. Rubinstein (1992b, p. 59) concluded that the emphasis on structural change in the family was too general and the emphasis on intergenerational family conflict was too specific to explain all types of suicide in Micronesia. Hezel's two approaches also placed more stress on parents rather than on adolescents (Rubinstein, 1992b, p. 58).

Rubinstein (1992b) also found the data reported by Macpherson and Macpherson (1987). insufficient to explain suicide among Micronesian adolescent males. He did not concur that young Micronesian males committed suicide because options for enhancing social status or emigrating for better prospects were blocked at the same time that Western influences and increased access to education caused young people to desire better opportunities, which seemed likely for the Samoan cases (Macpherson & Macpherson, 1987, p. 323, cited in Rubinstein 1992b, p. 62). Rubinstein (1992b, p. 64) also tested the Macphersons' hypotheses against the Micronesian post-Compact (post-1986) emigration and suicide data and noted that suicides did not decrease despite the increased opportunities for Micronesians. The information on the Samoan cases seemed too limited to explain suicide throughout Micronesia.

Rubinstein then proposed a framework that he believed might account for the data: adolescent socialization (ibid.); this framework is based on the socialization data he outlined in 1983. From observations in

Fais, Ulithi, and in Uman, Chuuk, he noted the lack of support offered young males after the men's houses––sites where young men learned traditional knowledge, skills, how to interact with others––ceased to exist. That is, support to young men in their transition to adulthood had generally ceased. Yet young men were still expected to mature, marry, and have their own families. Rubinstein (1992b) indicated that a socialization emphasis focused on suicide from the point of view of the youth's experience rather than the parents' and that it fits the ethnographic data better for central Micronesia than for the eastern or western periphery (p. 71).

Rubinstein's 1995 publication presents a case study of the suicide of a seventeen-year-old Chuukese male, called Sima in the account. Rubinstein's aim was twofold: to tell the story with a cultural explanation of the youth's behavior and to assess the "existential dilemma" that is the Micronesian youth's social world. (p. 22). The epigraph of the article is Sima's suicide note (ibid.), included below. The previous day, his father had told Sima to get up early, borrow a breadfruit-harvesting knife, and come help collect food for the following day (Sunday). Sima and his friend could not find a knife to borrow and showed up late. Sima's father scolded him, threatened him with a machete, and told him to find somewhere else to live (p. 28). This was the precipitating event, culminating Sima's difficult summer: He was expelled from school, was in a bad mood, got into a fight, was cut with a machete and was sent to the hospital, then experienced his grandmother's death and a move from his mother's clan to live with his father's clan. Further, Sima's older brothers and sisters were away, leaving him the oldest male child at home. His next younger brother found his hanging body (Rubinstein, 1995, pp. 25-29).

Rubinstein's (1995) discussion of this case indicated high levels of suicide in the region into the 1990's. Male suicides vastly outnumbered female. Methods, motives, actors, and precipitating events were all part of the known pattern (p. 30). Although most suicides seemed impulsive, Sima had spoken previously of not being around after October (p. 31). His school expulsion and his difficult summer identified ongoing conflicts., and his note to his mother indicated his feeling of abandonment and anger or *amwunumwun*:

OCTOBER 6, 1990

My life is coming to an end at this time. Now today is a day of sorrow for myself, also a day of suffering for me. But it is a day of celebration for Papa. Today Papa sent me away.

Thank you for loving me so little. [signed] Sima Give my farewell to Mama. Mama, you won't have any more frustration or trouble from your boy. Much love from

Sima. (Rubinstein, 1995, p. 21)

An element of shame is also apparent in Sima's comment to his mother. Neither his mother nor any of his sisters was present to soothe or "soft talk" the boy from his anger (p. 32), and this suicide was not related in any way to love or jealousy. In the remainder of the article Rubinstein focused on changes in Micronesia: education, life cycle, availability (or lack) of men's houses, authority patterns, socialization of children, cash economy and its consequences, and the consequences of Sima's suicide (Rubinstein, 1995, pp. 34-46).

Rubinstein in 1998 presented a summary status report on Micronesian suicide. The main points of the theory he outlined are its rootedness in the regional indigenous/aboriginal cultures, where suicide was closely correlated with shame, as an altruistic act to alleviate it. Since the 1960s, the cultural pattern has shifted to anger suicides. These suicides appeared to occur after seemingly trivial disagreements with a close family authority figure, often part of ongoing conflict; they were most common in the age group of 15-24, among males, occurred by hanging in or near the home, at night. Frequently they were associated with use of alcohol. Initially Rubinstein believed that these suicides might be a cohort effect, but after a slight decline in the 1980s the numbers continued to grow, especially in Chuuk and Pohnpei. By 1998, the ratio of male to female suicides was 15:1. Anger-motivated suicides increased, as did deaths by hanging, association with alcohol use, and, frighteningly, numbers of suicides in children aged 10-14. Rubinstein had already pointed out some of these effects in 1991, in an address to the Child Abuse and Neglect Summit at the University of Guam. Addressing political change in the FSM, Rubinstein (1998) noted that out-migration of Micronesian males was becoming a trend as a result of the independence

of the new island nations (p. 568).[10] This out-migration may present issues of current and future data collection, as Micronesians may not be disaggregated from the "Asian-American/Pacific Islander" category or even recognized as a specific category in collecting data on suicide. They may then disappear from data collection.

In his December 2018 keynote address to the University of Guam Annual Suicide Prevention Forum, Rubinstein emphasized two points. First, "Micronesian suicides are fundamentally cultural" in the sense of "shared, deep, taken-for-granted patterns of our everyday lives" in relationships, self-worth, meaning of life (Rubinstein, 2018, p. 3). He added, "Micronesian suicides are also cultural in the ways they differ among" the entities known as Micronesia (ibid.). Second, for suicide prevention, the most successful programs have been those that bring people together and provide support, a sense of belonging (p. 4).[11] He mentioned two programs of some success: the Samaritans program that originated in England in 1953 and the youth-to-youth program begun by Darlene Keju in the Marshalls (pp. 4-5). Keju's program seemed to offer young males some support lost in the men's houses, though I believe the program is for both males and females. Rubinstein (2018) also indicated that the early work with Hezel, island youth leaders, and mental health personnel collected "interviews and information on suicides in Palau, Yap, Chuuk, Pohnpei, Kosrae, and the Marshall Islands," that is, most of greater Micronesia (p. 3). Thus, by 2018, their work had both significant depth and breadth.

Critique: Edward D. Lowe

In his 2018 (reprinted in 2019) "Social Change and Micronesian Suicide Mortality," Edward D. Lowe used regression analysis to test hypotheses about social disintegration, traditional anomie, socialization

---

[10] This may be the earliest comment I have seen regarding the Micronesian political situation in Hezel's and Rubinstein's discussion of regional suicide; the political influence deserves some critical attention.

[11] Michael J. Kral's (2019) *The Idea of Suicide* (focused on the Inuit) takes a cultural/anthropological view of suicide as mimetic and a culturally normative option.

ambiguity, and lifestyle incongruity (Durkheimian concepts of suicide) with respect to suicides in Micronesia. Dividing the data into three classes by geographic area (urban, near-urban, and atoll) he performed a three-step regression analysis of the four hypotheses (of seven independent variables associated with each hypothesis: average suicide rate 1991-2000, kin-group integration, global exposure, the percentage unemployed, the percentage in subsistence-employment, economic resources, and modern style of life scale) for 74 of the 75 municipalities of Chuuk (Lowe, 2018, p. 17) ; the 75th is both a geographic and research outlier. After calculating the Pearson's correlation coefficients, Lowe (2018) concluded that the empirical data do not support "the traditional anomie hypotheses or the socialization ambiguity hypothesis" (p. 24). Rather, "a combination of kin-group integration" and disparity between achieved economic resources and desired modern lifestyle––controlled for distance from urban centers––best accounted for variation in the ten-year average suicide rates (Lowe, 2018, ibid.). These statistical data seem to support the interpretations offered by Hezel and Rubinstein.

In "Epidemic Suicide in the Context of Modernizing Social Change in Oceania" Lowe's (2019) focused on evaluating Durkheimian approaches, especially the (Durkheimian) processes of "social disequilibrium and social disintegration," that he believed were applied to suicide in Pacific societies (p.108). He believed the rapid infusion of money into the economy abetted the suicide epidemic (p. 126). He suggested that prevention and treatment programs take into consideration indigenous concepts of interrelationships (Lowe, 2019, pp. 119, 129-130). Indigenous approaches are definitely needed, and I believe Hezel and Rubinstein throughout their work have based their information on indigenous statements and opinions, explicitly stating that procedures used in the U.S. would not work here. (See especially Rubinstein, 1982, p. 5). This critique by Lowe, of the four discussed here, appeared in a Pacific journal.

In "A Comparative Ethnographic Study of Suicide Epidemics in Two Pacific Island Societies" Lowe (2020a) developed a three-stage process to compare existing ethnographic data on the suicide epidemics in Chuuk and Samoa: comparing studies of the ethnopsychologies of two societies, "drilling down," and "scaling up." His purpose was to develop "middle-range theories in anthropology that offer more historically and culturally

contextualized accounts of the general phenomena we want to better understand" (Lowe, 2020a, p. 69). As in Lowe's other contributions, the analysis he performs and the changes he suggests could not occur had not the data he re-analyzes already been collected and published. The work of Hezel and Rubinstein seems both historically and culturally contextualized: times and places are identified, and distinctions are made among suicides in specific island groups.

Finally, Lowe (2020b), in "Suicide Epidemics, Post-Colonial Governance, and the Image of the Recalcitrant Native in Oceania," took a different approach to the suicide epidemics in Micronesia and Samoa. He indicated that early reports of both epidemics came from non-indigenous sources, transferred their information to extra-regional advisors––indeed former colonizers, and that, therefore, post-colonial governance addressed the epidemics (Lowe, 2020b, p. 65). Neither Hezel nor Rubinstein used the term *recalcitrant native* in my reading, although Hezel's original work attracted more attention outside the area (for example, in *The New York Times* of March 6, 1983) than it appeared to have locally. Hezel's earliest work on suicide was motivated by his students' discussion and concern and by their survey on the issue of youth suicides in their community; it also relied on interviews with indigenous Islanders.

Furthermore, Lowe is also a representative of post-colonial governance. Lowe (2020b) believed that early reports of Samoan and Micronesian suicide epidemics came from non-indigenous sources, transferred their information to extra-regional advisors––indeed former colonizers, and that, therefore, post-colonial governance addressed suicide epidemics. His beliefs are grounded in fact. I believe, though, that regression analyses, correlation coefficients, and drilling down and scaling up ethnopsychologies are also a form of post-colonial governance. Even when these practices support existing hypotheses about suicide in Micronesia and when they clarify information for external reviewers, they neither clarify indigenous cultural data nor make explanations available to the indigenous populations.

Other Cultural Factors

In addition to Lowe's criticism, a number of sources have emerged from the initial theories and reports of Hezel and Rubinstein, some early, others later, that may shed further light on suicide in Micronesia.

For example, Peter W. Black (1985) applied the concept of empathy and the case study methodology to the aberrant behavior of a Tobian man who attempted suicide four times in a single day. Black (1985) focused on the notions of *anger*, *shame*, and *fear* (p. 271) central to Tobian folk psychology and concluded that the gossip of which the man complains–– while supposedly not "an appropriate subject for adult fear"––is "in fact, one of the major loci of fear. It is for this reason that it can play such an important role in social conformity" (p. 282). Black (1985) believed that the man's seemingly inexplicable behavior brought gossip to people's attention as a cause for suicide rather than the public shaming they assumed (ibid.), a possible and slightly different element of some suicides. A ghostly or spiritual element also appears in Marshallese and Chuukese suicides (Rubinstein, 1980a, p. 74; Carucci, 2019, p. 215; US DHHS, 2021, reason 5).

Carucci (2019) has identified an element that may affect recent Marshallese suicidal behaviors in "transnational" communities such as on the Big Island, Hawaii. There youth have transitioned from alcohol and drinking groups to the use and sharing of hard drugs such as ice and meth (pp. 204-205 ff.; p. 203). Use of these drugs poses a serious hazard to young Marshallese as these are Schedule 1 drugs. Under U.S. law, sharing may be viewed as distribution, a crime that could result in their deportation from anywhere in the U.S. and earn them a criminal record (Carucci, 2019, p. 216). Carucci (2019) also emphasized that drug use accompanies a "lack of a practice-grounded, shared, cross-generational identity [that] has served to increase the rift between Big Island Marshallese elders and the community's youth" (p. 209). Lack of identity poses serious psychological problems and seems reflected in the suicide pact discovered by one of the elders (and thus halted), in which a group of seven or eight young men planned to commit suicide simultaneously on Big Island (Carucci 2019, pp. 214-215). Carucci wrote that these young men "felt that their collective suicide, following on the heels of their age

mates' suicides, would communicate to community elders their collective sense of disenfranchisement" (ibid.). Despite prevention of the group suicide, the intergenerational gap has not been repaired (ibid.). A suicide pact in Guam among 50 young friends has also been reported by Struck (2001, p. A23).

The Present

Since 1950 the World Health Organization (WHO) of the United Nations (U.N.) has collected data on mortality, including suicide, from its member nations (Värnik, 2012, p. 760). As a result of research work in the 1980's, the U.N. also began a survey program of high school students, and in 1990 the U.S. Centers for Disease Control and Prevention (CDC) began administering the Youth Risk Behavior Survey (YRBS) biennially in the U. S., and in greater Micronesia. The purpose of the latter is to monitor health behaviors among youth and to help prevent disease and monitor suicidal behaviors (CDC, 2021). Both U.N. data and data from the YRBS, however, are published irregularly: Balling et al. (2005) presented data from the 2003 YRBS in the CNMI, Palau, and the RMI; David (2018, pp. 16 et al.) included information from the YRBS survey for Guam biennially for 1995-2015 (with no data for 2009). Both the U.N. and the CDC are external, post-colonial sources of data.

According to the U.S. DHHS (2021), suicides in the FSM decreased to a low of 22-24 per 100,000 in 2002-2005 but were at 27 per 100,000 in 2016 and 28 per 100,000 in 2019 as crude rates, not adjusted for age (US DHHS, 2021, FSM Suicide Rate 1966-2015 diagram; MacroTrends, 2022; Hezel, 2017, p. 10). In comparison, the raw data for Guam, with a population of approximately 153,000-160,000, the numbers of suicides were 31 in 2019, 40 in 2020 (with five each in June, July, and August), and 18 in the first seven months of 2021, as raw data, not adjusted for age (Cagurangan, 2020; Ngirairikl, 2021). No data were available for 2015-2021 for the Marshall Islands according to The World Bank (2022). The FSM did not experience COVID-19 as seriously as Guam or the CNMI, except for islanders being stranded and unable to return home, but data on FSM suicide rates for 2020-2021 are not yet available. The 2021 U.S.

DHHS report offers, as assessment, major reasons for committing suicide in the FSM:

1. Alterations in the family relationships and structures following the colonization periods and moving on into a new era where change is inevitable.
2. A reduction in dependence on subsistence production and more reliance on cash economy may have affected the importance of clan activities and lineage.
3. Undermining of the social supports structures for adolescents caused by unaccustomed reliance on the nuclear family leading to a rise in parent-adolescent conflicts.
4. Suicide has somewhat been accepted/expected (to some extent) and become more familiar among youths in the resolution of conflicts/social problems faced in society.
5. The Micronesian belief system that pertains to communication in spirit may also be another factor for influence from one suicide to another.
6. Despite the findings that suicides were a result of impulsive behavior, there is a trend involving long term intolerable situations and the preference to withdraw and handle matters indirectly rather than confrontation. (n.p.)

Reasons 1-3 appear to be external reasons while reasons 4-6 seem to be intra-cultural reasons for suicide; they also seem to be reasons that have been created or are derived from the discussions of suicide in the islands over the last 45-50 years.

The Future

The body of work produced by Francis X. Hezel and Don Rubinstein is worthy of critical study, especially in developing a theory that may explain all the data. In further study of adolescent suicide in Micronesia,

clarification of terminologies is needed to determine in what ways researcher vocabularies differ from each other, individually and across disciplines. Another area for further study is the place of political history in the discussion of suicide. The 1970s and 1980s were the period of the Islanders' efforts for independence, which was accompanied by profound economic and social change, including out-migration that could place additional strain on the remaining family members. What have been the influences of political and economic histories on family life? One source to consider on economy is Deleuze and Guattari's (2009) discussion of the schizoid nature of capitalism. Both Hezel and Rubinstein, accurately, I believe, focused on intra-family and intergenerational relationships. Another voice on that topic that I believe worth heeding is that of Bernard Stiegler (2010), a French philosopher who strongly believed that the breakdown of intergenerational ties is at the core of the alienation of youth, especially as influenced by capitalism and technology. Basically, what Stiegler wrote (not always in the simplest terms) is that people become individuals in their culture by interacting with other people, especially by taking care of others:

> *This* care cannot be seen as the basic conditions for survival, as subsistence. Care, 'strictly speaking,' always works through the care one takes *of oneself through* the care one takes of others, in that they are constituent elements of the 'self' as the transformation of individuation. (Stiegler, 2010, p. 178; emphasis in original)

That is, interactivity and caring for each other helps each person become an individual in their own culture. If there is no interaction with caring, people do not mature relative to their own culture and its expectations–– in any way.

In a paper presented to the American Anthropological Association in November 1984 Rubinstein stated that the "Trukese ethos elaborates and positively values both the gentle attributes of humility, kindness, and respectfulness . . ., and the violent potential of 'bravery, power' and 'strong thought' on the other." He described the two values as doubly bound–– perhaps like the opposite sides of a coin––and involved in the relationship between the rebuked youth and the rebuking parent that often precedes

and precipitates amwúnúmwún and suicide (Rubinstein, 1984b, pp. 1-2). Investigation of these indigenous concepts in Käser (2016) may provide further information and clarify what it means for a Chuukese to become Chuukese other than simply by birth. Reading of Kral (2019) may offer new insights into suicide among other indigenous cultures, as may other studies of indigenous suicide. If and when data from the YRBS are available regularly, female suicide and suicide attempts should also be studied.

While suicide may have always had a place in Micronesian societies, the conditions of WWII, the post-war changes in ecology, economy, education, religion, technology, relationship to land and sea, social organization, social order, and forced and voluntary migration, each individually and in aggregate, have been major disruptions in Micronesian life. The suicide patterns in Micronesia are as heterogeneous as Micronesian cultures and possibly as heterogeneous as socialization patterns, and, as Ran (2007, p. 86) has noted, "the role of culture in suicide" requires further study. Youth suicides and suicidal ideation are currently increasing in the U.S. and other developed and developing countries. Because the family is the initial core of culture in individual lives, the family must be the place to start, as Hezel and Rubinstein have done. Their research has shown that conflict with someone in the family or with family expectations is often a precipitating event of suicide, and these conflicts may differ by island culture as well as by individual. The greatest numbers of Micronesian suicides occur among males aged 15 to 24, and the preferred method is hanging, with death by anoxia. Anger and alcohol use may precede the suicide. For nearly fifty years Hezel and Rubinstein have collected data on more than a thousand suicides in Micronesia through records searches and through psychological autopsy. This body of data is worthy of further study.

Acknowledgments

References

Balling, A., Grunbaum, J. A., Speicher, N., McManus, T., & Kann, L. (2005). *Youth Risk Behavior Survey 2003: Commonwealth of the Northern Mariana Islands, Republic of the Marshall Islands, Republic of Palau.* files.eric.ed.gov/fulltext/ED512544.pdf.

Barnabas, S. J. (1985). Suicide in Micronesia: A phenomenon. In A. Q. Lynn & B. W. Sparks (Eds.), *Death by suicide on Guam and in Micronesia* (pp. 40-60). Cummings & Hathaway.

Black, P. W. (1985). Ghosts, gossip, and suicide: Meaning and action in Tobian folk psychology. In G. M. White & J. Kirkpatrick (Eds.), *Person, self, and experience: Exploring Pacific ethnopsychology* (pp. 245-300). University of California Press.

Cagurangan, M-V. (2020, 1 September). 15 suicides on Guam in the past three months of Covid [sic.] year. *Pacific Island Times*. pacificislandtimes.com/post/2020/09/01/guams-suicide-rate-up-during-the-year-of-covid-19.

Carucci, L. M. (2019). From drunken demeanor to doping: Shifting parameters of maturation among Marshall Islanders. In H. Lee (Ed.), *Pacific youth: Local and global futures* (pp. 203-218). Australian National University.

CDC: Centers for Disease Control and Prevention. (2021). Adolescent and school health: YRBSS summary and trends. *CDC: Centers for Disease Control and Prevention*. cdc.gov.

David, A. M. (2018). *Guam state epidemiological profile: 2016 update*. http://gbhwc.guam.gov/sites/default/files/REV_FINAL_Guam%20State%20Epidemiological%20Profile%202016_August%202018.pdf.

Deleuze, G. & Guattari, F. (1987). *A thousand plateaus: Capitalism and schizophrenia*. (B. Masumi, Trans.). The University of Minnesota Press.

Hezel, F. X. (1976). Tragic end for troubled youth. *Micronesian Reporter: The Journal of Micronesia,* 24(4), 8-13.

Hezel, F. X. (1977). Suicide epidemic among Micronesian youth. *South Pacific Bulletin*, 27(2), 5-10.

Hezel, F. X. (1984). Cultural patterns in Trukese suicide. *Ethnology*, 23(3), 193-206.

Hezel, F. X. (1985). Trukese suicide, In F. X. Hezel, D. H. Rubinstein, & G. M. White (Eds.), *Culture, youth and suicide in the Pacific: Papers from an East-West Center Conference* (pp. 112-124). University of Hawaii.

Hezel, F. X. (1987a). In search of social roots of mental pathology in Micronesia. In A. B. Robillard & A. J. Marsella, (Eds.), *Contemporary issues in mental health research in the Pacific Islands* (pp. 12-31). Social Science Research Institute, University of Hawaii.

Hezel, F. X. (1987b). Truk suicide epidemic and social change. *Human Organization*, 46(4), 283-291.

Hezel, F. X. (1989a, May 26). Micronesia suicides peaked in 1980's and have dropped to 1970's level. *Marshall Islands Journal* 20(21), 19, 24.

Hezel, F. X. (1989b, June 9). Profound family change is suicide catalyst. *Marshall Islands Journal* 20(23), 16-17.

Hezel, F. X. (1989c). Suicide and the Micronesian Family. *The Contempora ry Pacific*, 1(1-2),
43-74. https://www.jstor.org/stable/23701892.

Hezel, F. X. (1989d). Suicide in the Micronesian family. *Micronesian Seminar. MicSem Publications.*
http://micronesianseminar.org/article/suicide-in-the-micronesian-family/.

Hezel, F. X. (1989e). What can we do to prevent suicide? *Journal of the Pacific Society*, 17-20.

Hezel, F. X. (1991). Update on suicide problem. *The Micronesian Counselor*, 2.

Hezel, F. X. (1994). What can we do to prevent suicide in the Pacific? *Pacific Health Dialog* 1(1), 59-62.

Hezel, F. X. (1995). American anthropology's contributions to social problems research in Micronesia. *The Micronesian Counselor*. Micronesian Seminar.
http://www.micsem.org/pubs/articles/socprobs/frames/america nanthrofr.htm.

Hezel, F. X. (1999). American anthropology's contributions to social problems research in Micronesia. In R. C. Kiste & M. Marshall (Eds.),

American anthropology in Micronesia: An assessment (pp. 301-325). University of Hawaii Press.

Hezel, F. X. (2017). Suicide in Federated States of Micronesia: A new direction. [Author's final proof]. *Pacific Studies*, 40(3), 1-22.

Käser, L. (2016). *A Chuukese theory of personhood: The concepts body, mind, soul, and spirit on the islands of Chuuk (Micronesia), an ethnolinguistic study*. (G. Sutton & D. Cheeseman, Trans.). VTR Publications.

Kral, M. J. (2019). *The idea of suicide: Contagion, imitation, and cultural diffusion*. Routledge.

Lowe, E. D. (2018, 28 February). Social change and Micronesian suicide mortality: A test of competing hypotheses. *Cross-Cultural Research*, 00(0), 1-30. DOI:10.1177/1069397118759004.

Lowe, E. D. (2019). Epidemic suicide in the context of modernizing social change in Oceania: A critical review and assessment. *The Contemporary Pacific*, 31(1), 105-138. https://doi.org/10.1053/cp.2019.0007.

Lowe, E. D. (2020a). A comparative ethnographic study of suicide epidemics in two Pacific Island societies. In M. Schnegg & E. D. Lowe (Eds.), *Comparing cultures: Innovations in Comparative Ethnography* (pp. 69–90). Cambridge University Press. doi:10.1017/9781108766388.004.

Lowe, E. D. (2020b). Suicide epidemics, post-colonial governance, and the image of the recalcitrant native in Oceania. In A. Patterson & I. Read (Eds.), *The shapes of epidemics and global disease* (pp. 64-86). Cambridge Scholars Publishing.

Macpherson, C. & Macpherson, L. (1987). Towards an explanation of recent trends in suicide in Western Samoa," *Man* 22, 305-330.

MacroTrends. (2022). Micronesia suicides rate 2000-2022. *Macrotrends*. https://www.macrotrends.net/countries/FSM/micronesia/suicide -rate.

Mathieu, S., de Leo, D., Koo, Y. W., Leske, S., Goodfellow, B., & Kölves, K. (2021). Suicide and suicide attempts in the Pacific Islands: A systematic literature review, *The Lancet Regional Health – Western Pacific*, 17, 1-20. https://doi.org/10.1016/j.lanwpc.2021.100283.

Mayo Clinic. (2022). Schizophrenia. *Mayo Clinic*.

https://www.mayoclinic.org/diseases-conditions/schizophrenia/symptoms-causes/syc-20354443.

The New York Times. (1983, March 4). Micronesia's male suicide rate defies solution. *The New York Times*, 24.

Ngirairikl, O. (2021, September 5, updated 2021, September 14). 18 suicides in 7 months, *The Guam Daily Post*. Postguam.com/news/local/18-suicides-in-7-months/article_28368ce0-0c8a-11ec-8372-1f281e9dab08.html.

Ran, M-S. (2007). Suicide in Micronesia: A systematic review. *Primary Psychiatry*, 14(11), 80-87. https://www.researchgate.net/publication/262882325_Suicide_in_Micronesia_A_Systematic_Review

Rubenstein, D. H. (1979). *An ethnography of Micronesian childhood: Contexts of socialization on Fais Island*. Unpublished doctoral dissertation. Stanford University.

Rubinstein, D. H. (1980a). Micronesia's troubled generation. *Glimpses of Micronesia and the Western Pacific* 20(3), 71-75.

Rubinstein, D. H. (1980b). Suicide: A growing crisis for Micronesian youth. *Micronesian Support Committee Bulletin*, 5(3-4), 11-12, 14.

Rubinstein, D. H. (1981a). Micronesian suicides: Anomic or epidemic? Colloquium presentation, March 11, 1981, Department of Anthropology, University of Hawaii.

Rubinstein, D. H. (1981b). Preliminary research on suicide in Micronesia. [Suicide characteristics and rates in Micronesia].[12] In W-S. Tseng and B. B. C. Young (Eds.), *Prioritization of mental health services development for the Pacific Islanders, Workshop Report* (pp. 73 -84), University of Hawaii.

Rubinstein, D. H. (1981c). Suicide: An act of impulse; an act of despair. *The New Pacific Magazine* 6(4), 28-30.

Rubinstein, D. H. (1982). An investigative study of adolescent suicides in Micronesia [Adolescent suicides in Micronesia],[13] *Pacific Health*, XV, 2-5.

---

[12] The title on page 73 is as listed; the title in the table of contents is "Suicide characteristics and rates in Micronesia."

[13] The title on page 2 is as listed; the title in the table of contents is "Adolescent suicide in Micronesia."

Rubinstein, D. H. (1983). Epidemic suicide among Micronesian adolescents. *Social Science and Medicine,* 17(10), 657-665. https://doi.org/10.1016/0277-9536(83)90372-6.

Rubinstein, D. H. (1984a). Epidemic suicide among Micronesian adolescents. In C. Lutz (Ed.), Micronesia as strategic colony: The impact of U.S. Policy on Micronesian health and culture (pp. 52-65). Volume 12 of Occasional Papers, Cultural Survival Inc.

Rubinstein, D. H. (1984b). Self-righteous anger, soft talk, and amwúnúmwún suicides of young men: The ambivalent ethos of gentleness and violence in Truk. Paper presented at the American Anthropological Association meetings in Denver, November 15-18, 1984.

Rubinstein, D. H. (1985). Suicide in Micronesia. In F. X. Hezel, D. H. Rubinstein, & G. W. White (Eds.), *Culture, youth and suicide in the Pacific: Papers from an East-West Center Conference. Working papers, Pacific Islands Studies Program* (pp. 88-111). University of Hawaii.

Rubinstein, D. H. (1986). Micronesian suicides. In W.-S. Tseng & C. A. Lee (Eds.), *Culture and mental health in Micronesia* (pp. 170-188). Department of Psychiatry, John A. Burns School of Medicine, University of Hawaii.

Rubinstein, D. H. (1987). Cultural patterns and contagion: Epidemic suicide among Micronesian youth. In A. B. Robillard & A. J. Marsella (Eds.), *Contemporary issues in mental health research in the Pacific Islands* (pp. 127-148). Social Science Research Institute, University of Hawaii.

Rubinstein, D. H. (1989, December). Youth suicide in the Marshall Islands. *The MariMed Spirit*, 1-3.

Rubinstein, D. H. (1991). Changes in the Micronesian family structure leading to alcoholism, suicide and child abuse and neglect. Presentation to the Child Abuse and Neglect Summit, Pacific Basin Child Protection Initiative, January 22, 1991. University of Guam.

Rubinstein, D. H. (1992a). Suicidal behaviour in Micronesia. In K. L. Peng & W.-S. Tseng (Eds.) *Suicidal behaviour in the Asia-Pacific region* (pp. 199-230). Singapore University Press.

Rubinstein, D. H. (1992b). Suicide in Micronesia and Samoa: A critique of explanations. *Pacific Studies*, 15(1), 51-75.

Rubinstein, D. H. (1995). Love and suffering: Adolescent socialization and suicide in Micronesia. *The Contemporary Pacific*, 7(1), 21-53.

Rubinstein D. H. (1998). Recent trends in Micronesian suicide: The persistence of an epidemic. In *Proceedings of the second Pan-Asia Pacific Conference on mental health, October 12-15, 1998,* pp. 567-571. China Association for Mental Health.

Rubinstein, D. H. (2018). Understanding suicide: From culture to prevention. Keynote address: University of Guam Annual Suicide Prevention Forum, September 26, 2018. University of Guam.

Rubinstein, D. H. & G. White. (1983). Bibliography on culture and mental health in the Pacific Islands. *Micronesica*, 19(1-2), 183-245. https://micronesica.org/sites/default/files/ bibliography_on_culture_and_mental_health_in_the_pacific_islands_ micronesica_vol._19_no._1-2_dec._1983-10.pdf.

Stiegler, B. (2010). *Taking care of youth and the generations*. (S. Barker, Trans.). Stanford University Press.

Struck, D. (2001, March 22). 'Prestigious angels' of death. *The Washington Post*, A23.

Temarcel, D. (1985). Death by suicide on Palau. In A. Q. Lynn & B. W. Sparks (Eds.), *Death by suicide on Guam and in Micronesia,* pp. 61-74. Cummings & Hathaway.

U.S. Department of Health and Human Services. (2021) Overview of the state––Federated States of Micronesia – 2021. *HRSA Maternal & Child Health III.B.* https://mchb.tvisdata.hrsa.gov/Narratives/Overview/5287367a-ff2c-4459-b22a-5344998a0548.

Värnik, P. (2012). Suicide in the world, *International Journal of Environmental Research and Public Health*, 9, 760-771. DOI: 10.3390/ijerph9030760.

White, A. (1982). *Culture, development and mental health in the American Pacific: Observations from field studies in Micronesia and American Samoa.* Report prepared for the Pacific/Asian Mental Health Research Project, Honolulu, Hawaii.

The World Bank. (2022). Suicide mortality rate (per 100,000 population)
– Marshall Islands, *The World Bank*.
https://data.worldbank.org/indicator/SH.STA.SUIC.P5?locations=
MH.