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**The effects of food schedule adaptation on the ability of
naloxone to suppress the acquisition of schedule-induced
polydipsia**

Geter, Beth, M.A.

The American University, 1991

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THE EFFECTS OF FOOD SCHEDULE ADAPTATION ON THE ABILITY
OF NALOXONE TO SUPPRESS THE ACQUISITION
OF SCHEDULE-INDUCED POLYDIPSIA

by

Beth Geter

submitted to the

Faculty of the College of Arts and Sciences

of The American University

in Partial Fulfillment of

the Requirements for the Degree of

Master of Arts

in

Psychology

Signatures of Committee:

Chair:

Dr. I. P. J.

Scott P.

Cora Lee Hetherington

Antony Thomas
Dean of the College

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In loving memory of my grandfather,
Oliver Fairfax Seruby

THE EFFECTS OF FOOD SCHEDULE ADAPTATION ON THE ABILITY
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ABSTRACT

Naloxone suppressed the acquisition of schedule-induced polydipsia (SIP) in rats given no previous exposure to the feeding schedule. Adaptation to the feeding schedule prior to SIP acquisition attenuated this suppression. Specifically, water consumption, bout probability, licks/bout, and maximum lick rates during the interpellet interval (IPI) were significantly increased by adaptation. Although adaptation attenuated the suppressive effects of naloxone on SIP, this attenuation was not complete. Adapted, naloxone-treated subjects displayed both decreased water consumption and bout probability as compared to distilled water-treated controls. Unlike the effects of adaptation on naloxone's suppression of SIP, adaptation completely eliminated naloxone's suppression of feeding. That adapted subjects ate at control levels while still displaying a lower level of SIP suggests that the suppressive effects of naloxone on the acquisition of SIP is not an indirect effect of naloxone

on feeding, but rather a direct effect of naloxone on developing SIP. Given that naloxone has a general suppressive effect on drinking (including SIP), what remains to be determined is why naloxone has no effect on established SIP. Possible explanations for this are discussed.

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CHAPTER I

INTRODUCTION

The role of the opiates in ingestive behavior has been of interest to researchers since 1929 when Flowers and his colleagues reported that the exogenous opiate morphine increased water intake in rats (Flowers, Dunham, & Barbour, 1929). In 1963, Martin reported that morphine had the ability to increase food intake as well as water ingestion (Martin, Wikler, Eades, & Pescor, 1963). Since the discovery of the endogenous opiate ligands (Hughes, 1975; Kraulis, Foldes, Traikov, Dubrovsky, & Birmingham, 1975), attempts have been made to identify the effects of these endogenous compounds on ingestive behavior. Grandison and Giudotti (1977), for example, demonstrated that when the endogenous opioid beta-endorphin was injected into the ventromedial region of the hypothalamus, feeding was increased in rats. Thus, it has been shown that both exogenous and endogenous opioid compounds influence ingestive behavior (Morley, Gosnell, & Levine, 1984; Morley, Levine, Yim, & Lowy, 1983).

Consistent with these findings is the fact that the opiate antagonist naloxone hydrochloride suppresses food intake in the rat. Holtzman (1974) demonstrated that rats

deprived of food for 48 hours and subsequently injected with doses of naloxone ranging from 0.3 to 10 mg/kg decreased food consumption during a two-hour period in a dose-dependent manner. Since Holtzman's finding, it has been reported that naloxone and a variety of other opiate antagonists (e.g., naltrexone and diprenorphine) decrease both food and water intake under a range of experimental procedures. Naloxone, for example, suppresses food intake in hypothalamically obese rats (King, Castellanos, Kastin, Berzas, Mauk, Olson, & Olson, 1979), in rats subjected to tail-pinch stress (Lowy, Maikel, & Yim, 1980), and in rats receiving electrical stimulation of the lateral hypothalamus (Carr & Simon, 1983). Additionally, naloxone suppresses drinking induced by hypertonic NaCl (Czech & Stein, 1980), angiotensin (Rowland, 1982), and chlorodiazepoxide (Cooper, 1982).

Despite naloxone's capacity to affect food and water consumption under a wide variety of experimental conditions, it has failed to suppress drinking induced by the spaced delivery of food, i.e., schedule-induced polydipsia or SIP (Brown & Holtzman, 1981; Leander, McMillan, & Harris, 1975; Wallace, Willis, & Singer, 1984). Brown and Holtzman, for example, demonstrated that naloxone at doses as low as 0.1 mg/kg suppressed drinking in water-deprived rats, while a 10-mg/kg dose failed to affect SIP. Recently, however, Riley and Wetherington (1987) reported that developing SIP

is suppressed by naloxone. Rats given a 10-mg/kg injection of naloxone during the acquisition of SIP exhibited retarded acquisition relative to vehicle-injected rats. Consistent with prior research (see above), when naloxone was given once SIP had been established, there was little effect.

A study by Sanger and McCarthy (1982) suggests that adaptation to the feeding schedule may be the basis for the differential effects of naloxone on the acquisition and maintenance of SIP. In an attempt to determine the effects of adaptation to the feeding schedule on the suppressive effects of naloxone on food-deprived eating, they exposed rats to food for 6 hours each day until all animals were consuming similar quantities of food prior to injecting them with either 0.1, 1.0 or 10 mg/kg of naloxone. Whereas naloxone suppressed food consumption in nonadapted subjects by 26%, 40%, and 53%, respectively, it had only a marginal effect in food-adapted subjects, suppressing consumption of food by 6%, 2%, and 7%, respectively. These findings suggest that the differential effects of naloxone on developing and established SIP may result from differential effects of naloxone on feeding during acquisition and maintenance. That is, given that animals have received differential amounts of adaptation to the feeding schedule at the outset of SIP training as compared to once SIP has been established, it is possible that naloxone has differential effects on food consumption during acquisition and

maintenance. The effects of naloxone on SIP acquisition, thus, may be a by-product of the effects of naloxone on feeding, i.e., animals do not drink because food consumption is suppressed. Indeed, this possibility is supported by the fact that although in the Riley and Wetherington (1987) report naloxone suppressed food consumption throughout the acquisition phase, it did not affect food consumption once SIP was established.

If the naloxone-produced suppression of SIP during acquisition is a by-product of naloxone's suppression of feeding and if naloxone's effect on feeding is attenuated by adaptation to the feeding schedule, then adaptation to the feeding schedule prior to the acquisition of SIP should attenuate naloxone's suppressive effects on feeding and, in turn, on SIP acquisition. This prediction was tested in the present study by examining the effects of naloxone on water and food intake during the acquisition of SIP in rats already adapted to the schedule-induced polydipsia feeding schedule.

CHAPTER II

METHOD

Subjects

The subjects were 48 experimentally naive, female rats of Long-Evans descent, approximately 90 days of age at the beginning of the experiment. They were housed in individual wire-mesh cages and were maintained on a 12-h-light/12-h-dark cycle and at an ambient temperature of 26° C. Subjects were maintained at 85% of ad-lib body weight by restricting food intake. Water was continuously available in the home cage.

Apparatus

The four identical chambers (26.5 x 19.2 x 16.0 cm) had sides and ceiling made of 0.6-cm clear Plexiglas and a grid floor constructed of 0.4-cm-diameter stainless-steel rods spaced 2 cm apart. A 1 x 3-cm food hopper was centered on the front wall 3 cm above the grid floor. A graduated Nalgene drinking tube located outside the chamber was positioned such that the Girton metal drinking spout was flush with the outer wall 3 cm above the grid floor and 7 cm to the left of the hopper. Licks were detected by a drinkometer (Lafayette Model 55008). A continuously illuminated 28-V houselight was centered on the front wall of each

chamber 13.5 cm above the grid floor. All schedule events were programmed on a TRS-80 Model III microcomputer interfaced to the chambers via an Alpha Interfacer 80 that also recorded all lick responses. For a detailed description of both the hardware and software used in the conduct of this research, see Riley, Schoening, and Wetherington (1985).

Procedure

Phase I: Food Adaptation

Subjects were randomly divided into three groups ($n = 16$ per group) and given either 0, 10, or 20 days adaptation to a fixed-time 60 sec (FT 60) schedule in which a single 45-mg Noyes Pellet was delivered every 60 sec for a total of 60 pellet deliveries. Food intake was recorded after each session. Water was not available in the chambers during these sessions.

Phase II: Acquisition

Subjects in each of the three groups were further randomly divided into two groups ($n = 8$ per group) and were injected 15 min prior to each session with either naloxone hydrochloride (10 mg/kg) or an equivolume of distilled water, resulting in Groups OW, ON, 10W, 10N, 20W, and 20N. For each group, 0, 10, and 20 refer to the number of days of food adaptation and W (water) and N (naloxone) refer to the solution injected prior to each session. All subjects received food according to the same FT 60 feeding schedule

as in Phase I. Water was continuously available via the graduated Nalgene tubes. After each session, total water and food intake were recorded for each rat, and lick data were stored to disk. This phase was in effect for 10 consecutive days.

CHAPTER III

RESULTS

Water Consumption

The comparison of interest is naloxone's effects on SIP acquisition in rats nonadapted and in rats adapted to the feeding schedule. An unexpected result, however, was that food adaptation itself had a suppressive effect on SIP acquisition, i.e., the control baselines of SIP varied with adaptation in mean water consumption (Figure 1, top panel), the mean probability of postpellet licking (Figure 2, top panel), and the mean number of licks/bout (Figure 3, top panel). For example, although the mean water consumption on Days 1-5 of SIP acquisition was not significantly different between the adapted, distilled water-treated groups (i.e., Groups 10W and 20W) and the nonadapted, distilled water-treated Group (i.e., Group 0W), on Days 6-10 Groups 10W and 20W consumed less water than that by Group 0W ($H[1] = 5.83$ and 4.86 , respectively). Again, although the mean probability of postpellet licking on Days 1-5 was not significantly different between the adapted and nonadapted groups, on Days 6-10 Group 20W attempted significantly fewer bouts than Group 0W ($H[1] = 3.57$). In addition, Groups 10W and 20W made significantly fewer licks/bout than the nonadapted

group on Days 1-5 ($H[1] = 5.77$ and 5.77 , respectively) and 6-10 ($H[1] = 6.82$ and 6.82).

Given that adaptation alone had a suppressive affect on SIP, in order to assess the effects of adaptation on naloxone's suppression of SIP, the data for each naloxone-treated group are presented as the percentage shift from its respective distilled water-treated control across the 10-day acquisition period, i.e., $[(\text{naloxone} - \text{distilled water}) / (\text{distilled water group}) * 100]$. All statistical comparisons are made on these percentage shifts and are based on Kruskal-Wallis One-Way Analysis of Variance with $p < .05$. All between-group comparisons during the 10-day acquisition period are based on group means averaged on Days 1-5 and 6-10.

Figure 1 presents mean absolute water consumption during the 10-day acquisition period. The top and middle panels present the mean absolute water consumption for the distilled water and naloxone groups, respectively. The bottom panel shows the percentage shift in mean absolute water consumption between each naloxone group and its respective distilled water-treated control group. As predicted, adaptation to the feeding schedule attenuated the suppressive effects of naloxone on SIP. On Day 1 of SIP acquisition, the mean water consumption for subjects in Group ON was 81% less than that for subjects in Group OW; consumption for subjects in Group 10N was 55% less than that

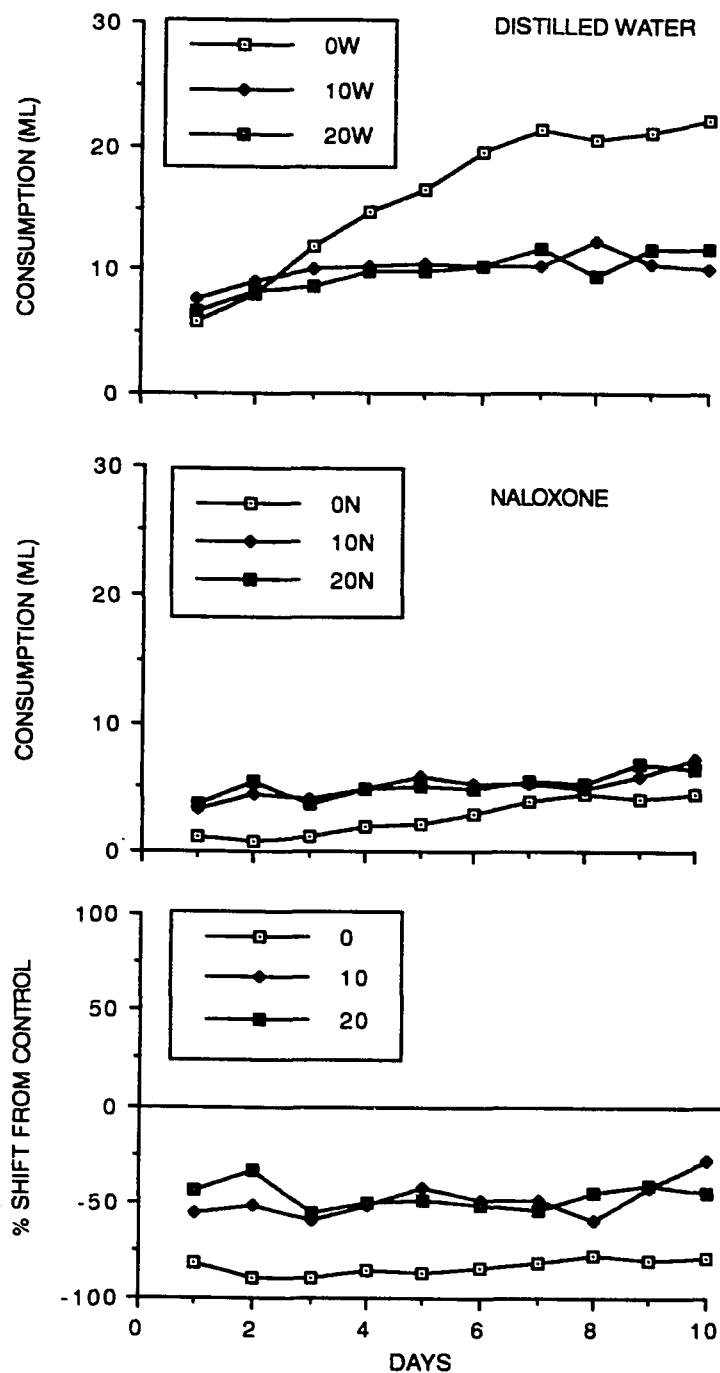


Fig. 1. Mean absolute water consumption for subjects in distilled water-treated (top) and naloxone-treated (middle) groups during acquisition. Bottom panel presents percentage shift in mean absolute water consumption between naloxone-treated groups and their respective distilled water-treated control groups.

for subjects in Group 10W, and consumption for subjects in Group 20N was 44% less than that for subjects in Group 20W. For each group comparison, the percentage shifts did not consistently vary over sessions.

The mean percentage shift in water consumption for Group 0N was significantly greater than that for Groups 10N and 20N on Days 1-5 ($H[1] = 6.82$ and 6.82 , respectively) and Days 6-10 ($H[1] = 6.82$ and 6.82 , respectively). The percentage shifts for Groups 10N and 20N did not differ for either of these comparisons.

Bout Probability

Figure 2 illustrates mean bout probability or the probability of postpellet licking (i.e., the number of interpellet intervals containing at least one lick divided by 60, the total number of interpellet intervals within a session) during acquisition. The mean absolute bout probability of postpellet licking for the distilled water and naloxone groups are illustrated in the top and middle panels, respectively. Again, the data for each naloxone-treated group are presented as a percentage shift from its distilled-water treated control (bottom panel). On Day 1 of SIP acquisition, the mean bout probability for subjects in Group 0N was 52% less than that for subjects in Group 0W; for subjects in Group 10N it was 42% less than that for subjects in Group 10W, and for subjects in Group 20N it was 54% less than that for subjects in Group 20N. For each group

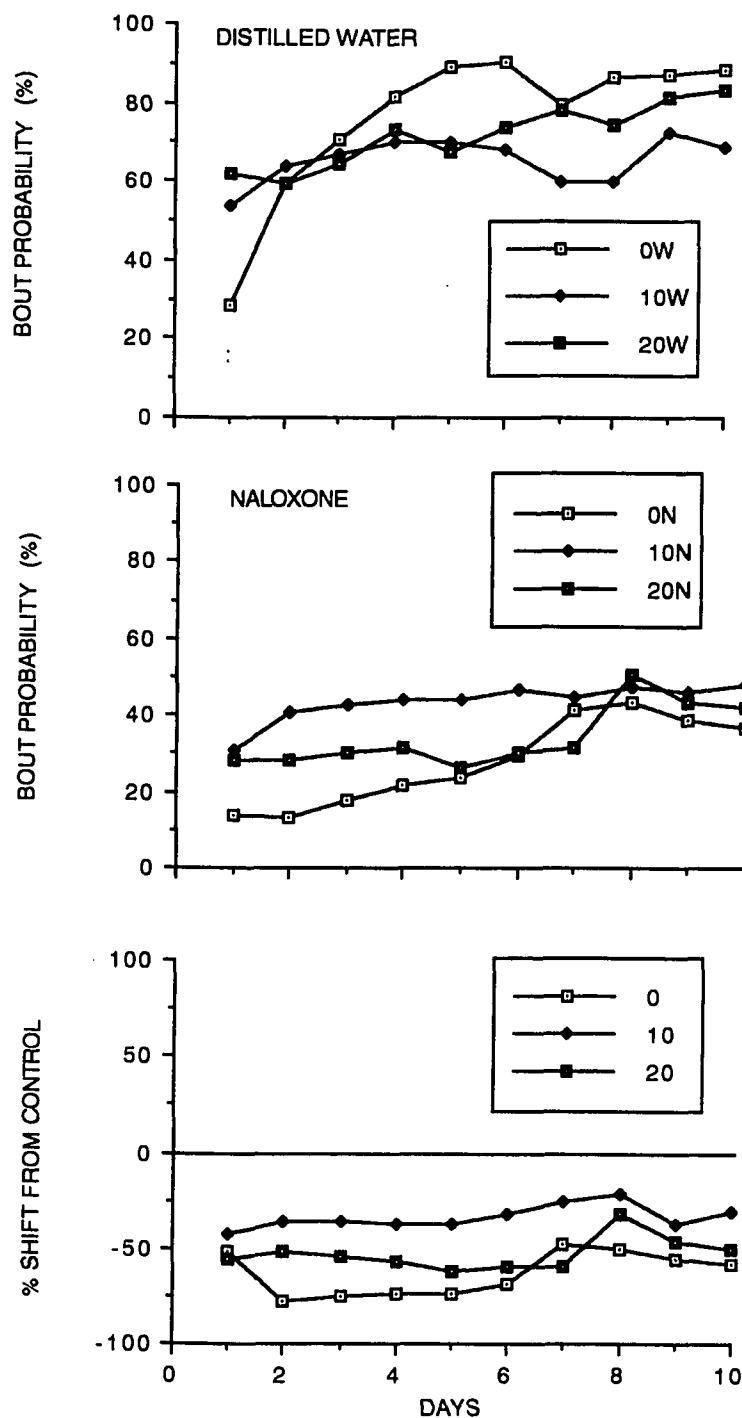


Fig. 2. Mean bout probability for subjects in distilled water-treated (top) and naloxone-treated (middle) groups during acquisition. Bottom panel presents percentage shift in mean probability of postpellet licking between naloxone-treated groups and their respective distilled water-treated groups.

comparison, the percentage shifts did not consistently vary over sessions.

The mean percentage shift in bout probability for Group 0N and 20N was significantly greater than that for Group 10N on Days 1-5 ($H[1] = 6.82$ and 6.82 , respectively) and 6-10 ($H[1] = 6.82$ and 5.77 , respectively) of acquisition. Groups 0N and 20N did not differ in percentage shifts for either of these comparisons.

Licks/Bout

Figure 3 presents the mean number of licks/bout (see above) during acquisition. The mean absolute number of licks/bout for the distilled water and naloxone groups are presented in the top and middle panels, respectively. The data for each naloxone group are presented as a percentage shift from its respective distilled water control (bottom panel). On Day 1 of SIP acquisition, the mean number of licks/bout for subjects in Group 0N was 37% less than that for subjects in Group 0W; Group 10N, 17% less than that for subjects in Group 10W; and Group 20N, 24% more than subjects in Group 20W. For each group comparison, the percentage shifts did not consistently vary over sessions.

The mean percentage shift in number of licks/bout was significantly greater for Group 0N than for Groups 10N and 20N on Days 1-5 ($H[1] = 6.82$ and 6.82 , respectively) and 6-10 ($H[1] = 6.82$ and 6.82 , respectively) of acquisition. The percentage shift for Group 20N was greater than for

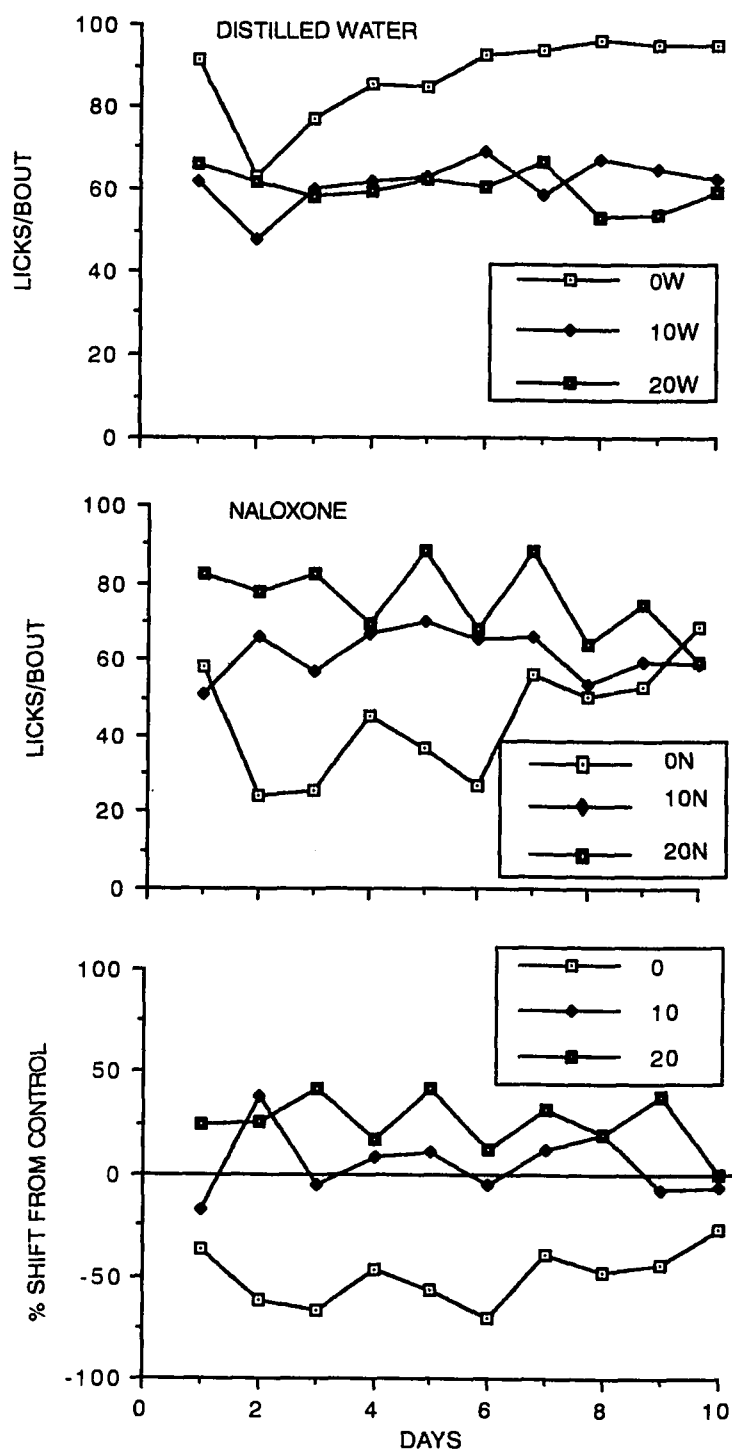


Fig. 3. Mean licks per bout for subjects in distilled water-treated (top) and naloxone-treated (middle) groups during acquisition. Bottom panel presents percentage shift in mean number of licks per bout between naloxone-treated groups and respective distilled water-treated control groups.

Group 10N for each of these comparisons ($H[1] = 3.94$ and 4.82 , respectively).

Temporal Distribution of Licking

Figure 4 illustrates the postpellet temporal distribution of licking in consecutive 5-sec bins of the 60-sec IPI averaged for each attempted bout over the 60-min session. As illustrated in Panel A, on Day 1 nonadapted subjects receiving distilled-water injections (i.e., Group 0W) displayed evenly distributed mean lick rates across the IPI ranging from 1.1 to 1.8 licks/sec. On Day 2, lick rates were no longer evenly distributed over the IPI with subjects displaying low rates early in the IPI, reaching maximum lick rates in Bin 6 (1.7 licks/sec), and decreasing lick rates over the remainder of the IPI. By Day 3, a licking pattern emerged typical of SIP, i.e., an initial low rate of licking immediately postpellet followed by a sharp increase in Bin 2 or 3 with lick rates then decreasing for the remainder of the IPI. Over sessions, maximum lick rates increased. By Day 9, licking occurred at the rate of 2.6 licks/sec in the first 5-sec bin, increased to a maximum rate of 5.5 licks/sec in Bin 2 and slowly decreased to a near zero lick rate during the latter third of the IPI. (Due to equipment failure, the lick rates for Day 10 are missing.)

As depicted in Panel B, on Day 1 of SIP acquisition nonadapted subjects receiving naloxone injections (i.e., Group 0N) displayed mean lick rates ranging from 0.5 to 0.8

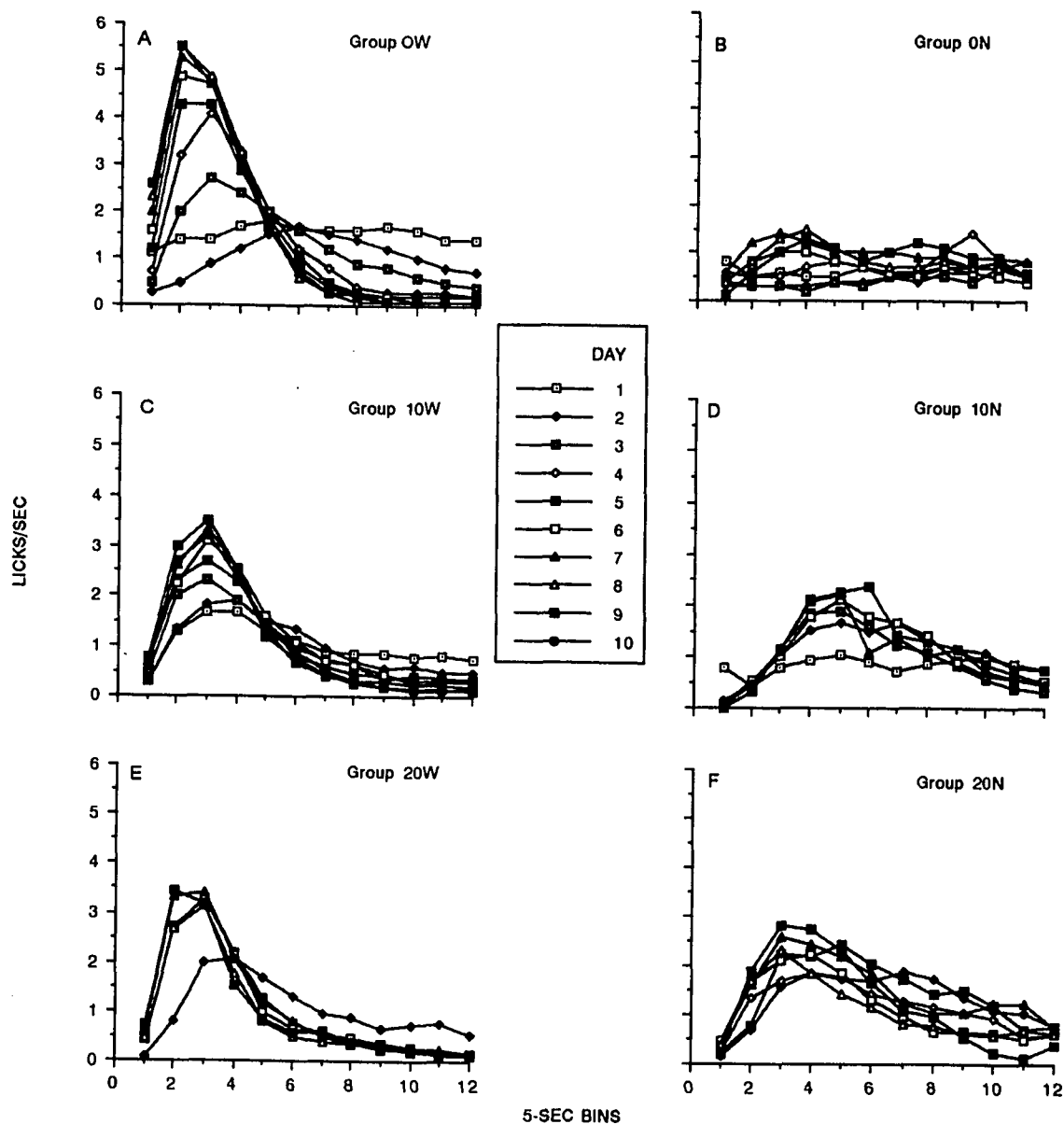


Fig. 4. Mean licks per second across consecutive 5-sec bins within the interpellet interval during acquisition for subjects in each of the six groups. Due to equipment malfunction, the following days are missing for each group: Group OW, Day 10; Group ON, Days 5 and 10; Group 10W, Days 4 and 7; Group 10N, Days 4, 8, 9, and 10; Group 20W, Days 1, 3, 4, and 10; and Group 20N, Days 1, 3, and 10.

licks/sec. These subjects did not display a typical SIP temporal distribution until Day 8, whereas subjects in Group OW displayed a typical SIP temporal distribution on Day 3. On Day 8, licking occurred at a low rate of 0.4 licks/sec in the initial 5-sec bin, increased to a maximum rate of 1.6 licks/sec in Bin 4, and decreased to a constant rate of 0.8 licks/sec for the remainder of the IPI. In comparison to Group OW, Group ON displayed suppressed maximum lick rates that occurred late in the IPI and overall more late interval licking.

Panel C shows that distilled water-treated subjects given 10 days adaptation to the feeding schedule (i.e., Group 10W) displayed a licking pattern typical of SIP on Day 1 of acquisition, i.e., the subjects displayed a low rate (0.3 licks/sec) in the first 5-sec bin, reached a maximum rate (1.7 licks/sec) in Bin 3, and decreased lick rates over the remainder of the IPI. Over sessions, maximum lick rates increased. By Day 10, licking in the first 5-sec bin occurred at a low rate of 0.6 licks/sec, increased to a maximum rate of 3.2 licks/sec in Bin 3 and slowly decreased to near zero rates during the latter third of the IPI.

Subjects receiving naloxone injections and 10 days adaptation to the feeding schedule (i.e., Group 10N) did not display a licking pattern typical of SIP on Day 1 of acquisition (Panel D). Mean lick rates in the 5-sec bins for subjects in this group ranged from 0.4 to 1.1 licks/sec.

Over sessions, maximum lick rates increased and by Day 7 a typical SIP licking pattern emerged. On this day, lick rates gradually increased over the IPI reaching a maximum of 2.2 licks/sec in Bin 5 followed by a decrease in lick rates over the remainder of the IPI. As compared to subjects in Group 10W who displayed a typical SIP temporal distribution on Day 1, subjects in Group 10N did not display a typical SIP temporal distribution until Day 7. In addition, the maximum lick rates for these subjects were reduced and shifted to the right in the interval. Furthermore, these subjects showed overall more late interval licking than subjects in Group 10W.

Distilled water-treated subjects given 20 days adaptation to the feeding schedule (i.e., Group 20W) displayed a typical SIP licking pattern on Day 1 of acquisition (Panel E), i.e., the subjects displayed a low rate (0.1 licks/sec) in the first 5-sec bin, increased to a maximum rate (2.1 licks/sec) in Bin 4, and decreased in lick rate over the remainder of the IPI. Over sessions, maximum lick rates increased. By Day 9, licking in the first 5-sec bin occurred at a low rate of 0.7 licks/sec, increased to a maximum rate of 3.4 licks/sec in Bin 2 and decreased to near zero during the latter third of the IPI.

As depicted in Panel F, subjects receiving naloxone injections and 20 days adaptation to the feeding schedule (i.e., Group 20N) did not display a licking pattern typical

of SIP on Day 2 of acquisition. (Due to equipment failure, lick rates for Day 1 are incomplete.) Mean lick rates in the 5-sec bins ranged from 0.1 licks/sec to 1.9 licks/sec. By the fourth session, a licking pattern emerged typical of SIP. Subjects licked at a low rate of 0.2 licks/sec in the first 5-sec bin, increased to a maximum lick rate of 1.9 licks/sec in Bin 4, and decreased in lick rates over the remainder of the IPI. Over sessions, maximum lick rates increased. On Day 9, subjects licked in the first 5-sec bin at a low rate of 0.2 licks/sec, increased to a maximum rate of 2.8 licks/sec in Bin 3, and slowly decreased in lick rates over the remainder of the IPI. Again, subjects in the control group displayed a typical SIP temporal distribution sooner than the naloxone-treated group. Whereas subjects in Group 20W displayed a typical SIP temporal distribution on Day 1, subjects in Group 20N did not display one until Day 4. In addition, the maximum lick rates for these subjects were reduced and shifted to the right in the interval. Furthermore, these subjects showed overall more late interval licking than subjects in Group 20W.

Pellet Consumption

Figure 5 presents the mean pellet consumption for all subjects during SIP acquisition. Panel A illustrates that on Day 1 of acquisition subjects not adapted to the FT 60-sec feeding schedule and injected with distilled water (i.e., Group 0W) consumed a mean of 49.5 pellets (from the

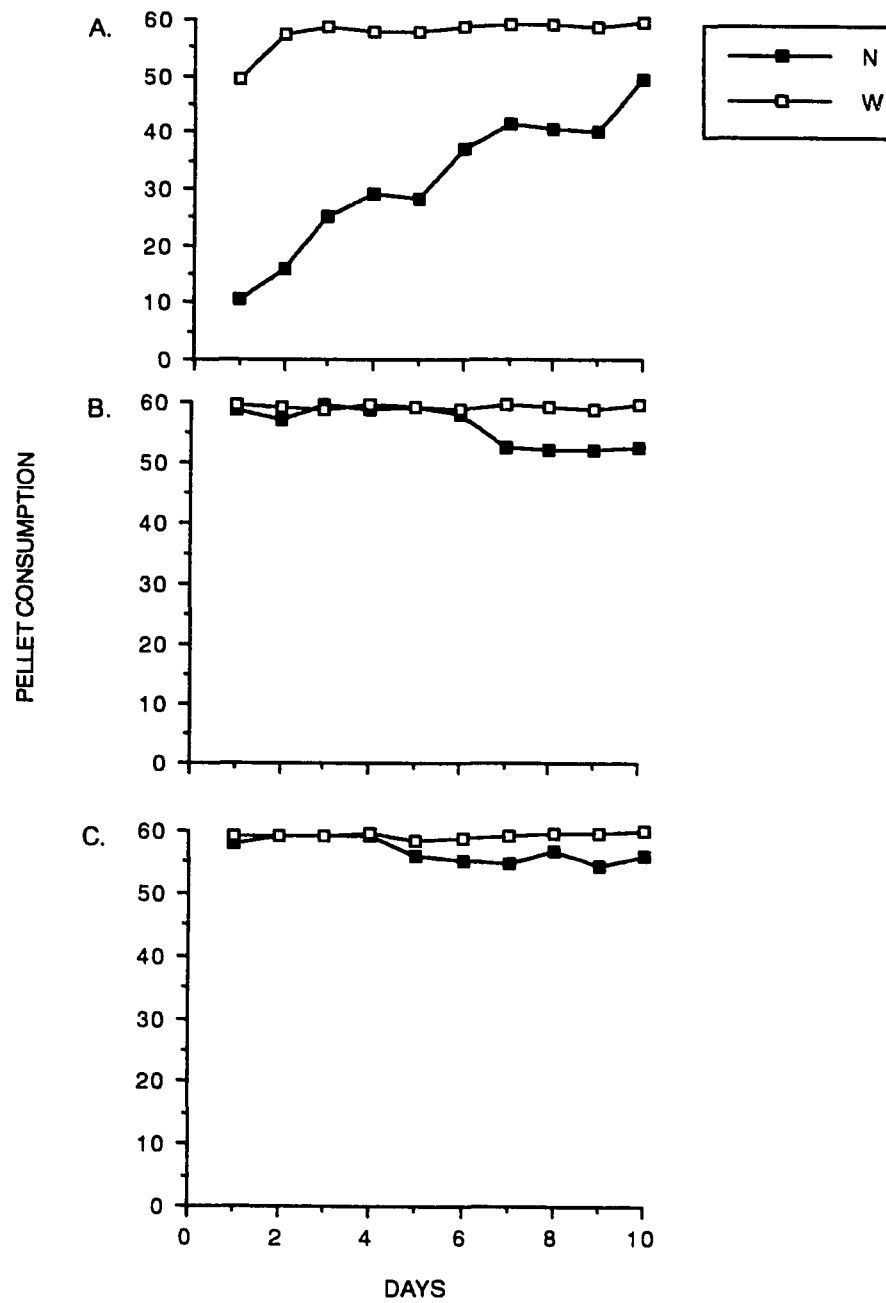


Fig. 5. Mean pellet consumption during acquisition for subjects in Groups 0N and 0W (A), Groups 10N and 10W (B), and Groups 20N and 20W (C).

60 presented). Pellet consumption increased over sessions, reaching a mean of 59.38 pellets on Day 10. Nonadapted subjects injected with naloxone consumed a mean of 10.5 pellets on Day 1. Pellet consumption gradually increased over sessions, reaching a mean of 49.63 pellets on Day 10. Mean pellet consumption on Days 1-5 ($\bar{H}[1] = 11.29$) and 6-10 ($\bar{H}[1] = 3.78$) for Group 0W was significantly greater than that of Group 0N.

On Day 1 of the adaptation period, distilled water-injected subjects given 10 days adaptation to the FT 60-sec schedule delivery prior to SIP acquisition (i.e., Group 10W) consumed a mean of 43.88 pellets and gradually increased to 59.25 pellets on Day 10. Pellet consumption remained at this level throughout the SIP acquisition phase (Panel B). Naloxone-injected subjects given 10 days adaptation (i.e., Group 10N) consumed a mean of 43.13 pellets on Day 1 of food adaptation and gradually increased to 58.75 pellets by Day 10. This level was maintained for the first six days of the SIP phase. For the remainder of this phase, mean pellet consumption decreased to 52.34 pellets, reflecting a change in the pellet consumption of a single subject. Mean pellet consumption between Groups 10W and 10N did not differ on Days 1-5 and 6-10 of the adaptation and acquisition phases.

On Day 1 of adaptation, distilled water-injected subjects given 20 days adaptation to pellet delivery prior to SIP acquisition (i.e., Group 20W) consumed a mean of 47.88

pellets and gradually increased to 59.13 pellets on Day 20. Pellet consumption remained at this level throughout SIP acquisition (Panel C). Naloxone-injected subjects given 20 days adaptation (i.e., Group 20N) consumed a mean of 42.50 pellets on Day 1 of food adaptation and gradually increased to 59.13 by Day 20. This level was maintained for the first five days of the SIP phase. For the remainder of this phase, mean pellet consumption decreased to 55.32 pellets, reflecting a change in the pellet consumption of a single subject. Mean pellet consumption between Groups 20N and 20W did not differ in statistical comparisons made on Days 1-5 and 16-20 of adaptation or on Days 1-5 and 6-10 of acquisition.

Among the three distilled water-treated groups, the mean number of pellets consumed on Days 1-5 during acquisition was significantly less for the nonadapted group (i.e., Groups 0W) than for the two adapted groups (i.e., Groups 10W and 20W; $H[1] = 10.77$ and 10.68 , respectively). On Days 6-10, the mean number of pellets consumed did not differ between subjects in Group 0W and in Group 10W, although the mean number was significantly less for subjects in Group 0W than for subjects in Group 20W ($H[1] = 5.27$). There were no significant differences between Groups 10W and 20W for either of these comparisons (i.e., Days 1-5 and 6-10).

Among the three naloxone-treated groups, the mean number of pellets consumed on Days 1-5 during acquisition

was significantly less for the nonadapted group (i.e., Group 0N) than for the adapted groups (i.e., Groups 10N and 20N; $H[1] = 11.32$ and 11.31 , respectively). On Days 6-10, the mean number of pellets consumed was significantly less for subjects in Group 0N than for subjects in Group 10N ($H[1] = 5.61$), but was not different between subjects in Group 0N and 20N or between subjects in Groups 10N and 20N.

CHAPTER IV

DISCUSSION

Consistent with the findings reported by Riley and Wetherington (1987), naloxone suppressed the acquisition of SIP in nonadapted animals (i.e., Group ON) as compared to nonadapted, distilled water-treated animals (i.e., Group OW). Specifically, naloxone markedly suppressed water consumption (Figure 1), bout probability (Figure 2), and the number of licks/bout (Figure 3). In addition, the postpellet temporal distribution of licking exhibited several disruptions in these animals. First, Group OW required three days to acquire a temporal distribution typical of SIP, whereas Group ON subjects did not display a typical SIP temporal distribution until Day 8. Second, Group ON displayed maximum lick rates that were suppressed relative to those of Group OW. Third, the occurrence of the maximal rate of licking in Bin 4 on Days 8 and 9 is in contrast to the temporal distribution of Group OW which contained maximal lick rates in Bins 2 and 3.

Although naloxone suppressed SIP acquisition in nonadapted animals, adaptation to the feeding schedule attenuated naloxone's suppressive effects on SIP acquisition, based on comparisons with respective control groups. Food

schedule adapted subjects receiving naloxone (i.e., Groups 10N and 20N) displayed less suppression of schedule-induced drinking than nonadapted, naloxone-treated animals (i.e., Group 0N). This attenuation of naloxone's suppressive effects was reflected in greater water consumption, bout probability, and number of licks/bout. In addition, Groups 10N and 20N displayed a typical SIP temporal distribution sooner than Group 0N and showed higher maximum lick rates than Group 0N. Interestingly, the length of adaptation (10 or 20 days) did not differentially affect this attenuation.

Although adaptation attenuated naloxone's suppressive effects, it did not eliminate them. For Groups 10N and 20N, both water consumption and bout probability were significantly below those of distilled water-treated control subjects. Furthermore, licking across the IPI for these subjects was characterized by a slower onset of maximum lick rates, overall lower lick rates, and more late interval licking than control subjects. On the other hand, naloxone failed to suppress the number of licks/bout in subjects adapted to the feeding schedule. Subjects in Group 10N were not significantly different from controls throughout acquisition, indicating that 10 days of adaptation are sufficient to eliminate naloxone's suppressive effects on licks/bout. Subjects in Group 20N made significantly more licks/bout than controls throughout the acquisition period, indicating that after 20 adaptation days naloxone produced a

facilitation of licks/bout. The failure of adaptation to eliminate the effects of naloxone on SIP, thus, is not due to reduced licks/bout, but rather reduced bout frequency.

The increase in licks/bout appears to be a compensation for the decrease in fluid intake or reduction in bout frequency. (If it is an attempt at conservation, however, the attempt was not successful in that there was only a partial attenuation of naloxone's suppressive effects.) The attempt by animals to conserve water intake by increasing the number of licks/bout is consistent with other work in SIP (Flory & O'Boyle, 1972; Freed & Mendelson, 1977; Gilbert, 1974; Wetherington & Riley, 1986). For example, when examining the temporal distribution of schedule-induced drinking when the opportunity to engage in a noninduced behavior, such as wheel running, was available, Wetherington and Riley (1986) demonstrated that the overall level of polydipsic drinking decreased when running was permitted. Specifically, licking was reduced in the second through sixth 10-sec intervals following pellet delivery, a period in which running was at its maximum. During the first 10-sec interval, however, there was either no change in licking or an actual increase in its frequency. The increase in the frequency of licking during this interval was interpreted by the authors as an attempt to defend a particular volume of water by changing the rate of licking. The parallel with

the present report suggests that conservation may be a general property of SIP.

Similar to its effects on polydipsic consumption, naloxone dramatically suppressed food consumption in non-adapted animals. However, the effects of adaptation on naloxone's suppression of feeding and drinking were markedly different. Whereas adaptation only partially attenuated naloxone's suppressive effects on SIP, it completely eliminated naloxone's suppressive effects on feeding. Throughout acquisition adapted, naloxone-treated subjects ate at control levels. That adapted subjects displayed a lower level of SIP while still eating at control levels indicates that naloxone's effects on feeding and drinking can be dissociated by adaptation to the feeding schedule. These findings also indicate that the suppressive effect of naloxone on the acquisition of SIP (Group ON; see also Riley & Wetherington, 1987) is not totally due to suppressed feeding.

That the suppression of the acquisition of SIP by naloxone is not totally due to the indirect effect of naloxone on feeding suggests that naloxone may be directly affecting polydipsia, an effect consistent with other reports demonstrating the suppression of drinking by naloxone in a variety of experimental conditions (see Cooper, 1982; Czech & Stein, 1980; Rowland, 1982). Given the general effects of naloxone on drinking (including SIP),

what remains to be determined is why naloxone has no effect on established SIP.

The relative insensitivity of established SIP to naloxone is consistent with other reports assessing the effects of various manipulations on established SIP. For example, Riley, Lotter, and Kulkosky (1979) demonstrated that established schedule-induced saccharin consumption was only marginally and temporarily affected by conditioned taste aversions (CTAs). Specifically, animals induced to drink saccharin by spaced food delivery were poisoned with lithium chloride (LiCl) following the schedule-induced saccharin consumption. Although schedule-induced drinking was reduced on the following exposure to saccharin, this aversion rapidly extinguished, an effect that is in marked contrast to the generally slow extinction of aversions tested under water deprivation or under ad-libitum feeding and drinking conditions (e.g., Grote & Brown, 1973; Riley, Hyson, Baker, & Kulkosky, 1980). Similar results on the resistance of established SIP to suppression have been reported with amphetamine (Yoburn & Glusman, 1982) and with water and saline preloads (Porter, Young, & Moeschel, 1982). Interestingly, each of the aforementioned manipulations readily suppresses SIP acquisition. That CTAs and other manipulations have been unable to markedly suppress established SIP suggests that once the behavior is reliably elicited, it is difficult to suppress. This possibility is

supported by Riley, Wetherington, Wachsman, Fishman, and Kautz (1988), who examined the effects of conditioned taste aversions on the specific components underlying schedule-induced consumption. They reported that the decrease in SIP by CTAs was effected primarily by a decrease in the number of licks/bout, particularly those licks occurring between 10 and 20 sec after pellet delivery. Bout initiation and licking immediately postpellet (i.e., within the first 10 sec following pellet delivery) were most resistant to suppression and appeared to be responsible for the relative insensitivity of established schedule-induced drinking to CTAs. Given that bout initiation is resistant to CTAs, these animals suppress fluid consumption by decreasing the number of licks/bout. This modifiability of the frequency of interpellet licking is consistent with the present data. In the present paper, during acquisition (before bout initiation was well established) naloxone suppressed SIP in adapted subjects by decreasing the number of bouts initiated. In turn, these subjects were able to compensate partially by increasing lick frequency when bouts were initiated. In the report of the effect of CTAs on SIP, once SIP was established and bout probability was high and resistant to suppression, animals modulated the amount of water consumed by varying the number of licks/bout. Thus, modifying the number of licks/bout seems to be the mechanism

in effecting changes in intake when manipulations disrupt SIP.

Given the differential effects of various manipulations on the acquisition and maintenance of SIP, it remains to be determined at which point SIP becomes insensitive to naloxone suppression. Preliminary data from this laboratory indicate that naloxone has no effect on SIP five days into acquisition. That bout probability is above 90% by day five of acquisition (present data; Riley & Wetherington, 1987) and that naloxone is unable to suppress SIP at this point (unpublished data) supports the idea that once the behavior is reliably elicited, it becomes highly resistant to suppression.

Although the focus of this study was the examination of the effects of naloxone on the acquisition of SIP in animals given prior adaptation to the feeding schedule, an additional effect of adaptation on SIP was observed. Specifically, adapted, distilled water-treated subjects (i.e., Groups 10W and 20W) displayed suppressed SIP as compared to nonadapted, distilled water-treated animals (i.e., Group 0W). The disruption of the development of SIP in rats adapted to the polydipsic feeding schedule is consistent with a recent study by Tang, Williams, and Falk (1988), which demonstrated that food-deprived rats given approximately 128 days exposure (2 hours/day) to a similar food pellet schedule as in the present study (i.e., FT 60-sec)

were subsequently retarded in the rate of acquisition and final level of SIP relative to animals maintained at 80% of their body weight for approximately 109 days in their living cages prior to SIP training. The present study further showed that these overall decreases in schedule-induced water consumption are associated with decreases in bout probability, licks/bout, and maximum lick rates within the IPI. Although the basis for these effects of adaptation are unknown, it is possibly due to the development of "superstitious" behaviors between pellet deliveries during the adaptation period (see Staddon & Simmelhag, 1971), which later disrupted the development of SIP during acquisition.

Interestingly, in this study adapted subjects displayed more rapid development of the postpellet temporal distribution characteristic of SIP than did the nonadapted subjects. That drinking and its temporal distribution can be differentially affected by adaptation is consistent with other reports showing a dissociation of the induction of a behavior and how that behavior is temporally distributed. Riley, Wetherington, Delamater, Peele, and Dacanay (1985), for example, reported that although wheel running was not induced by the spaced delivery of food, when running did occur in the interfood interval its distribution was an inverted-U-shaped function similar to that found in SIP and was similarly affected by variations in the interpellet intervals. Similarly, Wetherington and Riley (1985) noted

that although the spaced delivery of water did not induce food consumption, when eating was evident in the interfood interval, it too displayed an inverted-U-shaped function. The fact that drinking induced by pellet delivery and its temporal distribution can be differentially affected by adaptation (the present data) and that the temporal distributions of the behavior are present in the absence of induction suggest that the two can be dissociated (see Riley, Wetherington, Delamater, Peele, & Dacanay, 1985; Wetherington & Riley, 1985). Further, that the temporal distribution of behaviors occurs under schedules of spaced food even when no behaviors are induced suggests that the temporal modulating effect of the schedule is more fundamental than schedule induction (see Wetherington & Riley, 1985).

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dubiously permissible national sacrifice, and come to think of it as a transfer of authority. . . essential to the attainment of desirable results, a profitable investment in the good life.⁹³

As its prescriptions suggest, functionalism stands out as more than just an alternative to realism. It is a reaction away from realism because it involves a complete shift at the elementary level of assumptions. A functionalist simply has little use for *Homo homini lupus*. Where realists converse with Thucydides, Machiavelli, and Hobbes' shared cynicism, a functionalist reexpresses the fundamental optimism of Locke, Marx, and Kropotkin.⁹⁴ Contrast the implicit functionalist investment of trust in human potential for robust cooperation with what Stanley Hoffmann called the monotony of realism, a ". . . formalized ballet where the steps [of self-interested, balance of power, nation-state politics] fall into the same pattern over and over again, and which has no story to tell."⁹⁵ What is more, an increasingly large body of transdisciplinary literature continues to fortify functionalist claims of cooperative potential. Almost without exception, that entire literature - drawn from anthropology, economics, psychology, philosophy, sociology, and political theory - complements functionalism by arguing either man's natural cooperativeness or his potential to be so transformed.⁹⁶ Demonstration

⁹³ Claude, Swords Into Plowshares, 382, 383.

⁹⁴ The extent to which functionalists might depart from Marx's specific policy prescriptions - which of course are very few - is largely irrelevant. The point is the fundamental resonance of functionalist and Marxist views of human potential. Peotr Kropotkin, Mutual Aid: A Factor of Evolution (Boston: Porter Sargent, 1987), 223-261. Karl Marx, "Toward a Critique of Hegel's Philosophy of Right," in Early Texts, tr. and ed. David McLellan (Oxford: Basil Blackwell, 1971), 115-129. Karl Marx and Friedrich Engels, The German Ideology (New York: International, 1989), 42-57.

⁹⁵ Hoffmann, Contemporary Theory, 30, 35.

⁹⁶ Kenneth Boulding, Three Faces of Power (Newbury Park, California: Sage, 1989), 23-33. Alfie Kohn, No Contest: The Case Against Competition (Boston: Houghton Mifflin, 1986),

beyond doubt of the quality of human nature - whether benevolent or mischievous - is elusive. (Chapter Two argues that it is impossible). In

11-78. Ashley Montagu, ed., Learning Nonaggression (New York: Oxford University, 1978), 3-9. Steven Rosen and Walter Jones, The Logic of International Relations (Cambridge, Massachusetts: Winthrop, 1980), 426-463. Having previously touched upon some of the criticisms leveled against realism, I ought in fairness to do the same for functionalism. Neither review should be taken as complete.

Very little about the assumption that misery causes war is so self-evident that it might be taken for granted. In technical terms, there is no necessary causality between the dependent variable, war, and the independent variable, misery. There are numerous cases where war was entered into by states absent of marked misery. Both France and Prussia in 1870 were, relative to each's immediate past, quite well-off. The same is true of France, Germany, and even Russia in 1914, and the United States in 1917. For each country war followed. On the other hand, consider Zaire and the Philippines. Over the past thirty years, both have been systematically robbed, by their own regimes, of billions of dollars. Various forms of misery have been one consequence. Yet neither country has gone to war. Due to a faulty assumption about international relations, then, functionalism is compelled both to offer poor explanations for what has happened, as well as to suggest things that should be happening, but are not.

The second functionalist assumption carries an assumption of its own. To say that the state ought to be replaced as the principle agent of global relations involves the prior assumption that some alternative to the state indeed exists. Now certainly a non-state system is imaginable, even though it has been three-hundred and fifty years since the last widespread human experience with statelessness. Having conceived of an alternative, however, the functionalist must clarify: What, exactly, will persuade or coerce states to relinquish the sovereignty with which their very definition has been inextricably bound for so long? As Waltz writes in Theory of International Politics, "States are the units whose interactions form the structure of international political systems. They will long remain so. The death rate among states is remarkably low." (Waltz, Theory, 95). The functionalist response, never articulated particularly clearly, seems to be that transnational actors will take a route to power through "... poorly watched back doors. . . ." That is, states, having been persuaded over time to relinquish more and more of their prerogatives on seemingly unimportant issues, will suddenly find themselves confronted with a *fait accompli* when transnational agents, now with an arsenal of those gradually accumulated prerogatives, are finally positioned to coerce the end of the state. How unconvincing. Here functionalism seems completely to ignore the state's capacity to monitor its situation and act for its survival. To make the so-called back-door argument involves the rather arrogant assumption that functionalists - and presumably everybody else - can see developments to which everyone in the state is oblivious.

Finally, the happy consequences of individuals' - as opposed to states' - coming together is not at all self-evident. Functionalists argue that an inequitable distribution of power has engendered an unstable, unproductive international system. Yet there is every reason to believe that the universalization of transnational organizations will simply mean the replacement of inequity among states with inequity within organizations. As Ernst Haas writes in When Knowledge Is Power (page 57), "All organizations are characterized by major inequalities in power, however defined, among their members. Consequently, they are subject to rule by hegemonic states or hegemonic coalitions." Un-hierarchical civilizations do not exist. Equitable civilizations do not exist. In fact the very story of civilization is the story of individuals' coming together, some to labor, some to lead, some to ponder the stars.

See Claude, Swords Into Plowshares, 385-388. Durant, The Story of Philosophy, 7-23. Ernst Haas, When Knowledge is Power (Los Angeles: University of California, 1990), 56-58. Holsti, International Politics, 91-93. Robert Osgood and Robert Tucker, Force, Order, and Justice (Baltimore: John Hopkins University, 1967), 10-13, 30-34, 42-45, 267-269, 281-284. Kenneth Waltz, Theory of International Politics (Reading, Massachusetts: Addison-Wesley, 1979) 95, 96.

the absence of certainty, however, functionalism explores where cheerful assumptions might lead:

The power of nation-states is a complex mixture. . . The so-called realists, whose view of the world is frequently limited and unreal, tend to emphasize destructive and military power to the exclusion of other forms. . . which is a great mistake. . . Unfortunately, historians have been insensitive to the realities of integrative [that is, cooperative] power and hence its history remains largely to be written.⁹⁷

⁹⁷ Boulding, Three Faces, 50, 51. I call attention to Boulding's conception of integrative power because it represents an area of increasing interest to and promise for International Relations, particularly for the subdiscipline of Conflict Resolution. International Relations, largely as a result of the influence of positivism, has generally taken a linear-rational view of power. Two features of linear-rational thinking are notable here. First, linear-rational thought in International Relations mainly concerns the causes and effects of international activity. It presents power in particular (and however defined) in terms of zero-sum causes and effects; that is, power among states relates negatively. Any increase in the political power of one state signifies, *ipso facto*, a proportionate diminution in the power of states with which it interacts. This thinking would hold as well for diplomatic, military, even cultural power. A second feature of the linear-rational mindset - and this is decidedly expressive of positivist assumptions - is that the student is objective; that is, that the analyst is not affected by, and does not affect, subject matter. In contrast is "positive power," or Boulding's "integrative power." Boulding and others call attention not so much to the causes and effects related to power, but to power itself as a means. By this view peace, for example, is not an end of political activity, not an intermission from competition, but an ongoing means for the conduct of relations. When Boulding writes of integrative power, he aims at once to draw us away from the "us versus them" mindset with which realism is so thoroughly bound, and to offer instead a reconfigured power of "us." In practical terms this view might focus on the prospects for common security, say, rather than a traditional zero-sum conception of security. A second feature of the integrative view is its holism, or its involvement of student with subject. In the first place this obliges the student not only to diagnose but actively to evaluate: "We exercise judgment by the mere act of selecting one question instead of the other for analysis. Only when we focus on the world's substantive problems and not just the problems induced by one's own method of collecting and evaluating information, and only when we approach these problems not merely with the tools of the laboratory but also with a heightened sense of the values at stake, will we be able to see the resemblance among all of us: the fact that we are all - whether black or white, female or male, upper or lower class. . . - humans, and to appreciate our common fate." See Abdul Aziz Said, Concepts of International Politics (Unpublished manuscript for the Third Edition: The American University, 1991), 14. What is more, the holism of the integrative view "spills over" from the isolated study of world politics to the ethics of everyday life. Thus the view sees peace not only as a means for states but as a way of life for individuals. The obligation to care for the environment is one example; defense of human rights is another. As much as traditionalists in International Relations disparage what for them is the naivete of students of cooperative power, to the same extent the latter seem to redouble their adherence to the intellectual and ethical rightness of the integrative view.

For a study in the holistic implications of the integrative view, see Richard Falk, *et al.*, eds., Toward a Just World Order (Boulder: Westview, 1982), *passim*. The volume has great breadth; see its treatments of scientism; human rights; ecopolitics; demilitarization; nonviolent revolution. For personal transformation to the integrative mindset see Roger

In its own way, functionalism attempts to act out Boulding's unwritten story.

Realism and functionalism have helped International Relations advance far from the days when Hoffmann's "American Social Science" was just beginning. Both schools have their strong points, to be sure - realism's is probably its pragmatism; functionalism, its optimism. No theory, however, is beyond scrutiny; realism and functionalism are not exceptions. For all the information both provide about state behavior, they are also steeped in assumptions whose validity warrants a closer look. I take that look in the next chapter.

Walsh, Beyond Ego: Transpersonal Dimensions in Psychology (Los Angeles: Tarcher, 1980), 25-118, 196-260 *passim*. Also Chapter 5 on Explorations in R. B. J. Walker, One World, Many Worlds (Boulder: Rienner, 1988), 81-114. For the general integrative view with respect to world politics, see World Policy Institute, Peace and World Order Studies (New York: World Policy Institute, 1984), *passim*. Also Joseph Fahey and Richard Armstrong, eds., A Peace Reader (New York: Paulist, 1987), *passim*. A brief but instructive piece on environmental concerns is Wendell Berry, "Word and Flesh," Whole Earth Review Spring, 1990: 68-71. Finally, a call for a paradigm reconfigured toward integration - long before such calls were popular - is in Abdul Aziz Said, ed., Theory of International Relations (Englewood Cliffs: Prentice-Hall, 1968): 22-25.

CHAPTER TWO

PINS IN THE BALLOON:

Speculative Reason, Experiential Knowledge, and the Problems of Human Nature

. . .[A]ll statements about. . .nature are necessarily a verbalization of somebody's responses to that which evoked these responses. The nature of that which evoked them must always be an inference from the immediate datum. . . .All assertions about ultimate. . .nature [or] essence. . .are therefore unverifiable hypotheses. . . .¹

I.

Having in the previous chapter placed assumptions about human nature at the base of some international political theory, I argue in this chapter that neither speculative-rational nor experiential knowledge fortifies those assumptions.² That is not to say that

¹ George Lundberg, "The Postulates of Science and their Implications for Sociology," in Philosophy of the Social Sciences, ed. Maurice Natanson (New York: Random House, 1963), 41, 42, emphases deleted.

² If more formal language would help here, I prefer to draw from St. Thomas rather than Kant. For all the comprehensiveness and modernity of the latter's "pure reason" and "practical reason," the "speculative reason" and "practical reason" of the former are more easily understood and more pristine. For Thomas speculative reason

those assumptions are certainly wrong. It will be held, nevertheless, that human nature cannot be proven to exist, and that even granting its existence, its clear causal involvement in international activity cannot be demonstrated. Now if an assumption by definition is a statement sufficiently plausible so as to be accepted without proof as true, then the absence of plausibility suggests poor assumptions. Accordingly, Chapter Three will call for diminished attention in international theory to assumptions about human nature. In the meantime, Section II. below presents human nature as an essence that, as such, is impalpable. One can only speculatively, and not logically, claim its existence.³ In this connection the theories of Karl Popper and Ludwig Wittgenstein are instructive. Section III. reemphasizes human nature's arbitrary character by suggesting how even science, when it deals with human nature, engages in what in plain language is guesswork. Sigmund Freud's theory of human nature is an example

concerned necessity, or the logical consequence of statements such that the consequence could not be anything other than what it is. Symbolic logic and abstract mathematics epitomize speculative reason. On the other hand is practical reason with its concern for contingency. Practical reason is informed by a world-view with preferences based in experience. An example: "Hearing the alarm sound and fire engines approach, I chose (from among the various possibilities) to evacuate the building." Speculative reason and practical reason have separate categories of concern. The first involves "yes" and "no;" the second, "good" and "evil." We would not call it **good** that $1+1=2$; we would simply say, Yes, it is so. Contrariwise, in a burning building we seek out the **good** move, not the "yes." See Etienne Gilson, The Philosophy of St. Thomas Aquinas, tr. G. Elrington (New York: Arno, 1979), 221-256. For Thomas' own expression there are numerous English translations, of which Pegis' is the most respected. In the original Latin see, *inter alia*, Chapter 6 of the First Part in Sancti Thomae Aquinatis (St. Thomas Aquinas), Summa Theologica (Rome: Marietti, 1952), 620-713.

³ To avoid confusion, let it be understood that the use of "speculation" alone refers to the word's everyday meaning: conjecture. The phrase "speculative reason" or an obvious variant will always and only be used when referring to the Thomist concern, anticipatory of Kant's "pure reason," with necessary consequence. Since the two constructions are nearly opposite in meaning, some wariness is in order.

treated in detail. For all the scientific knowledge that informs Freud's thinking about man, Freud knew that, in drawing conclusions about human nature, he was making a speculative leap. Finally, Section IV. treats less abstract, more practical concerns. It is more or less a run-down of responses to the complaint, "So what if speculative reason cannot establish human nature. Look at the world around you. You can see it in your experiences." Implicit in this sentiment is the underlying belief that human nature takes expression in activity every day, all the time; more precisely: Human nature causes people and states to act as they do. In this connection I briefly treat James Madison and government, Karl Marx and society, and Alfred North Whitehead and culture. Two rebuttals here are especially damaging. First, the Residual Theory of Vilfredo Pareto argues that the involvement of ideology - "responses from immediate datum," roughly, for Lundberg in the opening quotation - compromises the naming with verisimilitude of root causes for social activity. Second, arguments implied by the first element in Kenneth Waltz's Three Images Theory casts serious doubt on the possibility of naming human nature as the root cause of international activity.

II.

The development of thought since Aristotle could. . .be summed up by saying that every discipline, as long as it used the Aristotelian method of definition, has remained arrested in a state of empty verbiage. . . .⁴

⁴ Karl Popper, The Open Society and Its Enemies (Princeton: Princeton University, 1966), 370.

Both Karl Popper and Ludwig Wittgenstein address the substance of definition. Popper contrasts essentialism and nominalism, or the idea, in the first case, that one ". . . must penetrate to the essence of things in order to explain them,"⁵ and, in the second, that one ". . . aim. . . at describing how a thing behaves. . . and especially whether there are any regularities in its behavior."⁶ Nominalism embraces function, then, while essentialism centers on ontology. Essentialism is exposed to a difficulty, though - perhaps an impossibility - of attempting to know what may be unknowable: essence, or universal.⁷ One implication is that human nature is indisposed to essential definition.

Essentialism as a practice encounters its greatest difficulty in the definition of terms that are themselves conceptual, as opposed to particular. Consider, as Popper does, the difference in the

⁵ *Ibid.*, 31. I share with Popper a preference for the term "essentialism" over "realism." The latter is somewhat ideological; I also do not wish to create confusion between the philosophical realism of Popper's discussion with Morgenthau's earlier political realism. See Karl Popper, The Poverty of Historicism (London: Routledge and Kegan Paul, 1961), 27. Section IV. of this chapter addresses informally the spirit if not the letter of the nominalist position. For a general treatment of the essentialist-nominalist controversy see Eacker, Problems of Metaphysics, 4-17. For a philosophical discussion see David Papinaeu, Reality and Representation (New York: Basil Blackwell, 1987), 1-23. For the debate between sociological realism and sociological nominalism see Steven Lukes, Essays in Social Theory (New York: Columbia University, 1977), 177-186. Werner Stark, The Fundamental Forms of Social Thought (New York: Fordham University, 1963), 17-29, 109-123.

⁶ Popper, The Open Society, 32.

⁷ Eacker, Problems of Metaphysics, 5. ". . . [T]he problem of essentialism, or universals, is whether there are any universals, or essences."

extents of doubt one might have as to the existence, on one hand, of "Alexander the Great," and, on the other, of "white:"

Every science uses. . .universal terms, such as. . . 'whiteness'. These are distinct from the sort of terms which we call singular. . .or individual. . .like 'Alexander the Great' . . .Over the nature of universal terms a long and sometimes bitter dispute raged between two parties. One held that universal terms differ from proper names only in being attached to a set or class of single things, rather than to just one single thing. The universal term 'white', for instance seemed to this party to be nothing but a label attached to a set of many different things - snowflakes, tablecloths, and swans, for instance. This is the doctrine of the nominalist party. . . .Essentialists [in contrast] deny that we first collect a group of single things and then label them 'white'; rather, they say, we call each single white thing 'white' on account of a certain intrinsic property that it shares with other white things, namely 'whiteness'. This property, denoted by the universal term, is regarded as an object which deserves investigation as much as the individual things themselves.⁸

Popper's main criticism of essentialism is its inconvensance, for him, with reason. He does grant the long history of essentialism, dating it to Plato and Aristotle. They determined ". . .the task of pure knowledge is the discovery of the hidden nature or Form or essence of things."⁹ Yet how, Popper complains, is one to penetrate to the essence of things? "All these methodological essentialists also agreed with Plato in holding that these essences may be discovered and discerned with the help of intellectual intuition

⁸ Popper, The Poverty of Historicism, 27, 28.

⁹ Popper, The Open Society, 31.

. . . .And a description of the essence of a thing they call a 'definition.'¹⁰ Here the problems lies. Popper sees pure intellectual intuition as more a contrivance than a possibility. Whatever intellectual intuition is, it is not, for him, reasonable. It is a heightened absurdity that Plato equated intellectual intuition entirely with the rational faculty. "Plato taught that we can grasp Ideas [that is, forms, essences] with the help of some kind of unerring intellectual intuition; that is to say, we visualize or look at them with our 'mental eye', a process which he conceived as analogous to seeing, but dependent **purely** on our intellect, and **excluding any element that depends on our senses.**"¹¹ It seems to follow from Popper's skepticism that an essential definition of human nature is at least elusive, and certainly not immediately given to reason. For one thing, it is difficult even to conceive of purely intellectual activity. Even the first principle, "A thing cannot be both itself and not itself," is only true because we have **seen** that a book cannot be a car. The only means we have to evaluate the truth of the procession of abstract-mathematical equations dealing with the statement, "A cannot be both A and not A" is the logic that derives from countless experiences with, say, books and cars. ". . . [B]etween us and the world [of reality] there is an intermediary, our senses; the world for us is not as it is but as it

¹⁰ Ibid., 31.

¹¹ Ibid., 372, emphasis added. Eacker reacts disparagingly to essentialism, making the jibe, "Thus, it appears that for both Plato and Aristotle we know the essence of a thing by means of intellectual intuition rather than sense experience because, to show the circularity of the position, we know the essences of things by intellectual intuition rather than sense experience; presumably, both of them knew that by means of intellectual intuition." Eacker, Problems, 9.

seems."¹² Yet it is exactly that experiential knowledge of which essentialism demands a denial. This would certainly puzzle Kant, for whom ". . . concerning knowledge strictly so called, the *a priori* principles of reason are valid only within the realm of sense-experience."¹³ With specific regard to human nature, the essentialist method seems to require, in effect, that we describe the essence of humanness without a glimpse at local human activity.

Ludwig Wittgenstein's critique, based on what might be called an antiarchetypical view, further complicates essentialist definition of human nature. It focuses not so much on the epistemological vehicles through which human nature might be understood, but on essences themselves, on the nature of nature. Even if experience were allowed to inform an essential definition, how are we to establish the parameters of a particular essence? From Part I of Philosophical Investigations:

Consider for example the proceedings that we call "games". I mean board games, card games, ball games, Olympic games, and so on. What is common to them

¹² Michael Donelan, Elements of International Political Theory (Oxford: Clarendon, 1990), 56.

¹³ Kant, Perpetual Peace, viii. "Facts for [Kant] are always the product of experience. . . ." See Williams, Kant's Political Philosophy, 167. Much of Kant's work was a reaction to Hume's extreme skepticism, but in some respects the two are at least superficially amenable: ". . . [O]bserve, said Hume, that we never perceive causes or laws; we perceive events and sequences, and infer causation and necessity; a law is not an eternal and necessary decree to which events are subjected, but merely a mental summary and shorthand of our kaleidoscopic experience. . . 'Law' is an observed custom in the sequence of events; but there is no 'necessity' in custom. Will Durant, The Story of Philosophy (Garden City, New York: Simon and Schuster, 1927), 281, original emphasis. Having likened Kant and Hume in this area of epistemology, I should acknowledge the latter's denial of *a priori* knowledge in contradistinction to Kant's acceptance in The Critique of Pure Reason.

all? Don't say: "There **must** be something common, or they would not be called 'games'" - but **look and see** whether there is anything common to all. For if you look at them you will not see something common to all but similarities, relationships, and a whole series of them that. . .[form] a complicated network of similarities overlapping and criss-crossing. . . .¹⁴

George Pritcher's encapsulation is simple but instructive: Is blue sugar, sugar?¹⁵ Wittgenstein's point is that what is often - sloppily - supposed to be a constitutionally consistent entity, may not be. Attach this concern to the essential theories of human nature, and a few questions arise: Is essence the same for fetus and corpse, paraplegic and ballerina, prince and pauper? There may not be human nature but human natures, variable and, in the extreme, antithetical. That of course is not easily reconciled with the traditional essentialist conception of definition. There is some irony to think that we normally engage in definition to order and clarify, yet for Wittgenstein, ". . .once we free ourselves from the belief in an essence corresponding to each word, we shall be well on the way toward freeing ourselves from at least some kinds of intellectual bewilderment."¹⁶

In adducing the appeal of essentialism to ". . .our craving for generality," Wittgenstein hints at the appeal of science. There is no scientific theory, after all, without generalizability. Freud for

¹⁴ Ludwig Wittgenstein, Philosophical Investigations (New York: Macmillan, 1968), 31, 32, original emphasis.

¹⁵ George Pritcher, The Philosophy of Wittgenstein (Englewood Cliffs: Prentice-Hall, 1964), 222.

¹⁶ Quoted in Ibid., 223.

example constructed psychoanalysis as a specific scientific theory among whose general applications was the lessening of social ills via individual awareness. Section III. concerns Freud's theory of human nature and its relation to psychoanalysis. I present the discussion with the aim of detailing some of the epistemological points that have been touched upon so far.

III.

There are variously scientific and speculative elements in Sigmund Freud's psychoanalytic thought. At the base of this thinking, acting as a foundation for theory-building, is a particular view of human nature. Freud derives this view through speculation (conjecture), not speculative reason. This is not a suggestion that either element, the speculative or scientific, is wholly isolable. It is testimony both of the major role of conjecture at the very heart of Freud's otherwise scientific thought and, more generally, of the conjecture *sine qua non* to theories of human nature, even ones that in some respects comport with scientific method. The next three subsections respectively base Freudian psychoanalysis in human nature, describe that nature, and argue its speculative character.

• • •

For Freud outward behavior is an indirect consequence of an inherent impulse. In his own language, the three components of personality are in operation when the id prompts the ego, which

itself engages the superego. That is, stimulation of an instinctual need or wish activates the id, a reflexive apparatus, to **seek** a resolution; the ego, a mental apparatus, **thinks** to satisfy the need; the superego **evaluates** the method of satisfaction. A "natural" drive for protection might prompt a homeowner to think of - or remember to, or recognize the need to - purchase a security device. The superego is in operation when he buys an electronic alarm rather than, say, a series of strange or tortuous booby traps. Freud calls the id's work "primary process" and the ego's "secondary process." (The idea of the superego came later in the development of Freud's thinking. The individual's inheritance of parental and other authoritative values constitutes the normative quality of the superego, the most sophisticated component of personality. Its relatively late formation contrasts with the early development [before ten years] of the ego and the inevitability of the id).

Freud's "psychic energy" enables the work of the id, ego, and superego. If energy is the ability to do work, Freud reasons, then the operation of personality must use an energy akin to any other kind. Further, if energy is able to change forms (from hydraulic to electric, for example), so must psychic energy be changable. Transfer - more accurately, transformation (from seek to think to evaluate) - of psychic energy occurs during the progression from primary to secondary processes, or from secondary to the work of the superego. Freud names this progression "object-cathexis" when it involves the id and the ego, and "ego-cathexis" when it links the secondary processes either to behavior, or indirectly to behavior via the superego. Similarly, "anti-cathexis" is resistance to some

component of the resolution of instinctual tension. Anti-cathexis might manifest in the homeowner's decision to have lunch (and thereby fulfill an immediate need) before purchasing his alarm system (in response to a less urgent need). Freud's name for cathetic interplay is "psychic determinism." His psychoanalysis goes on to treat the maladjustments that arise when cathetic interplay is faulty.¹⁷

Even a fragmentary description hints at the elaborateness of Freud's thought. It is plain that instincts are basic to that thought. The id, after all, is the source of all psychic energy.¹⁸ In turn, psychic-energetic fluidity is what makes dynamic psychology dynamic. From where do instincts themselves come?

"We do not know. . . ."¹⁹ Freudian psychology accepts instincts as primal, or impersonal.²⁰ That is, instincts predate the developments

¹⁷ See, *inter alia*, these works by Freud: New Introductory Lectures on Psycho-Analysis, tr. W. J. H. Sprott (New York: W. W. Norton, 1933), 82-112. "Psycho-Analysis and the Ascertaining of Truth in Courts of Law," vol. 2, Sigmund Freud: Collected Papers, tr. Joan Riviere (London: Hogarth, 1953), 15. "Instincts and their Vicissitudes (1915)," vol. 4, Collected Papers, (1956), 60-83. "Remarks Upon the theory and Practice of Dream-Interpretation," vol. 4, Collected Papers, tr. James Strachey (1956), 136-149. The Interpretation of Dreams, tr. James Strachey (New York: Basic Books, 1958), xvi-xviii, 550-621. The Ego and the Id, tr. Joan Riviere (New York: W. W. Norton, 1960), 9-29. See also Kurt Danziger, Constructing the Subject: Historical Origins of Psychological Research (New York: Cambridge University, 1990), 38.

¹⁸ Freud, The Ego and the Id, 42, 43.

¹⁹ Sigmund Freud, "On the Mechanism of Paranoia," vol. 3, Collected Papers, tr. Alix and James Strachey (1956), 461. Freud, "Instincts and their Vicissitudes (1915)," 66.

²⁰ Ibid., 67.

of individual personality, rationality, and morality.²¹ Instincts are essential or, in everyday language, part of human nature. What is more - and this will be reemphasized later, in final thoughts on Freud - for Freud there is nothing objectionable in this unknowing. What he calls abstraction, below, is nothing more than the assumptions prerequisite to theory-building:²²

The view is often defended that sciences should be built upon clear and sharply defined basal concepts. In actual fact no science, not even the most exact, begins with such definitions. The true beginning of scientific activity consists rather in describing phenomena and in proceeding to group, classify, and correlate them.²³ Even at the stage of description it is not possible to avoid certain abstract ideas, ideas derived from various sources. . . . [These ideas] necessarily possess some measure of uncertainty; there can be no question of any clear delineation of their content. . . . I am altogether doubtful whether work on psychological material will afford any decisive indication for the classification and distinction of instincts. Rather it would seem necessary to apply to this material certain definite assumptions in order to work upon it, and we could wish that these assumptions might be taken from some other branch of knowledge and transferred to psychology.²⁴

²¹ Freud, The Ego and the Id, 35-37. Also Freud, The Future of An Illusion, 42-49.

²² The key question, though, is the quality of the assumption. When I say, "That silhouette on the horizon is either a rock or a man," implicit in my statement is that the object is not **both** a rock and a man. Since absolutely everything in my experience warrants that assumption, the assumption is excellent, close to certitude. The statement therefore proceeds from strong assumptions. Let us revisit the question: How strong will be Freud's assumptions that man has a definite nature, and that its chief characteristic is mischievousness? See Celestine Bittle, Epistemology: Reality and the Mind (New York: Bruce, 1936), 20-25. A. C. Cotter, S.J., Logic and Epistemology (Boston: Stratford, 1938), 107-113.

²³ Here Freud seem to be calling for experiential epistemology, which is the subject of Section IV. of this chapter.

²⁴ Freud, "Instincts and their Vicissitudes (1915)," 60, 67.

The next paragraphs describe Freud's view of human nature, with attention to Freud's belief in man's natural hostility. This description is an artifice. It implies classifiability of human nature into primarily social components (for example, aggressiveness and distrust) and more physiological ones (such as the compulsion to quench thirst or satiate hunger). There is no reason to believe that, for Freud, the quenching of thirst is any more or less natural than aggressiveness. Of course, Freud himself classified instincts as either self-perpetuating and preservative (Eros) or destructive and deathly (Thanatos).²⁵

• • •

And in the middle of them, with filthy body, matted hair, and unwiped nose, Ralph wept for the end of innocence, the darkness of man's heart, and the fall through the air of the true, wise friend called Piggy.²⁶

William Golding's novel popularized the grim view of human nature shared by Sigmund Freud.²⁷ Civilization and Its Discontents contains Freud's estimate of natural man:

. . .[M]en are not gentle creatures who want to be loved, and who at the most can defend themselves if they are

²⁵ Freud, The Ego and the Id, 30-37. Sigmund Freud and Albert Einstein, Why War?, tr. Stuart Gilbert (Dijon: League of Nations, 1933), 16-25.

²⁶ William Golding, Lord of the Flies (New York: Capricorn, 1954), 186, 187.

²⁷ For Bettelheim it is not grim it all. See Bruno Bettelheim, Freud and Man's Soul (New York: Random House, 1982), 15.

attacked; they are, on the contrary, creatures among whose instinctual endowments is to be reckoned a powerful share of aggressiveness. As a result, their neighbor is. . .someone. . .to cause man pain, to torture and to kill him. *Homo homini lupus*. . .As a general rule this aggressiveness waits for some provocation[I]t also manifests itself spontaneously and reveals man as a savage to whom consideration toward his own kind is something alien.²⁸

But for the syntax and spelling, this could be mistaken for a passage from Leviathan. Hobbes, who provides the classic formulation of the dark human nature inherited by Freud, saw man with

. . .no account of Time; no Arts; no Letters; no Society; and which is worst of all, continual feare, and danger of violent death; And the life of man, solitary, poore, nasty, brutish, and short.²⁹

Hobbes' premise enables a standard political-theoretic understanding of state-formation as described in Chapter One: Let you and me establish and submit to a government whose chief mandate is adjudication of the conflicts that otherwise would lead to the destruction of us both. Freud adduces the same palliative power to civil society which, for him, is identical with

²⁸ Sigmund Freud, Civilization and Its Discontents, tr. James Strachey (New York: W. W. Norton, 1989), 68, 69.

²⁹ Hobbes, Leviathan, 113.

civilization:³⁰ "It seems. . .that every civilization must be built on coercion and the renunciation of instincts. . . ."31

For both Hobbes and Freud, gratification is the prime mover: "The fundamental narcissism of the individual directs him. . . .The members of the community, just like the porcupines in Schopenhauer's parable, come sufficiently close to get warm and not close enough to nettle each other."³² Especially for Freud, lusty men stay lusty, even in society; Freud never sighs in relief, as Hobbes' man, albeit tentatively, may:

Thus, under primitive conditions, it is superior force - brute violence - that lords it[self] everywhere. we know that in the course of evolution this state of things was modified, a path was traced that led away from violence to law. . . .Brute force is overcome by union. . . .Thus we may define right, that is, law, as the might of the community. Yet it, too, is nothing else than violence, quick to attack whatever individual stands in its path. . . .³³

For both Hobbes and Freud, peace is unnatural because, even in society, "Nothing is so completely at variance with human nature as. . .the ideal command to love one's neighbor as oneself."³⁴ Freud goes on to write that to ". . .love thine enemies. . ." is even more absurd.

³⁰ Freud, Future of an Illusion, 2, cf. x. Jean Roy, Hobbes and Freud, tr. Thomas Osler (Toronto: Canadian Philosophical Manuscripts, 1984), 1-12, 25-29.

³¹ Freud, Future of an Illusion, 3.

³² Roy, Hobbes and Freud, 69.

³³ Freud and Einstein, Why War?, 10, 11.

³⁴ Ilham Dilman, Freud and Human Nature (Oxford: Basil Blackwell, 1983), 141.

Then he thinks about it, and concludes, "At bottom it is the same thing."³⁵

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Now what are instincts and how many should be postulated? There is obviously a great opportunity here for arbitrary choice.³⁶

How does it happen that gifted men are so unable to agree on what they consider the basic facts of human nature? . . . One, or two. . . or forty - this looks suspicious. Facts are the given, accepted, apparent data of a problem. Perhaps instincts are the hypotheses.³⁷

What had Freud been doing when he drew such unfortunate conclusions about human nature? After all, he did not pull from nowhere a belief in the unsavory nature of man. The next paragraphs build the position that, yes, there is science (in the forms of sociology and psychology) in Freud's human nature, but the conception in the first place is based on philosophy in the form of speculation.³⁸

³⁵ Freud, Civilization and Its Discontents, 67. See Paul Roazen, Encountering Freud (New Brunswick: Transaction, 1990), 122.

³⁶ Freud, "Instincts and their Vicissitudes (1915)," 66.

³⁷ Ellsworth Faris, The Nature of Human Nature (Chicago: University of Chicago, 1976), 65.

³⁸ The equations, first of sociology and psychology with science, then of speculation with philosophy, may be objectionable. To the former Weber and even Durkheim (ultimately) would object. To the latter many philosophers would object, perhaps rationalists first. These objections are overly profound. I make the equations purely tentatively. I apply them only to this discussion of Freud, and only to expedite a

There is a sociology here. Freud's very undertaking to explore human nature begins for much the same reasons as Comte's or Durkheim's sociology, namely, to make social life more tenable. Yet, also like Comte and Durkheim, Freud did not have in mind radical social change. The aim, rather, is to enable the individual better to understand why he behaves as he does. Psychoanalysis saw self-awareness as a major step toward the tenability of society: "The purpose of Freud's lifelong struggle was to help us understand ourselves, so that we would no longer be propelled, by forces unknown to us, to live lives of discontent. . . ."39 Roazen goes further, eyeing the very best hope of psychoanalysis: ". . . the creation of a neutral technique capable of transforming human nature. . . ."40 Roazen's - or Freud's - is a sizable investment of trust in the ultimate power of knowledge. It is not, however, proof of sociology in Freud's approach to human nature. Whatever sociological **ends** may be served by understanding human nature are not adequate arguments for the unrelated proposition that Freud was using a scientific sociological method as he **came to understand** human nature.

On, then, to a second possibility: Freud's human nature is sociological because he drew his understanding of human nature

comparison of the knowledge possible from scientific endeavors with knowledge from philosophy (specifically, from epistemology, and still more specifically, from speculation). Regarding sociology see Max Weber, Basic Concepts in Sociology, tr. H. P. Secher (Westport: Greenwood, 1962), 29-31. Also Donald Campbell, Methodology and Epistemology for Social Science (Chicago: University of Chicago, 1988), viii-x.

³⁹ Bettelheim, Freud and Man's Soul, 15. Also Roazen, Encountering Freud, 121-124.

⁴⁰ Roazen, Encountering Freud, 62.

from an orderly examination of relevant precedents. In Why War?, Freud substantiates his view of human nature by pointing to the behavior of Mongol, Turk, and Roman societies.⁴¹ In Civilization and Its Discontents, he hints at detailed case studies of aggressive behavior in the names of everything from Germany to Rome, Christ, and Democracy.⁴²

Here the method of inquiry is right. The units of analysis are right. The conclusion is wrong. There is some distance - a gorge comes to mind - between the possible sociologically valid conclusion that destructiveness is a pervasive social force, and the quite more ambitious declaration that man is by nature violent. The second statement is not necessary from the first. There is a rather wild difference between the suggestion of a social law that men and women have different clothing habits, and the proposition that men and women **naturally** dress differently. Consider Brown's distinction between

. . . universal and probabilistic laws. . . . [The] practical interest for sociologists [should come] from the problem inferring a probabilistic causal relationship from a correlation of variables. A probabilistic law has the form $p(A,B)=r$, that is, the probability for a case of property B to be a case of property A is r, where r is the long term, but otherwise unspecified, frequency with which events of class A tend to appear, given reference class B. . . . But since the explanatory value of a correlation depends on our being able to rely on its holding true for unexamined populations, the

⁴¹ Freud and Einstein, Why War?, 62.

⁴² Freud, Civilization and Its Discontents, 72-112 *passim*.

question constantly arises whether a particular correlation can be so relied upon. . . .⁴³

In the simpler language of another methodologist:

But at some point in time [it is possible that] a point is reached at which the modifications in a system required to save the hypothesis become more implausible than the rejection of the hypothesis, and then the hypothesis is rejected.⁴⁴

If sociological science falls short of explaining what Freud is doing as he arrives at human nature, science in the form of psychology adds little. Certainly Freud is "doing" psychology - employing the methodology of psychology - at times in his inquiry about human nature. It is, for example, a psychological road that ends where man is, at bottom, singlemindedly self-seeking. For Freud this is a statement about gratification. Ilham Dilman paraphrases from Civilization and Its Discontents:

Whether he conforms to other people's opinions because he is afraid to displease them, does something to please someone he loves, or helps someone for whom he feels sorry, he does what he himself wants. He may be doing what someone else wants, but only because he wants [that is, **chooses**] to do it. Hence in all these cases he acts to satisfy himself.⁴⁵

⁴³ Robert Brown, Rules and Rule in Sociology (Chicago: Aldine, 1973), 95.

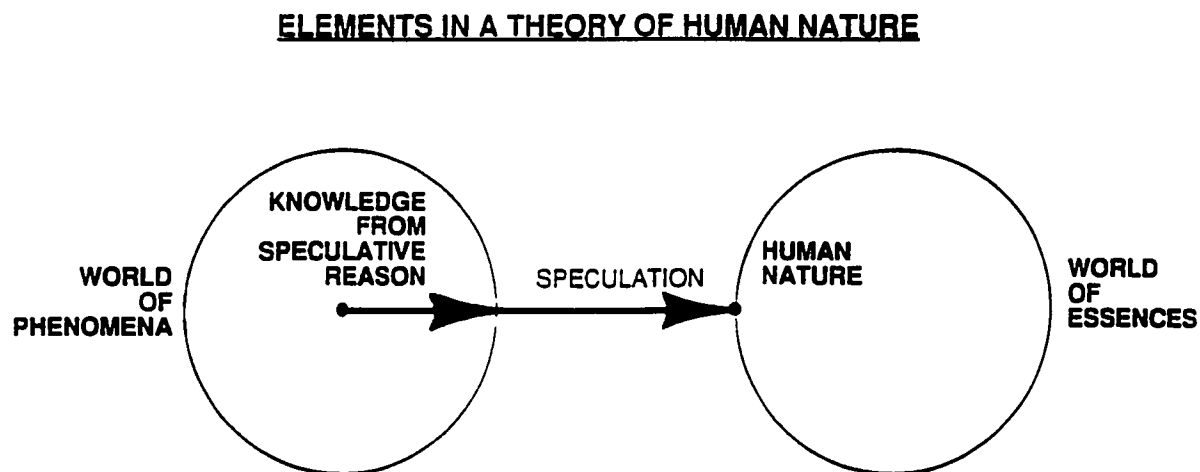
⁴⁴ Richard Bevan Braithwaite, Scientific Explanation: A Study of the Function of Theory, Probability, and Law in Science (Cambridge, England: Cambridge University, 1955), 20.

⁴⁵ Dilman, Freud and Human Nature, 131, 132.

For Freud, discussion of human nature must include - indeed center on - the matter of instincts. Psychology is informative on that matter in all its aspects, except the one crucial to a theory of human nature: "The study of the **sources** of instincts is outside the scope of psychology. . . ."46 Psychology may explain how man acts: instinctively. Yet that is no more a theory of human nature than the statement "He could buy the ring because he is wealthy" explains the man's wealth. What is needed is an instrument - a bridge - capable of joining two otherwise unconnected points: one marking the end of knowledge derived from speculative reason; the other beginning the world of essences.

Enter philosophy. The need for this bridge is an **epistemological need speculative** in character:

Illustration 3:



CONSTRUCTED BY THE AUTHOR

⁴⁶ Freud, "Instincts and their Vicissitudes (1915)," 66, emphasis added.

Philosophy performs a completing function for theories of human nature by making the purely speculative supposition that what one believes one knows about human nature (having reasoned about it in one's phenomenal world) is in fact one and the same with human nature, an essence. Now speculative character does not fatally damage a theory. It does place it far from the highest stratum of knowledge: certainty.

There is no reason to believe that any of this would have troubled Freud. His own early attraction to philosophy was persistent: "Freud took all of culture as his province. He was realizing the program he had outlined for himself in his youth: To solve some of the great riddles of human existence."⁴⁷ Freud did not stop being a scientist. He did know where science stopped. It amuses Bettelheim that this is often a surprise to Americans. Bettelheim explains that it was poor translations, not Freud the man, that was overscientific.⁴⁸ Freud himself was introspective, humanistic and, to borrow Freud's own word, a "midwife" of ideas and man's world.

IV.

Laws were made that, in fear thereof, human audacity might be held in check, that innocence might be safeguarded in the midst of wickedness, and that the dread of punishment might prevent the wicked from

⁴⁷ Peter Gay, "Freud: A Brief Life," in Civilization and Its Discontents, tr. James Strachey (New York: W. W. Norton, 1989), xxiii.

⁴⁸ Bettelheim, Freud and Man's Soul, 8-10.

doing harm.⁴⁹

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Maybe theory cannot prove human nature. Maybe that does not matter. If the two previous sections were somewhat abstruse from their attention to the world of ideas, then the next few paragraphs might lightheartedly be called the workingman's response: You do not **need** necessary reason to see human nature. You can see it in the world around you, in your human experience. As St. Thomas suggests in the opening quotation, government itself seems to exist to contain the effects of a troublesome human nature. I begin by making the general experiential argument, but I will turn, after, and argue against it. Like speculative reason, experience fails conclusively to explain human nature.

Government as palliative seems to be one recurrent theme. In The Federalist, for example, James Madison repeats Thomas' unfortunate view: "But what is government itself but the greatest of all reflections on human nature? If men were angels, no government would be necessary."⁵⁰ The very mandate of government is, by this view, adjudication of the bloody conflicts its absence would certainly welcome. People will be mischievous when left to their own devices. Redress of mischief, for Madison, is possible

⁴⁹ This begins the first article of Question 95 in the Second Part of the First Part of St. Thomas' Summa. For the full text see William Baumgarth and Richard Regan, eds., St. Thomas Aquinas: On Law, Morality, and Politics (Indianapolis: Hackett, 1988), 56, 57.

⁵⁰ From "Federalist No. 51" in James Madison *et al.*, The Federalist (Middletown, Connecticut: Wesleyan University, 1961), 349.

either by removing its causes or controlling its effects. For removing causes there are also two methods: removal of the liberty that enables mischievous behavior, or ". . .by giving to every citizen the same opinions, the same passions, and the same interests."⁵¹

Since the removal of liberty would be suicidally unwise, and since uniform passions and interests are impossible, the best to be hoped for is to control the effects of mischief. That control, exercised in the name of the ". . .aggregate interests of the community. . .,"

validates government. From this point of view, then, there must be foolishness in the position that denies human nature and its effects on behavior. After all, the entire nation-state system, centuries old and universal, of which everyone is a member, is itself a sardonic monument to the unsavory behavior to which man is predisposed.

The views of Karl Marx seem to bear-out the related proposition that society is itself an expression of human nature.⁵² This requires some backtracking. It is sometimes contended that for Marx there is no human nature. The sentiment more rightly expressed is that traditional conceptions of human nature amount, for Marx, to little more than the ideological contrivances of which Feuerbach and the Germans are guilty.⁵³ That is not to say, though, that Marx has no

⁵¹ From "No. 10," also in Madison, The Federalist, 58.

⁵² See Erich Fromm, Marx's Conception of Man (New York: Ungar, 1990), 24-30.

⁵³ For distortions of Marx, including his allegedly "soulless" man, see ibid., 1-7. Marx of course writes extensively against Feuerbach. Strong indictments of the historically-misdirected ideology of which the Germans were both a product and erstwhile perpetrators are in, *inter alia*, Karl Marx, "Critique of Feuerbach," in The Essential Writings, ed. F. Bender (Boulder: Westview, 1986), 152-158. "Toward A Critique of Hegel's Philosophy of Right," in Early Texts, tr. and ed. D. McLellan (Oxford: Basil Blackwell, 1971) 115-129. Louis Althusser, For Marx, tr. B. Brewster (New

statement of his own to make. For Marx human nature is the totality of social relations.⁵⁴ Man is *zoon politikon*, and so Marx can in all seriousness write in The Grundrisse about the ". . .social individual."⁵⁵ Marx communicates exactly this, Louis Dumont adds, when he writes, "'It is society that thinks in me.'"⁵⁶ As a most famous phrase suggests, there is nothing else but society: "Man is no abstract being squatting outside the world. Man is the world of man, the state, society."⁵⁷ The sin of German ideology is the exile of man from a world definitionally his. All social structures, from cultural preferences to the economic order, inform a social aggregation of which man is. Now it follows that human nature is mutable (since social structures are). Indeed it is human nature somehow recast - it can safely be speculated - that man will enjoy

York: Random House, 1969), 75-77. The Germans' greatest wrong was the misrepresentation of man's state. Only misplaced efforts put religion as the cause of alienation. Karl Marx and Friedrich Engels, The German Ideology (New York: International, 1989), 39-48. Religion is not the cause, but the **expression** of alienation. "Man makes religion, religion does not make man." The Germans, then, move counter to the task of history, the establishment of the ". . .truth of this world." A half-century before Durkheim, Marx demanded a Man-centered religion. See Raymond Aron, Main Currents in Sociological Thought, tr. Howard and Weaver (New York: Doubleday, 1989), 120.

⁵⁴ Marx, The German Ideology, 59.

⁵⁵ Karl Marx, The Grundrisse, tr. and ed. D. McLellan (New York: Harper and Row, 1980), 18. "Man acts as a function of what he thinks, and while he has up to a certain pot the ability to arrange his thoughts in his own way, to construct new categories, he does so starting from the categories which are given him by society. . . .[T]here is indeed a person, an individual and a unique experience, but it is in large part made up of common elements, and there is nothing destructive in recognizing this: [T]ear from yourself the social material and you are left with nothing more than the potentiality for personal organization." From Louis Dumont, Homo Hierarchicus, tr. M. Sainsbury (Chicago: University of Chicago, 1970), 6.

⁵⁶ Ibid., 5.

⁵⁷ Marx, "Toward a Critique," 115, 116, emphasis added.

after his self-deliverance from ideology and alienation. In the meantime, man's nature is all around him.⁵⁸

Finally, a third possibility (out of very many) comes from Whitehead who, like Marx, sees human nature in a fundamental characteristic that different times and places merely modify. For Marx that characteristic is productivity, for Whitehead, potentiality.⁵⁹ To get the sense of his position, we might begin with the search for human nature. Now how to do that? Perhaps the human animal is like other animals. There seems to be no great difficulty, the argument goes, in arriving at the nature of birds of flight, since they all act more or less the same. It seems sensible that the source of that sameness is their nature. The same conclusions might be drawn about snakes and elephants. What, then, about the human animal? The difficulty here is that one finds not sameness, but the opposite. To be sure, there are biological commonalities - eating, sleeping - but behaviorally, "They will

⁵⁸ To minimize doubt about what Marx seems to have in mind here, it might be useful to reemphasize his conception of man's socially derived nature, that is, his environmentalism. Marx is not concerned with man's essence *qua* abstraction but, rather, with how human nature is modified with each historical period of existence. Essence for Marx seems to equate with production ("A non-objective being is a non-being.") From "Philosophical Manuscripts," in Early Texts, tr. and ed. D. McLellan [Oxford: Basil Blackwell, 1971], 168.) The forms of and constraints upon production are functions of the various epochs.

⁵⁹ See, *inter alia*, Alfred North Whitehead, "of Education" and Other Essays (New York: Macmillan, 1929), 1-23. Adler's Chapter Eight is basically a reexpression of Whitehead in Mortimer Adler, Ten Philosophical Mistakes (New York: Macmillan, 1985), 156-166. More elaborate treatments are in Victor Lowe, Understanding Whitehead (Baltimore: Johns Hopkins, 1966), 32-58. Ewing Shahan, Whitehead's Theory of Experience (New York: Columbia University, 1950), 1-10. Johnson faults Whitehead for paying too little attention to inescapable victimization as a result of environmental pressures. A. H. Johnson, Whitehead's Philosophy of Civilization (New York: Dover, 1962), 168, 169.

differ in languages. . .in their dress. . .in their cuisines, in their customs and manners, in the organization of their families, in the institutions of their societies, in their beliefs, in their standards of conduct. . .in almost. . .everything.⁶⁰ For Whitehead, though, what appears to be the difficulty of differentness is actually the solution. If differentness is particularly human, then it is in the nature of humans to be somehow different. Humanness for Whitehead is the creative potential everywhere to be seen. He means exactly this when he writes of man, "It is not what they are at eighteen, it is what they become afterwards that matters."⁶¹ Little matters for elephants because they are the same at eighteen and will be the same at thirty-eight. Among men, however, there will be architects and demolitionists, athletes and philosophers, doctors and priests. That some people speak French and others Chinese seems to make them different, but the very capacity so to speak makes them closer to the same. By this view Whiteheadian education makes full sense: "Style, in its finest sense, is the last acquirement of the educated mind; it is also the most useful. It pervades the whole being."⁶² Here, then, seems to be a fine case for human nature, environmentally-evident. When Whitehead calls potentiality the Category of the Ultimate, he means that it is the basic feature of humanity. With Whitehead, as with Marx, the only constraint on the

⁶⁰ Adler, Ten Philosophical Mistakes, 159.

⁶¹ Whitehead, "Aims of Education", 1.

⁶² Ibid., 19.

visibility of human nature is the extent of what we can see around us.

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Each of the three views presented seems at least initially to persuade. The key word is "initially," though; in fact not Madison, Marx, or Whitehead withstands serious scrutiny. They are an odd couple to be sure, but Madison and Marx will stand or fall together, as the external similarity of their positions suggests. I use Pareto's Residue Theory to argue against both portrayals of experientially-clarified human nature. As for the Whiteheadian concept of potentiality, I accept its possibility, but argue, drawing from Waltz, its practical uselessness.

One of the main concerns of Vilfredo Pareto's sociology is a critique of non-logical thinking disguised as logic.⁶³ In fact it is to such a critique that all of Volume One - a full 500 pages - of the massive Treatise on General Sociology is devoted.⁶⁴ The point, as

⁶³ Pareto directs much of his criticism at sociologists themselves, even though the discipline was quite new in Pareto's day. Emile Durkheim did not become the first professor of sociology until 1893. See George Ritzer, Sociological Theory (New York: Knopf, 1988), 72, 73. For Pareto's critique see Vilfredo Pareto, Sociological Writings, tr. D. Mirfin (New York: Praeger, 1966), 183-188. Non-logic is not the same as illogic. Illogic is reason certainly, perceivably counter to logic. To pick up the phone when the doorbell rings is illogical. Non-logic is part of the process of logicization, or reasoning according to the perceived needs and preferences of a particular individual's world-view. A woman walking down a lonely road at night with her child might try to quell the child's fears by saying, Everything will be all right. The statement has no objective logical content, but neither is it outwardly counter-logical. Rather, it is part of a subjective reasoning that for Pareto is non-logic. The extent of the ideology involved in an action is the extent to which the objective (purely logical) ends and means of action differ from the subjective (non-logical) ends and means. See Pareto, Sociological Writings, 193-214.

Raymond Aron puts it, is that "Man as seen by Pareto is at the same time both unreasoning and reasoning. Men rarely behave in a logical manner, but they always try to convince their fellows that they do. . . .And **society** is the prototype of the confused, ambiguous concept."⁶⁵ Now man will often mistake his non-logic for clear thinking. That is, he is not necessarily duplicitous in asserting the logic of his position, though Pareto does not put disingenuity past him. (Pareto was no philanthropist and, unsurprisingly, did not see others as such). The motivation for a logical claim is clear: People will more readily accept as true what one has to say, and accept as right what one does. As for the chief complication to clear thinking, Pareto names what for philosophers is ideology.⁶⁶ Pareto deals with ideology in his analysis of action. This analysis addresses the epistemological question, Is what appears to explain activity necessarily the explanation? Pareto's Residue Theory argues, no. The theory elaborates the perverting effect on explanation of intervening variables. Pareto focuses on three terms. An **action** is a deed. A **residue** is a constant motive, a real causal factor. "Nature" is a residue. Residues tend to defy measure. A **derivation** is an illusory factor - an intervening variable - that **appears** to have causal quality. Derivatives are ideological; they suggest unreal relationships. Consider Aron's example of climatic activity. The

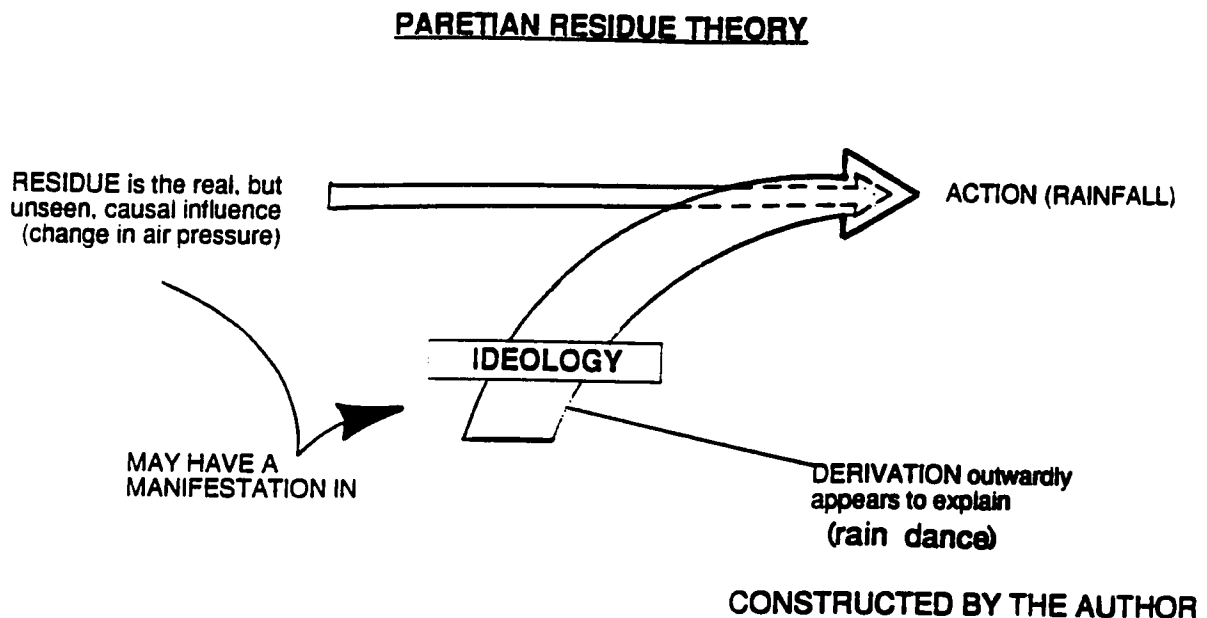
⁶⁴ Vilfredo Pareto, On Non-Logic, vol. 1 of The Mind and Society: Treatise on General Sociology, 4 vols., tr. A. Bongiorno and A. Livingston (New York: Harcourt Brace Jovanovich, 1935), 1-497 *passim*.

⁶⁵ Aron, Main Currents, 119, 120, original emphasis.

⁶⁶ I call ideological that thought which is un-resonant with objective reality because of its overdependence on the particular world-view of the thinker.

action is rainfall. The residue is a change in air pressure. A derivation might be, say, the rain dance performed by a tribal chieftain. The action is itself. The residual cause is the real cause. The derivative cause is an illusory, ideological "cause":

Illustration 4:



Having laid-out Pareto's general scheme, it now remains to be seen what sort of damage his theory might do to the argument for experiential human nature. The answer is that human nature becomes an ideological concept to which reason compels no more attention than to the mother's. Everything will be alright. Human nature may be little more than a catch-phrase for expediting social theory; the term has no subjective meaning. In contrast to, say, a book which, if used to hold open a window, would continue to be a book, human nature is no more than what Madison's or Marx's - or

Johnny Carson's or my eight-year-old nephew's - particular world-views want it to be. This requires a slower treatment.

Human activity is different from non-human activity. Returning to Aron's story about the rainfall, it is reasonably clear that, despite the chieftain's claims, means exist through which it might be determined what is almost certainly the objective efficient cause of rain. It follows that it is possible to determine the extent to which the chieftain's claim of causal efficiency is ideological - derivative and not residual. Now consider the case of human activity. A young boy takes note of a sign announcing a reward for the return of a wealthy citizen's lost dog. Spotting the dog along a dangerous road, the boy scoops it up and returns home. His mother asks, "Why did you rescue the dog?" "I thought it would be the right thing to do," comes the response. In this case, there are no means through which reason might ascertain the quality - ambitious and greedy, or charitable and benevolent - of the boy's action. The mother is left only with her world-view - particularly her view of the boy - as a basis for judgment. Now a world-view is definitionally ideological to at least a small extent.⁶⁷ Not to agree would be equivalent to positing that a person can be purely objective in thought and deed. Finally, then, the boy's action is caused by nothing more or less than what the mother chooses to make its cause.

⁶⁷ Note how the mother engages in logicization. If, for example, she sees the boy as benevolent, she engages in reasoning that is not *per se* counter to logic, but which has no strictly logical basis.

It is possible now to return to the larger question of a Paretian response to experiential human nature. For Madison and Marx, man's activity is an expression of his nature. Pareto's response - and in it he is unmistakably Kantian - is that man's activity is filtered through individuals' world-views in such a way that the activity has a changed meaning.⁶⁸ The change may take the form of making a hero out of a little boy, or in creating collectivities such as art, good, and human nature. There is no such thing, for Pareto, as an immaculate interpretation of human activity. Interpretation leaves spots in the form of ideological, therefore non-logical, judgments. In short, for Pareto, human activity does not explain human nature. Human nature, which is by its own nature residual, is only to be interpreted through a filter already tainted by ideology.

Pareto seems to repudiate human nature when the endeavor to define it is contaminated by individuals' non-logical world-views. Is that, though, a complete dissuasion from the argument for experience? It is not. For the exhortation, "You can see it all around you" is addressed not to you, singular, but to you, all of you. That is, from the appeal to experience depends the challenge for **everyone** to look all around and agree as to "facts" of human nature. Now that is not the same as an individual's circumspection. The one - as discussed - is non-logical; the other is not only neither non-logical nor illogical, but it is the same "logico-experimental" (that is, logical) scientific inference for which Pareto himself calls, but now

⁶⁸ I allude to the transcendental esthetic in The Critique of Pure Reason. See Durant, The Story of Philosophy, 289-294.

applied to a human subject. If two-thousand people, then another two-thousand and two-thousand more, all draw, based on their experiences, the same conclusions about human characteristic X, then that is qualitatively different, the experiential argument would aver, from the mother's conclusions about the little boy. The mother's finding is highly particularized. If, on the other hand, six thousand people come to one conclusion, unless they have **all** made the same mistake - in defense of Pareto, a likelihood; witness the Third Reich, with thousands of thousands - then perhaps their thinking indeed had in it the same logic whose popular absence Pareto so laments.⁶⁹ So now, having denied on Paretian grounds experiential utility in the case of individual and small-group experiences, it remains to address the case of large-group experiences. Of those I do not deny the possibility, only the usefulness, the demonstrable determinacy. For support I draw from the theory of Waltz's First Image in Man, the State, and War. I argue that the implications of Waltz's argument at the same time undermine the usefulness of Whitehead's potentialities.

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Waltz's major claim to fame in International Relations is his theory of Three Images.⁷⁰ These are three conceptual frameworks

⁶⁹ Wesley Salmon, Scientific Explanation and the Causal Structure of the World (Princeton: Princeton University, 1984), 11-20. Wesley Salmon, The Foundations of Scientific Inference (Pittsburgh: University of Pittsburgh, 1967), 12-21.

⁷⁰ Kenneth Waltz, Man, the State, and War (New York: Columbia University, 1959), *passim*.

designed to help students distinguish the various components of international political activity, particularly war. The First Image deals with individual persons and how war may be interpreted as an extension of human behavior. It is in this connection that Waltz makes a warning: In looking at individuals, it is sometimes tempting to compare and contrast what activity is particular to their personalities, and what activity is an expression of human nature. Be careful, though, in ascribing causal efficiency to the latter. If human nature causes one person to act benevolently, and another (or even the same person) to act with malice, then human nature, however defined, is not a particularly helpful causal term:

But the importance of human nature as a factor in the analysis of social events is reduced by the fact that the same nature, however defined, has to explain an infinite variety of social events. Anyone can "prove" that man is bad simply by pointing to evidence of his viciousness. . . . [But w]hat about the counterevidence provided by acts of charity, love, and self-sacrifice? To say, then, that certain things happen because men are stupid or bad is a hypothesis that is accepted or rejected according to the mood of the writer. It is a statement that evidence cannot prove or disprove, for what we make of the evidence depends on the theory we hold.⁷¹

Waltz's remark is a practical interpretation of an abstract truth: If an independent variable X (human nature) affects Y (competitive behavior) and -Y (cooperative behavior), then the independent variable has a contingent, not a necessary, causal relationship with the dependent variable, behavior. This truth argues against

⁷¹ Waltz, Man, the State, and War, 27, 28.

behavioral-experiential ascriptions to human nature in the same way that it argues against the statement, Climate causes draught. The notion correctly stated is that both draught and flooding are manifestations of climate, in whose nature neither draught nor flooding exists alone. Similarly, the existence of both cooperation and competition, in individual lives and in global political life, suggests that neither behavior is exclusively natural. Human nature is demonstrably prone to neither. The notion of potentiality, relatedly, fails clearly to demonstrate a quality of human nature. The conception provides as much information as the statement, Man may cooperate or compete, or It may be rainy or sunny.

Waltz's warning answers Madison, Marx, and Whitehead. To the first and second he might respond, While society and social relations may be expressions of human nature, those expressions take a multiplicity of forms, from extreme love to bitter hatred. Some forms may be somehow more impressive in their expression, but in that conspicuousness alternatives do not disappear. One man's bloody murder of another does not mean the end of charity in that same society. Both murders and charity continue. We might answer Whitehead in a similar manner, since from his on focus potentiality we learn little more than that there may be a murder tomorrow, or that an old woman might drop a coin in the church poorbox - or both.

CHAPTER THREE

THE EXISTENTIAL ALTERNATIVE:

Men and States, Choice and Responsibility

. . . [T]he question of the reasonableness of a belief. . . is that of the validity of. . . the premise.¹

I.

To have succeeded in their purpose, Chapters One and Two must have compelled a main question by now: If international political theory is built in large part on conceptions of human nature, and if those conceptions are demonstrably problematic, what alternatives might replace human nature as the starting point for theory in International Relations? This chapter tries for an answer: International relations ought to be conceptualized roughly as existentialists conceptualize man. Primary attention ought to be paid to the concepts of choice and responsibility. The concept of choice is the most appropriate tool for the **description** of international behavior. The concept of responsibility is a tool for

¹ Braithwaite, Scientific Explanation, 278.

the **evaluation** of behavior in what I call Existential International Relations (EIR). I should slow down here and specify more precisely what I do and do not mean. First, I use the word "roughly" to indicate that parts and not all of existential theory should be absorbed into international political theory. Some traditional existentialist precepts would be more harmful than helpful to theory in International Relations. Others would simply make no sense in the context of world politics. The whole point of Heideggerian *Dasein*, for example, is that man *qua* man has a unique capacity to identify with human ontology, to use human being as a window through which to understand Human Being.² There are, however, a few recurring, fundamental themes in existentialism, and those - particularly choice as the font of behavior and responsibility as its ethics - I consider to be of potentially great help. Another reason I use "roughly" is to acknowledge the vastly different interpretations to which existentialism is disposed.³ Camus, for example, consistently explored existentialist themes in an unmistakably existentialist manner. He closely associated with Sartre for years. Yet he denied that he even was an existentialist. Heidegger made the same denial, which Breisach refuses to accept.⁴ It is not nuances to

² Martin Heidegger, Being and Time, tr. J. Macquarrie and E. Robinson (Oxford: Basil Blackwell, 1978), 32, 33.

³ See, *inter alia*, Ernst Breisach, Modern Existentialism (New York: Grove, 1962), 4: "Nobody has ever yet nor will ever put down 'the' tenets of existentialism. . . . Even the word. . . itself must be used with great caution, since it refers not to a rigid set of propositions, but rather to a number of themes which recur. . . ."

⁴ Germaine Bree, Camus and Sartre (New York: Delacorte, 1972), 1-13. Breisach, Modern Existentialism, 79.

which I propose to give attention, but to central elements necessarily prior to nuance. I generally have Sartrean existentialism in mind.

The first three parts of Section 2 are devoted to a clarification of what International Relations theory might borrow from existentialism, and why. The first subsection borrows an existentialist assumption; the second, a descriptive tool; the third, an ethics. As this brief sketch suggests, the discussion will draw on the domestic analogy of Chapter 1. That does not mean that I have overcome the misgivings, alluded to earlier, about its internal validity.

I also do not mean to "throw out the baby with the bathwater." That is, the fact that existing theories of international relations proceed from possibly-misconceived assumptions is not *per se* a reason to discard the theories altogether.⁵ Part of the reason that realists assume a hostile international environment is that very often the international environment warrants that assumption. Flimsy assumptions entitle diminished acceptance, not total repudiation, of the theories to which they give rise.⁶ Accordingly, I conclude in Section 3 by remarking on some of the strengths and

⁵ The existence of a false assumption does not logically necessitate a false conclusion. "If the antecedent is false, the conclusion may be true or false." See Cotter, S.J., Logic and Epistemology, 39. The conclusion may simply proceed from an assumption other than the (wrong) one named. This thesis, viewed one way, is a search for good assumptions.

⁶ They entitle diminished acceptance or, on the flipside, they compel more severe scrutiny.

weaknesses of EIR relative to preexisting international political theory.

II.

The elements of theory - premises, tools for description, and prescriptions, for example - are functionally and qualitatively distinct. As theories proceed from premises to prescriptions, they become more perfect. I mean perfect not in the everyday sense of flawless, but in the philosophical and grammatical senses of complete. An oak, St. Thomas tells us, is more perfect than an acorn. EIR, as a new theory, is hardly perfect (in any sense of the word). It builds, though, from an appropriate major assumption: Choice is the only natural behavioral characteristic of men and states.⁷ It will follow, later, that the descriptive tool of EIR is choice. States are rightly described by the choices they make. With that it follows in turn that responsibility, Sartre's "authenticity," roughly, can become the ethical obligation of states.

⁷ I write "major" assumption to acknowledge the fact that innumerable other (minor) assumptions are implicit in this and every subject. A student does not arrive in class and wonder whether he should take a student's seat or the teacher's seat. An assumption, too self-evident even to treat consciously, directs him to the former. Likewise, here there are many unspoken assumptions. I assume that states exist, for example, and that their behavior is given to analysis. Super-obvious assumptions do not merit elaboration, but sometimes - such as now, I think - there is some use in merely recognizing their existence. Self-awareness is desirable to even the most innocent presumptuousness.

I write of "behavioral" characteristics to indicate non-biological ones. When Freud deals with human nature, he discusses primarily how people act, not the facts that all humans have, say, lungs, or that they get thirsty. Similarly, it is of course a characteristic of states to occupy land and touch generally discernible borders. I am not so much concerned with the constitutional criteria of statehood as with the behavioral one. For Freud, lungs were still natural human characteristics, though, and for me so is a state's occupation of land.

The only natural behavioral tendency of men and states is the performance of choice. This, not realism's competitiveness or functionalism's cooperativeness, is the nature of the state. Cooperation and competition are variable **choices**. I render this view of states and choice, through the domestic analogy, from the Sartrean conception of man and choice. To accept this rendering is nothing more than to accept the concept of sovereignty, for what is a sovereign state but a Godless man:

"Man defines himself by his project." In other words, we each makes ourselves what we are by what we do. No one has any **essence**. A man's being is the history of his achievements. . . . Consider the example of [No Exit] [T]he male protagonist Garcin tries to maintain that he has a noble and courageous nature in spite of the fact that he has done cowardly deeds. . . . Ines tells Garcin that a man has no nature apart from his actions; his actions define him, so that a man whose behavior is cowardly is a coward. . . . "You are nothing other than your life. . . ."⁸

Man has no nature, for Sartre, because there is no God to order nature. Sartre's nonexistent God is based on three arguments: ". . . the intrinsic contradiction of the notion of God⁹, the impossibility of Creation, and the genetic explanation of the idea of God. . . . In each case, **the problem of God discloses itself as the problem of human nature as well.**"¹⁰ It is not necessary to

⁸ Maurice Cranston, The Quintessence of Sartreism (Montreal: Harvest House, 1969), 29, 39, 40, original emphasis.

⁹ For Sartre God must be, but cannot be, an infinite cause-in-itself.

¹⁰ James Collins, The Existentialists: A Critical Study (Chicago: Henry Regnery, 1952), 65, emphasis added.

detail Sartre's thetic complaints. For Sartre, God is irrelevant to choice in the sense that He does not reveal the correctness of certain choices over others. Man has the same knowledge with and without Him.¹¹ Rather I should focus on a human world unordered by God, and an international world characterized by anarchy. For St. Thomas, God-given human reason is the ". . . rule and measure. . ." of behavior. With Sartre's removal of God, man is left to figure his way around an unordered world. Now is this a reasonable metaphor for the international situation? It seems to be, since the only global order is the one imposed by states. International Relations has traditionally accepted this:

The history of international politics does not tell us conclusively whether states in the future will be up to the task of **establishing** a tolerable order. . .but. . .the whole record of man's political life manifests a propensity for order. . . .Among modern states. . .the propensity [to order] is. . .more consciously developedIt is more conscious in that the conditions of world order in a rapidly changing environment must depend less on custom and more on deliberately contrived restraints, while the idea of world order must be more explicitly rationalized.¹²

¹¹ He recognizes that his thetic complaints are arbitrary and subjective in *Ibid.*, 64. Also Jean-Paul Sartre, "Existentialism," in *The Norton Reader*, eds. A. Eastman *et al.* (New York: W. W. Norton, 1984), 1195-1197. For Kierkegaard, the tragedy of life is that it must be lived forward, but the correctness of choices is clear only looking backward.

¹² Osgood and Tucker, *Force, Order, and Justice*, 32, 33, emphasis added.

Men order their lives as states order international life. A preëxisting natural order characterizes neither case. This is what Sartre means when he writes

Man is nothing else but what he makes of himself. . . . Subjectivism means, on the one hand, that an individual chooses and makes himself; and, on the other, that it is impossible for man to transcend human subjectivity.¹³

If we can accept the propensity to order, we might accept the inevitability of choice, since ordering is choice manifested in a predictable motif. Still, Chapter 2 presented criteria against which many traditional conceptions of human nature did not obtain. If choice is to be accepted as the behavioral characteristic of man and state, it should be held to, and must be shown to satisfy, both the speculative-rational and experiential criteria used earlier. First, the criterion of speculative reason (that is, the area of necessary consequence): Chapter 2 argued that the quality, or even the existence, of essence cannot be certainly proven. In the absence of certainty, what might be said for naming choice as the characteristic trait of man? With a few prior assumptions, there seems to be a high sensibility to this position. If we can accept that man exists, and if we can accept that to be is to do (and one need not accept either), then it follows that choice is inseparable from existence. How so? There are physical and intellectual constraints (among others) on doing. One might lift a rock or paint a painting or read a book, but one does not do all at once. To do, then, involves the

¹³ Sartre, "Existentialism," 1193.

choice of what is to be done. If there is no being without doing (as one of the assumptions above postulates), and if there is no doing without choosing (as I have demonstrated), then choosing is incident to being. No formidable obstacles appear in projecting this conception, through the domestic analogy, onto states. States are; they do; they choose. The three phenomena appear to be bound into humanness and statehood.

A second earlier criterion questioned the extent to which conceptions of human nature bear-out in experience. The conception of natural human competitiveness sometimes did and sometimes did not. Similarly, states were sometimes cooperative and sometimes not. Since Whiteheadian potentiality effectively suggested nothing more than the possibility of cooperativeness or competitiveness, of fecundity or impotence, of clumsiness or grace, I similarly doubted its usefulness. Now I present the notion of choice as the natural characteristic of men. In so doing I take it upon myself to demonstrate, in the first place, that the notion of choice bears-out in experience and, next, that it is a useful notion. That experience manifests choice is clear enough. The very fact that men and states do particular things, and not **all** things, is the most immediate evidence. Man either runs or walks. A state either does or does not recognize another.¹⁴ One ground for skepticism is the notion of the

¹⁴ I do not mean to ignore paradox. A paradox, strictly understood, is a statement that is both true and untrue at the same time. (Paradoxes are definitionally counterlogical. Recall from Chapter 2 that A cannot be both itself and not itself). We might reinterpret paradox to characterize behavior such as this: The recent encounter of the United States with Iraq included all the behavioral characteristics of war. There was, however, no declaration of war. So the encounter both was and was not a war. As my example suggests, I often view paradoxes with skepticism, as impositions of language. That is, only language prevents the encounter from being a war. Still, I

ostensible denial of choice. I write "ostensible" to insinuate my response, namely, that the denial is not real - that is, that the choice continues to be. Consider this situation: To escape a vicious tiger's pursuit, a traveler may either attempt to outrun the animal, or he may get into his jeep and drive to safety. There is no choice, one might object. There is, though, for the ease with which a choice is made does not negate the factual existence of the choice. Another situation: A gun is held to a man's head. He is assured that, if he does not strangle his newborn son, the holder of the gun will shoot both the man and wife. Here, another objection might go, is an impossible situation; the man has no choice. On the contrary, the difficulty (like the ease) with which a choice is made does not make untrue the fact that choice exists. To suggest otherwise is to suggest that the man can both strangle and not strangle the baby. Recall Dilman's discussion of Freud's natural man: "Whether he conforms to other people's opinions because he is afraid to displease them, does something to please someone he loves, or helps someone for whom he feels sorry, he does what he himself wants. He may be doing what someone else wants, but only because he wants to do it."

This interweaving of choice and being builds in large part from the Sartrean-existentialist view of choice and freedom. For Sartre, part of life's absurdity is that man is constantly presented with choices, but never knows which choices are the right ones. Man's only recourse is his freedom to choose (and, as we shall see later,

recognize paradox as an exception, often a semantic one, from the rule of choice outlined above.

loyalty to one's choices is the key to salvation).¹⁵ I find this conception of choice a useful one. Unlike Whitehead, who distinguishes man by what he will become, with Sartre ". . . existentialism's first move is to make every man aware of what he is and to make the full responsibility of his existence rest on him."¹⁶ In short, Sartrean choice is useful because it is possible to build an ethics on it.

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Like realism and functionalism, EIR requires a focus in order aptly to describe international behavior. Realism proceeds from assumptions about competitiveness in men and states. Accordingly, it focuses in its descriptions of international behavior on plays for power by one state or states at the expense of another or others. Similarly, functionalism assumes cooperative capacity and goes on to describe the extent to which activity comports with or undermines cooperation in the functionalist sense. It seems sensible that EIR should proceed similarly from its assumptions. Its focus, then, is on international activity as a function of states' choices. Whatever order or disorder characterizes international

¹⁵ Sartre's freedom is in a way the opposite of Erich Fromm's "escapes" from freedom: authoritarianism, destructiveness, and automaton conformity. See Erich From, Escape From Freedom (New York: Hearst, 1969), 157-230.

¹⁶ Sartre, "Existentialism," 1193. I do not entirely disconnect Sartre from Whitehead. I rather emphasize Sartrean choice in the present over Whiteheadian future possibility. They are of course related: "As for despair, the term has a very simple meaning. . . [namely] that we shall confine ourselves to reckoning only what depends on our will, or on the ensemble of possibilities which make our action possible. When we want something, we have to reckon with probabilities." *Ibid.*, 1199. See, though, the next sentence in the text.

relations is a function of constituent states' choices. Those choices are made by actors who are neither particularly cooperative nor competitive. Rather, cooperation or competition, genteel diplomacy or brinksmanship, competing alliances or pretenses to world federalism, are the results of characteristic choice. Choices are not unambiguously rational, as realists would have, since (as Pareto suggested earlier), there is more than one route to "reasonable" activity. It is not difficult to interpret British and French appeasement of Germany in 1938, for example, as rational in some ways and irrational in others. (There is reason in diverting an aggressor's course; there is nonsense in the belief that Hitler, having given every indication of insatiability, might be satiated). EIR sees concepts beyond the choice-characteristic as ideological. Such concepts are the "insignificant figures" with which we began. They obscure more than they enlighten.

It might be helpful at this point to show EIR in action. How, for example, would it explain to a newcomer to International Relations balance of power, a concept without which no introductory text is complete? Realism insists that to understand balance of power, one must understand one of the factors ". . .at the base of international society. . .[namely] the antagonism of its elements. . .the struggle for power on the international scene can be carried on in two typical patterns. . .direct opposition. . .[or] competition."¹⁷ Functionalism, for its part, explains the nineteenth-century balance of power as

¹⁷ Morgenthau, Politics Among Nations, 166, 168.

". . . a directorate of the Great Powers, which tried to use its powers to thwart the growth of new popular forces, with the smaller states ignored altogether."¹⁸ EIR would fit details of balance of power into a conceptual framework structured roughly as follows:

• • • Men must take some posture in their dealings together; so must states. Involvement in a balance of power is a behavioral choice to which some states resort. EIR recognizes the major influence of the international system emphasized in the Third Image of Kenneth Waltz's Three Images theory.¹⁹ It is true that the international system may exert extreme pressure on states. Belgium, say, resting as it does between France and Germany, is hardly unaffected by international pressures in its policymaking. EIR holds, though, that extremity of pressure (as with the example of the father, earlier) does not amount to negation of choice. The entire Gandhian view of political activity rests on a pacifism whose absoluteness defies counterpressure.

• • • Certain states - traditionally the "Great Powers" - are more prone than others to choose a balance of power posture. These states perceive it to be in their interests to do so. (Note the debt to realism: EIR does not deny the self-interest of states. Note also, though, that that self-interest is perceived. Like Sartrean man, there is no way for the state to know the correctness of its choice). In a sense, the amorphous balance of power in the nineteenth-century (first a state allies with Russia, then Austria, then Russia

¹⁸ Mitrany, The Functional Theory, 88, 89.

¹⁹ Waltz, Man, the State, and War, 159-186.

again) may be construed as a series of correct choices, if those choices satisfied the interest of the chooser-state. In another sense, it is possible to see the balance of power as a series of poor choices. If they had been the right ones in the first place, why were there so many shifts in the balance in the hundred years before 1914? EIR accepts the Paretian notion of non-logic: Men and states invent their reasons. These reasons predicate choices whose wisdom or foolishness is only retrospectively observable, if at all. States, like men, are naturally guideless. Both are definitionally constituted by the record of their choices.

- • • Balance of power as a behavioral choice involves epiphenomena such as cooperation and competition. States do not naturally cooperate; nor do they naturally compete. They naturally choose. Choice has multifaceted expressions. The choice of balance of power politics involves cooperation within one component bloc (where there is a military, diplomatic, political alliance), and among the various blocs themselves (in, for example, the engagement of diplomatic protocols, in the rules of military engagement, or in the mutual expectation of possible future alliance). The choice of balance of power politics also involves competition as part of the general attempt to check possible plays for hegemony, as well as in the related expectation that today's ally might be tomorrow's adversary.

EIR would treat other traditional concerns of International Relations - arms control, interdependence - in a similar fashion as areas in which states assume a posture based on perceived self-interest. So far, EIR seems not to have **added** tremendously to the

theory of international relations. If anything, its goal is to take away from International Relations conceptions that are demonstrably wrongheaded. Less is more, when the lessening is of those insignificant figures such as natural competitiveness. Even in its focus on choice, EIR does not break new ground. While it does forge a new interpretation in the area of choice by establishing it as the international projection of natural behavior, there is nothing new in the **general** endeavor to address the role of choice in international relations. Maoz begins his comprehensive study, National Choices and International Processes, by acknowledging the ". . .tremendous progress in this field and. . .the significant degree of cumulative research."²⁰ Robert Jervis' Perception and Misperception in International Politics treats choice in rigorous detail.²¹ However, analyses of choice tend to stop at the descriptive level of theory. They can hardly do more, since they generally accept traditional assumptions about decisionmaking: International activity is the result of rational choices by competitive actors, or of actors with more to gain by cooperation than competition. These assumptions are actually limits imposed by Hobbes and Morgenthau, Locke and Mitrany. EIR recognizes no prior assumptions about the quality of state behavior. The quality of a state is the record of its choices. With that claim, EIR is able to advance beyond the

²⁰ Zeev Maoz, National Choices and International Processes (New York: Cambridge University, 1990), xvii.

²¹ Neither Jervis nor I suggest that the study of international relations amounts to studying the world-views of a few key players. Robert Jervis, Perception and Misperception in International Politics (New York: Cambridge University, 1976), 13-18.

descriptive level of theory. Indeed, if EIR does make a substantive advancement to theory in International Relations, it is in the prescriptive area of ethics, where it argues for a conception of state responsibility akin to man's in Sartrean existentialism.

• • •

"If God is dead, everything is permitted." The ethical thought of Jean-Paul Sartre is a response to this challenge from Dostoevsky, a challenge to construct a viable moral position in the face of the death of God and the absence of any objective moral values. The universe in which Sartrean morality must find its home is a sterile one, devoid of all intrinsic value and meaning, a universe with no inherent justification for being. In a world in which God - or any transcendent source of meaning, whatever it is called, and hence any *a priori* objectively given realm of values - is totally absent. In a world, in short, in which man must create whatever sense of worth there is.²²

The purpose of the next paragraphs is to apply existential ethics to the analysis of international relations. Having dwelled on this over time, I forget whether it seems far-fetched at first glance. In a way it makes complete sense: If man is a chooser, and if we accept the domestic analogy, then states are choosers. Moreover, if there is a human ethics for choice, and if we accept the domestic analogy, then there is an ethics for state behavior. I do recognize that Sartre never wrote an ethics *per se*.²³

²² Thomas C. Anderson, The Foundation and Structure of Sartrean Ethics (Lawrence, Kansas: Regents Press, 1979), 3.

²³ He promises one on the last page - the last line - of Being and Nothingness: "We shall devote to them [ethical questions] a future work." Sartre, Being and Nothingness.

The opening quotation of this subsection presents the problem to which Sartrean ethics is an answer. Without God, man's life is orderless. Orderlessness involves meaninglessness, because in an unordered world man and everything around him is contingent, a product of chance, not necessary. What meaning can anything have if its very existence might just as easily have been, or not been? Sartre titles his ontological treatise Being and Nothingness for precisely this reason:

. . . [W]ith every apprehension of being, man also apprehends the threat or possibility of non-being. In other words, when an individual consciousness becomes aware of the presence or existence of something other than itself, something which exists outside and independently of itself, it also becomes aware of the possibility that the thing may someday cease to exist.²⁴

In seeing man's consciousness in his apprehension, we also begin to see his anxiety. Man's consciousness distinguishes him; only he can apprehend his being and, along with it, his contingency. That is, along with man's capacity to conceive of an object's nonexistence is

628. In the absence of that future work, I am obliged to make the following qualifications, the same as Anderson makes in The Foundation and Structure of Sartrean Ethics, 4-7. First, if we are to confine ourselves exclusively to Sartre's works, then whatever we say about his ethics is inferential. The inferences may seem entirely plausible, justified, but they do remain less than explicit statements. Second - and this is more fortunate - we do have DeBeauvoir's The Ethics of Ambiguity, which ". . . is said by the author herself to be based on the ontology Sartre expounded in Being and Nothingness." Also, Sartre wrote the ". . . glowing. . ." preface to Jeanson's Moral Problems and Sartrean Thought. This, Anderson asserts, leaves no doubt that the work can properly be seen as representing Sartre's views.

²⁴ Davis Dunbar McElroy, Existentialism and Modern Literature (Secaucus, New Jersey: Citadel, 1962), 5.

the capacity to recognize the possibility of his own nonexistence. What is more, even given existence, man is never free of anxiety because he never escapes the possible nothingness of any or all of his beliefs. Paul Tillich calls the first anxiety one of ". . .fate and death," and the second one of ". . .doubt and meaninglessness. . . ."

Regarding the latter he writes:

Nonbeing threatens man as a whole, and therefore threatens his. . .self-affirmation. . . .[O]ne must be able to participate meaningfully in creations. . . . This is what one can call spiritual self-affirmationWe use the term meaningless for the absolute threat of non-being to spiritual self-affirmation. . . . The anxiety about meaninglessness is the anxiety about the loss of ultimate concern, of a meaning which gives a meaning to all meanings. . . .The anxiety is aroused by the threat of nonbeing to the special contents of the spiritual life. A belief breaks down through external events or inner processes. . . .²⁵

To live, we must choose, but the beliefs on which choices are based are contingent. Where, then, can we find Tillich's "Courage To Be"? This is a major question of existentialist philosophy. Sartre addresses this problem of being when he remarks that man is ". . .condemned to be free. . .;" man, unlike animals or small children, ". . .is free in the way of man: [H]e is free from the strict necessity of submitting to a compulsory, limited, and irreversible course of action. . .as he develops his choice."²⁶ This for existentialists is

²⁵ Paul Tillich, The Courage To Be (New Haven: Yale University, 1952), 46, 47.

²⁶ McElroy, Existentialism, 7. Nathan Scott, Mirrors of Man in Existentialism (Nashville: Abingdon, 1978), 170-175.

the meaning of man's individuality; but man is **condemned** to his freedom. The question reappears, If man must choose but always doubt his choice, what can give him comfort. McElroy names three theoretical possibilities.²⁷ The first, to ". . .return to the primary ties of nature, clan, and religion. . .," is closed. Man cannot go back. The second is to escape to ". . .new dependencies and states of submission." This is Fromm's "Escape From Freedom," alluded to earlier. Finally, man may ". . .advance, based upon his uniqueness and individuality. . . ." Man, in other words, may take responsibility.

If the universe is contingent, it is also free. . . .This is another of Sartre's main themes, perhaps his most important. If a man is free, it follows that he is responsible for everything he does. He is not just a cog in a machine, a creature of circumstance or destiny. . . . A man is what he makes himself; and for what he makes himself he alone is answerable.²⁸

For Sartre, responsibility is the ". . .authentic mode. . .," which is to say, responsibility is the key to ethical life.²⁹ In making this claim Sartre distinguishes reflective and nonreflective choices, and makes responsibility relevant the former. First, the choices: Sartre sees choice as the source of value; we choose what we value. Nonreflective choice is choice blind to values other than the compulsory ones of children and animals. That is, nonreflective

²⁷ McElroy, Existentialism, 9-14.

²⁸ Cranston, Sartreism, 20, 21.

²⁹ Authenticity is Kierkegaard's term. Calvin Schrag, Existence and Freedom (Ann Arbor: Northwestern University, 1961), 189. John Wild, The Challenge of Existentialism (Bloomington: University of Indiana, 1955), 126.

choice is mindless, passionless choice. Sartre disparages nonreflective choosers as having ". . .an attitude of seriousness," where seriousness is the guise of their strict adherence to unquestioned values.³⁰ In contrast is the reflective, responsible chooser. He is a man of ". . .good faith. . .," for Sartre, since he properly treats morality as a ". . .reflective study of values. . . ."³¹ In Sartre's words, "Thus reflective consciousness can properly be called a moral consciousness since it cannot arise without at the same moment disclosing values."³² I pause here to clarify: When Sartre writes about values and moral consciousness, he does not intend their popular meanings, roughly, enlightened ethical fortitude. By a value Sartre means a choice, or what he calls a project.³³ This is sensible enough if we recall that man for Sartre lives an unordered existence; part of his anguish is that he does not **know** which choices are right. In that case, an ethics, popularly understood, seems impossible. We are wrong, though, if we conclude from this that in accepting Sartre's ethics we accept nothing more than a world in which men claim their projects one by one. In that case we would seem to have taken a long trip only to find ourselves back with Hobbes' egoistic man. Yet Sartre's responsibility is not radically individualistic and situational, as his attention to

³⁰ Sartre, Being and Nothingness, 626.

³¹ Anderson, Foundation and Structure, 41.

³² Sartre, Being and Nothingness, 95.

³³ Ibid., 626.

community shows: "Ultimately, if he is to achieve authentic existence, the individual must make his decision alone, but this decision, made in solitude, at the same time reaches out into the social context. . . ." ³⁴ When man takes responsibility, part of his reflection is for all mankind. Here Sartre seems to think in terms similar to Kant's categorical imperative. In willing his project, man, if he is responsible, wills what he would have all men choose. Authenticity in this light involves ". . . awareness of the true universal condition of man. . . . [Insofar as they must all choose] all men are in fact equal. . . and [with this belief comes] the acceptance of the responsibility to live according to this awareness." ³⁵ Here Sartre seems to be far from individualistic and situational. If anything, he makes an absolute claim by calling on man to reflect on the way they would have all men choose, and on the way he would develop his own history, that is, the continuity of his own choice. As Sartre puts it:

When we say that man chooses his own self, we mean that every one of us does likewise; but we also mean that in making his choice he also chooses all men. In fact, in creating the man we want to be, there is not a single one of our acts which does not at the same time create an image of man as we think he ought to be. ³⁶

³⁴ Schrag, Existence and Freedom, 200, 201. Wild, The Challenge of Existentialism, 130-139.

³⁵ Anderson, Foundations and Structure, 43.

³⁶ Sartre, "Existentialism," 1193, 1194.

In EIR I coopt Sartrean responsibility both as an evaluative tool and as a call for international morality. There is nothing new in this joining of evaluation and prescription. We have seen that Morgenthau both evaluates states in (his) terms of their rational self interest, and calls on states to master the objective laws undergirding those interests; witness his preference for statesmen, not engineers. In a similar way EIR evaluates states, in the first place, by the extent to which they take responsibility for their choices and, next, whether those choices comport with the notion that they would be choices for all states (just as man chooses for all man). In its prescription, then, EIR calls on states to be responsible not only for themselves, but for the world of states.

In evaluating states, EIR does not confine responsibility to a formal public declaration. Rather it is possible to see responsibility in continuity, in the extent to which a choice reflects the history of choices that precede it. (Garcin in No Exit was a coward because of his own history of cowardice). In this way EIR views each state project in the larger context of the actor's larger historical project. It may be useful to remark that so far EIR has not obliged a state to any particular projects other than those of its historical type. Even then, though, the state is not trapped by its history; as long as it exists, it is capable of beginning a new history. (Sartre denies determinism and sees existence prior to essence). This is so in the same way that as long as a man lives he may with each new project alter the course of his history.³⁷ EIR forces states to choose what

³⁷ Cranston, Sartrism, 41.

they will become. A warrior state, cheerfully, is not bound to war; but then neither is a democratic republic assured democracy and republicanism. States are what they choose to be; those choices may keep with precedent, or may move consistently in a new direction. In either case, though, movement must be intelligible. The responsible state, like the responsible man, imposes **order** on its or his world. The authentic mode of men and states forbids random choice. The fight against randomness is a fight, amidst a contingent existence, for meaning.³⁸

It is not enough to evaluate states by the conformity of actions to history or to a newly-emergent continuity. Taken alone, this standard would hold nothing against war of aggression, say, or total war. Yet if an international ethics is worth its name (in the popular conception of "ethics"), it must object to traditional vices in international behavior. Accordingly, the second evaluative criterion of EIR concerns the extent to which a state would have its choices repeated by all states. The action of one state for all derives from states' ontological equality. They, like men, are equal in their contingency, and from that contingency receive the freedom to try to impose order on their existences by making choices. With this standard I do not merely iterate the call for adherence to international law. In the first place, the authority of international law is often conceptualized in a manner akin to the Lockian conception of the authority of the state. I have consistently argued

³⁸ Anderson, Foundation and Structure, 15-27. Wild, The Challenge of Existentialism, 68-80.

against the assumptions prior to such a view, and do no turnaround here. What is more, a call for international law might be mistaken for compliance with the nonreflective values condemned by Sartre as serious, inauthentic, in bad faith. On the contrary, states must do what they do because they will it reflectively, not because of what Sartre would call childish nonreflection.

III.

Finally, I call attention for a moment to the areas in which EIR has its greatest strengths, and its profoundest shortcomings, as compared to "The Academic Heritage" prior to it. One problem is the absence of extreme predictive power in EIR. I recognize that EIR does not stand up to realism in this respect, especially since the latter seems consistently, accurately to render meaningful the concept of power struggle in international life. Time and again, events seem to confirm that pervasive struggle. EIR, in contrast, will go no further than the prediction that states choose, and that the patterns of international order are epiphenomenal to choice. EIR has a debt to realism when it acknowledges patterns of struggle - and it does make that acknowledgment - although it differs in its view of the quality of struggle. Realism sees it as endemic to nation-statehood; EIR sees it as but one expression of endemic **choices**. To fortify this claim EIR cites the high degree of cooperation that also exists in international life. One must wonder how natural struggle is if there is also cooperation.

Another shortcoming may be the overstretched breadth of interpretations to which analysis in EIR is disposed. With realism, in contrast, analysis is confined to power relationships and interest. In functionalism, also, analysis is able to focus particularly on the products of cooperative international politics in contrast to competitive postures. With EIR, analysis is open to all the facets of world politics. The only guiding analytic framework is the parameters of choice.

This may not be such a bad trade-off, though, in light of the best claim of EIR: It takes men and states for we can know them to be. I mean by this that EIR avoids presumptuous assertions about the natures underlying the world, and confines itself to "significant figures." In contrast to conceptions about essential cooperativeness or competitiveness, the conceptions of EIR are informed more by knowledge than speculation. Since the former is of a higher order of doubtlessness, and since theory tries to impose sense and remove doubt, perhaps there is something to be said for an existential view of international relations, even with its flaws.

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