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Detention in Transition: Sonoma
County's New Generation Jail

A Report to the National Institute of Corrections
Jails Division

by

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Executive Summary

This study has been conducted to determine how well Sonoma County's 41.5 million dollar, podular style, direct supervision facility is working. It examines the nature and extent of change in inmate and staff attitudes, perceptions and behavior that accompanied their transfer from the old Main Adult Facility (MAF) and the North County Detention Facility (NCDF) to the new Main Adult Detention Facility (MADF). Inmate and staff questionnaires include standardized questions used in prior research. The questionnaire results are supplemented by inmate criminal incident and disciplinary violation data.

The findings regarding inmate incidents indicate that:

- there has been a sharp decrease in the rate of more serious inmate incidents. MAF rates of assault were cut in half after the transfer to MADF. The largest decrease has been in inmate-on-inmate assaults.

- the overall rate of all Section 100 (criminal) disciplinary actions at the MADF has been cut in half from what it was at the MAF. There has been a 25 percent decline in disciplinary actions for staff assaults, a 90 percent decline in inmate assaults, a 68 percent decline in inmate fighting, and a 57 percent decline in all other criminal disciplinary actions.

- the overall rate of disciplinary isolation has declined by a third at the MADF. At the same time, the imposition of disciplinary isolation for violations has increased by more than a third for inmates at MADF.

- the rate of contraband incidents actually increased at MADF. Contraband incidents often involve little more than inmates having cigarettes, extra underwear or blankets. Moreover, officers at MADF may have more incentives, opportunity and/or time to uncover violations. In addition, the individual rooms in the pods may be associated with increased individual inmate accountability.

Inmate questionnaire data indicate that:

- male inmates perceived greater safety, structure, privacy, support, social stimulation, freedom and activity at MADF than they did at MAF. They also gave more positive evaluations of the facility and to a lesser extent other inmates and correctional officers.

- male inmates showed significant improvement on three out of the four measures of stress at MADF.

- female inmates perceived greater safety and privacy at MADF compared to NCDF. However, unlike males, females showed declines in stimulation, freedom, emotional feedback and activity. Moreover, female evaluations of correctional officers also declined significantly at MADF; their evaluations of the facility and other inmates also deteriorated, only less strongly so.

- female stress levels are worse on three of the four stress measures but only one decline is significant.

Sex differences in inmate outcomes may be a result of the loss of privileges females enjoyed at MAF prior to their transition to MADF, such as contact visits, an ability to talk to male inmates, wear makeup, the outdoor feeling at NCDF, lesser security, etc. Examination of the pre to post differences for males at NCDF and

MADF indicated no similar pattern of deterioration.

The results for correctional officers were mixed but generally indicated improvement. These findings indicate that, compared to MAF officers, MADF officers:

- are significantly more positive about their pay and people on the job; they are also generally more satisfied with their jobs.

- are less happy with the feedback that they receive on the job and their supervision at the MADF. These results differ slightly depending upon the shift of the officer.

- report feeling less safe from physical assault at MADF than they did at MAF. However, they also report that they are less tense in general.

- report an improvement in their perception of environmental stressors, such as crowding, quietness, dreariness of the workplace, etc.

The isolation of officers in modules may decrease a sense of teamwork and alter feedback for work performed, thereby increasing stress. Other stressors, such as feelings that the criteria for promotion at MADF are less fair, are probably unrelated to module work.

In conclusion, the results generally indicate that the MADF is a safer and more secure environment than MAF for both inmates and staff. While there is evidence of some dissatisfaction, such as the female inmates' perceptions of the modules and the correctional officers' perceptions of their supervision, the overall positive results are generally consistent with those of prior studies that have been conducted on facilities that have successfully implemented direct supervision principles.

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The idea for this study developed in response to a talk given by Lieutenant Jim Husset in the Department of Criminal Justice Administration's Lecture Series about Sonoma County's newly constructed, direct supervision detention facility. At that time he and Pat Jackson began a discussion about the new facility and the need for a study of how it was working. Since these early beginnings in 1990 Jim has been extremely helpful in a great number of ways. He (and others) have opened their facilities and practices to scrutiny by an outside researcher in the interest of obtaining the most accurate information possible about the efficacy of their new facility and management strategies. Jim personally opened many of the administrative and other doors necessary for the research to proceed and generously gave of his time and energy.

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Introduction

Jails are the major workhorses in the administration of justice and sentencing of offenders. More people pass through them each year than any other form of correctional supervision, even though the time that inmates spend there is relatively brief (Jackson, 1988). The potential impact that jails have on society is therefore potentially enormous, particularly when one considers that the conditions of confinement experienced by most inmates are not terribly good, and by some accounts, downright awful (e.g., Irwin, 1985; Goldfarb, 1975).

Throughout history the local jail has been a common object of reform energy. Much of this critical attack has centered on the inhumane conditions of confinement, ranging from poor quality food, ventilation and sanitation, rapacious inmates and callous staff, the indiscriminate mixing of young and old, naive and sophisticated, to the domination of jail administration by local political patronage systems and poor staff morale. Jails have been notoriously successful at resisting attempts to change (Flynn, 1985) until relatively recent times.

A major source of change has come through the courts, which have responded favorably to inmate litigation questioning the conditions of confinement (Mays and Bernat, 1988). Moreover, for a variety of reasons, there has been a sharp increase in the actual and anticipated number of jail inmates. In California, as in the nation as a whole, the greatest increase has been among pretrial inmates (Blue Ribbon Commission on Inmate Population Management,

1990:45; BJS, 1990). These changes, along with public desires for low cost incarceration, have created a dilemma for many jurisdictions--i.e., how to provide humane but low cost detention.

An innovative approach to dealing with these issues is the new generation jail. Through the use of an architectural design unique in the jail context and a form of direct supervision calling for officers to directly supervise inmates, a number of seemingly intractable problems of concern to past jail reformers have been addressed: inmate control of the institution, violence, vandalism, tension, noise, lack of cleanliness, dehumanization, idleness, and many others (Gettinger, 1984:3-9).

Sonoma County Detention Facilities

In response to a federal civil rights lawsuit which successfully challenged the constitutionality of detention in Sonoma County's existing Main Adult Facility (MAF) (Cherco vs. the County of Sonoma, 1980), the county eventually received the Sonoma County Board of Supervisors' approval and developed and built a jail according to the new generation, direct supervision principles as stated by the National Institute of Corrections. Sonoma County's new Main Adult Detention Facility (MADF) was completed and the transfer of inmates began in mid-October, 1991. The MADF is a state-of-the-art, podular style, direct supervision facility. It embodies most of the best features of this style of jail today, a sharp contrast to all but a handful of the nearly 3,500 jails in the U.S. It is a 233,000 square foot facility with a current capacity of 404 inmates, which can be expanded to 700. Each of the five 50

bed modules for general population contains a medical unit, recreation area, showers for individual use, carpeted floors, wooden inmate doors, four televisions, and other features. There is also a male special housing unit that encompasses administrative segregation, discipline and a protective custody unit. The booking area incorporates the most up-to-date design and operational features. The behavior-based classification system is also unique.

This progressive approach to the detention of inmates thus incorporates the two cornerstones of the new generation philosophy: a unique architectural design and a direct supervision style of managing inmates.

After numerous delays in the opening of the MADF, the eventual transfer in October of 1991 was accompanied by a growth in inmate population. The actual average daily population (ADP) figures in all of Sonoma County's detention facilities from 1991 through June of 1992 have fluctuated markedly, particularly in response to a decline in bookings that began in January of 1992. The MAF ADP from January through September of 1991 ranged from 223.1 to 229.7. During the same time period the ADP at NCDF ranged from 446 to 515.5. After the transfer of inmates to the MADF in mid-October, 1991, the ADP at the MADF increased to 323.4 in November, peaked at 339.7 in January of 1992, and gradually declined to 304.7 as of June, 1992. The NCDF ADP declined from 432.9 in November of 1991 to 387.5 in December, increasing to 425.6 in February, 1992, eventually dropping to 404 by April and 389 by June of 1992 (raw data taken from Sonoma County Sheriff's Department, Bookings, ADP, Releases,

not dated).¹

While it is easy to demonstrate that Sonoma County's new generation jail is now occupied and fully operational, it is not known how well the new facility is meeting its expectations. There have been few studies of jails in general, and few on the effectiveness of new generation jails, even though an increasing number of jurisdictions has adopted this innovative idea. While some past research has been conducted, such as the work of Zupan (1991), Nelson (1987) and others,² each facility is in various ways unique in design and management. Moreover, it is by no means inevitable that any new generation facility will work unless staff are adequately trained and successfully make the transition.

The present study has a variety of purposes. These are to determine the impact of Sonoma County's new generation jail on staff and inmate attitudes and behavior related to confinement; to replicate the study of Washington's new generation jails (Zupan and Menke, 1988; Zupan and Stohr-Gillmore, 1988) in Sonoma County; to extend the study of Zupan and Menke by including measures of staff stress; and to determine the capital and operating costs of the new facility.

The general hypothesis of the study is that both staff and inmate attitudes will show improvement after the transition to the new facility in response to the environment and management style. An extended discussion and justification for this prediction is provided in various sources (Zupan, 1991; Zupan and Menke, 1988; Zupan and Stohr-Gillmore 1988; Gettinger, 1984; Nelson, 1988; Nelson

and O'Toole, 1983; and others) and is not elaborated upon in any great detail here.

It is hoped that the information gained from the study will be of use to researchers, administrators and policy makers examining the effectiveness of new generation facilities and to others interested in the new generation philosophy.

Data Sources, Research Design and Methods

Four sources of data are used in addressing the questions of the study: staff and inmate questionnaire surveys, existing data on capital and operating costs, and additional existing data related to inmates and staff.

The research design adopted involves a pre and post examination of inmate and staff attitudes, perceptions and behaviors. The surveys were conducted six months prior to and six months following the transfer of inmates and staff to the new detention facility.

Staff Questionnaire. The staff questionnaire was adapted from Zupan and Menke (1988).³ The three-part survey includes standardized and normed instruments adapted to the jail context. It taps the enrichment levels of a job as perceived by staff (such dimensions as the skill variety of a job, task identity, task significance, autonomy and feedback); organizational climate (including supervisor style, pressure to produce, open decision-making, and others); employee satisfaction over a variety of domains (e.g., level of pay, opportunity for promotion, supervision quality); and background information about staff. These measures tap numerous aspects of staff jobs that may be altered by

environments successfully implementing new generation direct supervision principles.

This research developed additional questions on officer perceptions of stress in their environment in light of Zupan and Menke's (1988) suggestion that transitional officers may experience greater stress than new ones due to fundamental changes in the organization of work and by the suggestion of Ray Nelson (conversation of April 13, 1990). The Zupan and Menke research did not measure officer perceptions of stress.

The correctional officers' response level at the pretest (about 50 percent) was not as high as hoped. This occurred despite various attempts to insure a high response rate. The principal investigator met with supervisory staff, met with and received cooperation from the employees' association that represents the officers, attended all shift briefings of officers, discussed human subjects protections regarding confidentiality and anonymity with officers, personally distributed most of the questionnaires, and fielded numerous questions from officers at briefing regarding the study.

There were several reasons for the pretest response rate. The feeling of numerous staff and correctional officers spoken to was that officer morale was at a low level due to the numerous postponements in the opening of the new facility. Furthermore, some officers were also suspicious of the survey because of past experiences with the administration. Some officers were also miffed because they were not allowed to fill out the survey during duty hours.

In response to these and other problems, at the posttest correctional officers were allowed to fill out the surveys on their duty hours, either before or after their shift. For this and doubtless other reasons, response levels for the officers surveyed at the new main detention facility improved dramatically (to 98 percent).⁴

As originally planned, staff surveys were to be longitudinal in nature. A staff questionnaire was distributed to about 100 staff who might be eligible to work in the new jail. Those assigned to or newly hired for the MADF (approximately 100 staff total) were to be followed and administered the post questionnaire. The goal of following individual officers over time had to be given up, however. Too few of the correctional officers surveyed in the pretest period filled out the questionnaire or did not fill out the identifiers necessary for longitudinal followup. Many of those who did fill it out and provided identifiers were not subsequently transferred to the MADF.

The pretest survey of correctional officers occurred during a two week period beginning on December 19, 1990. The transfer of staff and inmates began on October 15, 1991. The posttest surveys for correctional officers were completed in late April, 1992, over six months subsequent to the transfer of staff and inmates to the new facility.

Rationale for Staff Questionnaire. This project was intended to understand whether and to what extent the implementation of the new generation philosophy has altered the work environment of staff,

in particular, correctional officers. The environment of the MADF was purposefully designed to improve the physical workplace of staff and to reduce environmental stress. Zupan (1991) has gone further and argued that the new job duties of correctional officers in such facilities have a number of characteristics that make them "enriched," following the work of Hackman et al. (1981). In the words of Hackman and Oldham (1975:160),

The basic theory...proposes that positive personal and work outcomes (high internal motivation, high work satisfaction, high quality performance, and low absenteeism and turnover) are obtained when three 'critical psychological states' are present for a given employee (experienced meaningfulness of the work, experienced responsibility for the outcomes of the work, and knowledge of the results of the work activities). All three of the psychological states must be present for the positive outcomes to be realized.

Hackman and others argue that these "critical psychological states" are generated by five job conditions: the variety of skills required, the task identity and the task significance, coupled with the autonomy on the job and the level of feedback given. Thus, a job that requires a variety of skills and talents of an employee (variety), that permits the worker to complete a "whole" piece of work (task identity), which has a substantial effect on the work or lives of other people (significance), which involves autonomy (that in turn increases responsibility for work outcomes), and which has high feedback for work performed, will lead to positive personal and work outcomes.

Combining these job dimensions generates a "motivation potential score."⁵ Not all jobs that are high in motivating potential will affect everyone in the same way. If someone does not

value feelings of personal growth and accomplishment then they might find such a job produces stress and a feeling of being "stretched" (Hackman and Oldman, 1975:160). The results for staff are considered after a discussion of the inmate survey.

Inmate Questionnaire. The inmate questionnaire, also borrowed from Zupan and Menke and Zupan and Stohr-Gillmore (1988), consists of four parts and includes eight dimensions of inmate perceptions of the jail environmental climate discussed below; evaluative indexes of the jail environment as measured through semantic differential word pairs relating to the facility itself, custodial staff and other inmates; physical and psychological stress, a ten-item checklist tapping the nature and extent of stress; and inmate background information. Facility social environment scales were derived from Wright's (1985) work, which was based upon the earlier work of Toch (1977), Prison: The Ecology of Survival. Toch's work, based on interviews with inmates, and Wright's subsequent successful attempt at scaling, using questionnaire data, yielded nine dimensions of prison life.

Rationale for Inmate Questionnaire. As noted by Toch (1977:16) in Wright (1985:260), these dimensions of prison life provide "portraits of what is valuable and noxious to inmates in prison settings." They are dimensions that are commonly recognized by inmates as important in defining what prison life is like.

As defined in Toch (1977: 16), the dimensions are defined as follows:

Privacy: A concern about social and physical overstimulation; a preference for isolation, peace and quiet, absence of

environmental irritants such as noise and crowding;

Safety: A concern about one's physical safety; a preference for social and physical settings that provide protection and that minimize the chances of being attacked;

Structure: A concern about environmental stability and predictability; a preference for consistency, clear-cut rules, orderly and scheduled events and impingements;

Support: A concern about reliable, tangible assistance from persons and settings, and about services that facilitate self-advancement and self-improvement;

Emotional Feedback: A concern about being loved, appreciated and cared for; a desire for intimate relationships that provide emotional sustenance and empathy;

Social Stimulation: A concern with congeniality, and a preference for settings that provide an opportunity for social interaction, companionship, and gregariousness;

Activity: A concern about understimulation; a need for maximizing the opportunity to be occupied and to fill time; a need for distraction;

Freedom: A concern about circumscription of one's autonomy; a need for minimal restriction and for maximum opportunity to govern one's own conduct.

The inmate evaluative indexes and stress questions are the same as those used in prior research.

Inmate Questionnaire Administration. In the MAF (the old main jail), questionnaires were distributed to inmates in each of the jail cells by the principal investigator and a program officer. The response level among the inmates at the pretest across the two facilities was 66 percent. Some inmates were excluded from even being offered a questionnaire although they are counted as nonrespondents: those who were ill, under heavy medication, out to court or who were held for under 24 hours. Persons of hispanic origin who were unable to read english also did not fill out the questionnaire.

In the MADF, questionnaires were distributed to inmates on a Sunday afternoon in late April by the principal investigator and a supervisor. Response levels were quite similar to those at the

pretest.

Other Data Sources.. Aggregate cost data were provided by detention personnel. Some additional data were also collected on inmate incident and disciplinary reports, population figures, along with other readily accessible information related to the quality of the institutional experience for staff, inmates and their interaction.⁶

THE STAFF

The Sonoma County Sheriff's Department Custody Division is comprised of two facilities for holding inmates: the North County Detention Facility (NCDF) and the MADF. The Detention Division falls under the jurisdiction of the local Sheriff's Department, presently headed by Sheriff Mark Ihde, who took office after a tumultuous period previously headed by Dick Michaelson. Authority flows from the Sheriff through the Undersheriff, then Detention Commander, Operations Captain, Lieutenants (5 at MADF), Sergeants (12 at MADF) and 104 correctional officers at MADF and another 59 at NCDF.

The background characteristics of the officers from the surveys are displayed in the table below. As the table shows, the officers are 71 percent male, have in most instances attended some college, and represent all of the shifts. The officers have been employed at the facility for an average of four years, and most completed their academy training before 1989; about a third completed the academy in 1989 or more recently. While overall the correctional officers average 42 years of age, officers at the new facility are on the

average somewhat younger and have been employed for a slightly shorter period of time (data not shown) than those assigned elsewhere.

Characteristics of Correctional Officers

<u>Characteristic</u>	<u>Number</u>	<u>Percent</u>
Gender		
Male	72	71.3
Female	29	28.7
Shift		
Days	32	30.8
Swing	35	33.7
Grave	37	35.6
Education		
High school	17	15.9
Some college	50	46.7
Associate degree	20	18.7
Four year degree	13	12.1
Some graduate	2	1.9
Graduate degree	2	1.9
No information	3	2.8
Year completed academy training		
1983 or earlier	10	9.3
1984-1985	15	14.0
1986-1987	15	14.0
1988	20	18.7
1989	8	7.5
1990	19	17.8
1991-1992	8	7.5
Not ascertained	12	11.2
Mean months employed	48.277	
s.d.	32.571	
Mean age at time of survey	42.065	
s.d.	23.448	

NCDF results are also presented in the table because some officers came from NCDF to the MADF and it is not exactly clear which officers should be compared since it was not possible to identify from the surveys where transferred officers had previously

been assigned. Since working conditions were better in general at the NCDF than the MAF it is not surprising that there are numerous significant differences between the NCDF and the MADF.

Job Diagnostic and Descriptive Index Results. The table on the next page compares the job diagnostic survey mean scores of correctional officers for the NCDF, MAF and MADF. Higher means indicate a more positive response on this widely used measure of job satisfaction. The results indicate that correctional officers at the MADF generally felt less positive than officers at the MAF. However, there are only two statistically significant differences⁷ between the two facilities--in Feedback and in the overall Motivating Potential Score. The direction of the results indicate that the MADF officers are significantly less likely to believe they receive adequate feedback and that their job as a correctional officer is less motivating than it was for officers at the MAF. The overall results are quite similar regardless of the characteristics of officers (e.g., gender, education, etc.), although sample sizes drop quite a bit.

The Job Descriptive Index also asked the correctional officers to evaluate their jobs on five different dimensions: the nature of their work, pay, promotional opportunities, quality of supervision and people on the job. These were added to create an overall score. Results of this analysis are presented below for all of the facilities. Here the MADF officers are significantly more favorable in their assessment of their pay than they were at the MAF (and NCDF). They are also significantly more favorable in

Job Diagnostic Scores of Correctional
Officers by Facility

	NCDF	MAF	New MADF
N of cases	26	31	50
Skill Variety ^a			
Mean.	3.885	3.903	3.600
s.d..	1.395	1.375	1.443
Task Identification			
Mean.	4.000	3.355	3.300 ^{*b}
s.d..	1.357	1.170	1.165
Task Significance			
Mean.	4.846	4.645	4.220 ^{**b}
s.d..	1.377	1.305	1.706
Autonomy			
Mean.	5.961	5.452	5.530 ^{*b}
s.d..	0.662	0.373	0.618
Feedback from the job			
Mean.	3.769	3.850	3.227 ^{*b,c}
s.d..	1.195	0.829	0.917
Motivating Potential			
Mean.	99.536	85.384	70.557 ^{*b,c}
s.d..	51.256	36.417	38.819

^aHigher mean scores indicate more positive results.

^bNCDF vs. MADF.

^cMAF vs. MADF.

*Significant at the .05 level or below.

**Significant at the < .10 > .05 level.

**Significant at the > .05 < .20 level.

Job Descriptive Index Scores
by Facility

	NCDF	MAF	MADF
Character of Work ^a			
Mean.	22.308	20.862	21.213
s.d..	9.951	7.657	9.160
Level of Pay			
Mean.	14.462	14.581	17.574 ^{*b,c,d}
s.d..	6.801	4.441	6.042
Opportunity for Promotion			
Mean.	8.423	9.517	9.326
s.d..	7.095	5.956	5.982
Quality of Supervision			
Mean.	36.080	40.500	32.936 ^{*c}
s.d..	13.784	10.657	13.182
People on the Job			
Mean.	31.385	36.276	37.130 ^b
s.d..	16.000	12.404	13.124
Overall Satisfaction			
Mean.	113.600	123.360	118.136
s.d..	39.516	27.169	33.085

*The difference in means is significant at the .05 level or below.

**The difference in means is significant at $< .10 > .05$ level.

^aHigher scores mean more positive results.

^bThe NCDF vs. MADF difference is significant.

^cThe MAF vs. MADF difference is significant.

^dThe NCDF vs. MADF difference significance level here is .058, $t=1.95$.

their assessments of their fellow workers than NCDF officers and view their opportunity for promotion more favorably than NCDF officers, although the latter difference is not statistically significant. The negative finding is that the MADF officers rate the quality of their supervisors as significantly lower than the MAF officers did. Overall, the MADF officers are slightly less satisfied with their work than MAF officers but, surprisingly enough, MADF officers are slightly more satisfied than the NCDF officers. The results suggest that level of pay is a major positive factor in officer evaluations of their jobs and that the quality of supervision is a major negative factor.⁸

The results were examined separately by gender and shift for the MAF and MADF officers. There were no gender differences. A comparative analysis was conducted of the results by gender across the NCDF and MADF in order to determine whether there were any prior facility by gender interaction effects. There were none.

The Days shift feels somewhat better about their co-workers in the MADF (n=14) than they did in the MAF (n=9, $t=2.02$, $p=.066$). Of the three shifts, Swings and Graves feel most negatively about Supervision (Swings n=5 at MAF, 19 in MADF, $t=4.1$, $p < .001$; Graves n=14 at MAF and 13 at MADF, $t=2.2$, $p=.041$). Directly opposite the Day shift, the Swing shift feels significantly negatively about coworkers ($t=3.5$, $p=.003$), although the number of cases is a lot smaller at the MAF (n=4) than at the MADF (n=20). Moreover, the Swing shift at MADF has a significantly lower descriptive index total score compared to the Swing shift at the MAF (n=3 at MAF;

n=19 at MADF, $t=4.35$, $p=.001$). However, compared to the overall score for the MADF officers (mean=118.136), the Swing mean is not all that different (mean=113.053).

Stress. The study examined a wide variety of indicators of stress. These findings are summarized below without the detailed tables. After the summary a few interpretive comments on the results are offered before turning to the results for inmates.

One dimension of stress concerns how safe officers felt at work. This would appear to be a dimension of major importance since there are no bars separating officers and inmates. The study found that MADF officers felt significantly less safe from physical assault than they did at MAF. However, MADF officers also indicated that they felt less tense in general than MAF officers. It is also shown at a later point in the analysis that inmate assaults against staff have in fact decreased.

Based on the officer survey, various forms of environmental stressors at the MADF have also been reduced from what they were at the MAF. Officers feel that they have more space and freedom, that they work in less crowded conditions, perceive that their workplace is less dreary, that it is quieter, and that their equipment is up-to-date.

In the realm of promotion and work, the MADF officers were more critical than MAF officers. They were more likely to agree with the statement that promotions are based on "who you know." They are also more likely to feel that praise is not given for a good job, that employees do not know what supervisors expect of them, that

important decisions are not made by employees closest to the situation, and that supervisors are not flexible when needed. They were also somewhat more likely to agree with the statement that they are unable to influence their supervisors' decisions. Officers feel that they are required to work too many hours. They are somewhat more likely to agree with the statement that they feel like taking sick leave even though they are not sick.

In their daily work lives MADF officers do not feel that inmates want more attention than they did at MAF. In fact, just the opposite is true. They do not believe that their MADF work requires as much cooperation with other officers as it used to at MAF, they disagree that there is teamwork at the MADF, and they do not perceive supervisors or co-workers let them know how they are performing their jobs. They are less likely than MAF officers to indicate that the work itself provides feedback on how well they are doing their jobs. They are somewhat more likely than MAF officers to disagree with the statement that people at work are friendly and helpful. They are also significantly more likely to disagree with the statement that they can take it easy and get their work done at the MADF.

Observation and examination of prior research suggests a few interpretations of some of the stress items discussed here. Perhaps one of the greatest changes for officers as they have moved to MADF is their relative isolation. At the MAF officers congregated around the post. At the MADF they are assigned to modules. Correctional officers who work in modules at MADF mostly do so alone. Their

sense of belonging to a "team," of working cooperatively with other individuals in an interpersonal sense, has diminished while the necessity of their working autonomously has simultaneously increased. Because of their isolation it may also be that their need for interaction on and/or off the job will increase. In the literature on new generation facilities one reads that one of the greatest organizational challenges that managers face in dealing with such a situation is the so-called "Stockholm Syndrome," an officer's overidentification with inmates that leads to compromising behavior and/or security of the facility.

As an organizational issue, the question may be whether officers have a balance between the kinds and amounts of human interaction associated with a fulfilling individual life⁹ and sufficiently meaningful feedback on the job that they need to complete their work satisfactorily. Whatever solution is taken to avoiding the Stockholm syndrome must simultaneously deal with the necessity of providing meaningful feedback to officers. The isolation of officers in the modules may well provide a structural impediment to the possibility of sufficiently meaningful feedback. This may be one major source of stress revealed in the study and captured in part through the standardized job diagnostic instruments above.

Summary. In summary, the scaled results for correctional officers are mixed. On the one hand, officers are happier with their pay than they were in the MAF. On the other hand, they indicate no improvement and some digression in the job diagnostic

survey, particularly on the Feedback dimension and (due in part to the lower Feedback score) in the overall motivating potential score of the job itself. They also rate the quality of supervision less favorably at the MADF.

Outcomes as measured by a wide variety of stress measures as broadly defined also provide a mixed picture. Environmental stressors have been significantly reduced. While officers feel somewhat more vulnerable to inmate assault they view their work as less tense and, as will be noted below, staff assaults have actually decreased. Some factors related to the isolation of officers may also be stressors, while others, such as questions about the criteria for promotion, appear to derive from other sources.

THE INMATES

Inmates at the MAF were detained in a variety of cells, including a dayroom holding approximately 60 male inmates, about eight other cells holding five to 18 inmates, a number of other cells holding one or two inmates each, plus isolation. The dayroom of the MAF was actually run as a direct supervision unit, although of course it lacked most of the architectural and many other features of the MAF. The cramped and poorly ventilated old jail was dirty, loud, smelled, and for most of the 225 or so inmates and a much smaller staff had all the negative trappings that go along with intermittent surveillance in linear facilities: a climate of fear, absence of privacy, lack of positive leadership, etc.

Inmates were and are also held at the North County Detention Facility (NCDF), which is located a few miles north of the MADF and

holds approximately 400 inmates. Most inmates at NCDF are detained in dormitories, and there is a small section for segregation, which housed a few females at the time of the pretest (segregated males were held at MADF). There was a separate female living unit at NCDF at the time of the pretest. Eventually all of the female inmates were transferred from their somewhat looser and open NCDF living unit to a module in the MADF. As it turned out, their experiences were substantially different than those of the males after the transition, as shown below.

Reliability of Scales. Prior to examining the differences in outcomes between the old and new facilities the study first examined the reliability of the scales developed in prior analysis. The reliability of scales is measured by Cronbach's alpha. A score of above .60 is desirable and above .50 is tolerable. The reliability coefficients for the items developed by Wright (1985) based on Toch's (1977) analysis are as follows:

<u>Scale</u>	<u>Alpha</u>
Safety	.733
Structure	.714
Privacy	.712
Support	.612
Social	
Stimulation	.684
Freedom	.484
Emotional	
feedback	.548
Activity	.650

With the exception of the Freedom dimension, the Prison Environment Inventory Indices are well within acceptable reliability limits. While the Freedom scale is marginal it is used in all subsequent analysis.

The three additional items tapping inmate evaluations of the facility, correctional officers and other inmates, also used by Zupan and Stohr-Gilmore, are shown below. The reliability of these additional indices is also very high, ranging from .815 to .932.

<u>Index</u>	<u>Cronbach's Alpha</u>
Facility score	.815
Office score	.932
Inmate score	.889

Personal Characteristics. Finally, the characteristics of the inmates as determined from the anonymous surveys is shown in the table found on the next page. Data from the pre and post periods are combined. Anglo comprise over 50 percent of the sampled inmates, followed by nearly 11 percent Afro American and a substantial 15 percent of Native Americans. Inmates of Latino/hispanic origin are more numerous than this table shows. Four-fifths of the inmates are male.

Most inmates have fairly extensive arrest and incarceration histories. We know from past studies of other jail inmates in California and of sentenced inmates in the Sonoma County Detention Facilities that far less than 10 percent of the inmates have served prison time. Most of the prior incarceration histories are local only, and a good number of the prior arrests are for misdemeanors. Inmates being held for personal offenses account for nearly a fourth of the sample, with the rest made up of minor offenses, property, drugs, and "other" offenses. Some of the latter includes individuals who indicated they were held for more than one offense. Their average age is 30.7 years. The average time spent in custody

Characteristics of Inmates

Characteristics	Number	Percent
Ethnicity/race		
Asian	12	3.6
Afro American	36	10.7
Anglo	175	51.8
Hispanic	17	5.0
Native American	50	14.8
Latino	5	1.5
Other	21	6.2
Combination	3	0.9
No information	19	5.6
Gender		
Male	271	80.2
Female	49	14.5
No information	18	5.3
Prior arrests		
Never	14	4.1
1-2 times	43	12.7
3-5 times	70	20.7
6-10 times	71	21.0
11-20 times	53	15.7
Over 20 times	65	19.2
No information	22	6.5
Prior jail/prison		
Never	27	8.0
Once	34	10.1
2-3 times	78	23.1
4-5 times	45	13.3
6 or more times	136	40.2
No information	18	5.3
Commitment offense		
Minor	64	18.9
Property	75	22.2
Personal	79	23.4
Drug/alcohol	42	12.4
Other	46	13.6
No information	32	9.5
Mean age in years	30.711	
s.d.	8.945	
Days in custody at time of survey	87.585	
s.d.	95.828	
Inmate location		
Old Main	110	32.5
NCDF	76	22.5
MADF	152	45.0

at the time of the study is 87.6 days, which is very long for jail inmate populations. It part this reflects the method of data collection used here.¹⁰

Jail Environment and Inmate Evaluations.

MAF and MADF: Males. The table below compares the MAF to the MADF. The mean differences favoring the podular design, direct supervision facility are here very sharp since the NCDF is excluded from the analysis. The outcome of all scale items and indexes are in the predicted direction. All of the scale items except one (Emotional Feedback) show a statistically significant improvement after the move to MADF. Moreover, all inmate evaluative scores are statistically significant. The improvement in the three scores is particularly high for the one that taps their evaluation of the facility. This is fairly good evidence that inmates have far more positive evaluations of the new physical environment, which is consistent with officer evaluations.

Subgroup Differences. In order to assess whether differences in inmate characteristics across the MAF and MADF might explain the improvement associated with transfer to the MADF, or whether certain subcategories of inmates adapted better than others to the MADF, subsequent analyses controlled for various background characteristics of the inmates. In most instances the jail environment inventory scales were reproduced for the subgroups compared, including inmate ethnicity, gender, age, time in facility, pretrial vs. sentenced status and two measures of prior record.

Visual inspection of mean indicators of the environment and

Mean Scores on Jail Environment:
MAF and MADF

<u>Scale</u>	MAF [*]		MADF ^{**}	
	<u>Mean</u>	<u>s.d.</u>	<u>Mean</u>	<u>s.d.</u>
Safetya	11.90	3.23	9.93	3.06 ^b
Structure	15.77	3.21	16.75	2.80 ^b
Privacy	13.18	3.61	17.73	3.34 ^b
Support	11.57	3.03	12.79	3.20 ^b
Social				
Stimulation	14.61	3.30	15.79	3.59 ^b
Freedom	14.54	2.77	16.66	3.81 ^b
Emotional				
feedback	15.23	2.62	15.30	2.95
Activity	12.72	3.85	15.83	3.34 ^b
<u>Indexes</u>				
Facility scorec	33.26	8.54	23.14	7.35 ^b
Officer scorec	52.49	17.20	46.82	14.09 ^b
<u>Inmate scorec</u>	<u>53.26</u>	<u>13.35</u>	<u>47.79</u>	<u>13.44^b</u>

The number of cases ranges from 95-105. It does not drop below ^{**}n=100 for the scale items.

The number of cases ranges from 124-146. It does not drop below n=142 for the scale items.

^aA higher score on the Safety scale represents a worse evaluation. A higher score on the remaining scales (Structure through Activity) represent a better evaluation.

^bThe difference in mean scores is significant at the .05 level or below using a two-tailed test.

^cThe items in this index are scored such that a low mean score represents a more positive evaluation.

inmate evaluations for the MAF and the MADF reveals that the original results were not reproduced in only a few instances. When age was divided into quartiles, inmates between the ages of 30 and 37 have essentially the same means on the Structure scale (both means = 16.6). There are two other subgroup departures on the Structure scale: while the number of cases is somewhat small, Native Americans in the MAF (mean=17.1, n=18) had more positive perceptions of structure than Native Americans in the MADF (mean=16.5, n=16). This is formally referred to as an "interaction

effect"--the effects of the MADF on perceptions of structure are reversed for Native Americans compared to the remaining ethnic groups. The same kind of reversal occurred for inmates who had served between 22 and 65 days in custody (with time in custody divided into quartiles) at the time of the survey. The MAF inmates in this group felt more positively with regard to Structure (mean=17.3, n=19) than did the MADF inmates (mean=16.8, n=40).

There is one small subgroup departure from the overall results in the Support scale among those with the lengthiest records of prior arrest (those over 20 priors). MAF inmates in this category had somewhat more positive perceptions of a supportive environment (mean=11.6, n=25) than did MADF inmates (mean=11.5, n=26). Moreover, there are two subgroup departures in the Social Stimulation subscale. MAF inmates with between 22 and 65 days time in custody or 151 days or more in custody are more positive in their evaluations on this scale than MADF inmates (MAF means=15.8 and 15.8, respectively vs. MADF means=15.6 and 15.5, respectively). Finally, MAF inmates with records of over 20 prior arrests have more positive perceptions of social stimulation (mean=15.1) than MADF inmates (mean=14.6).

The results of the subgroup analysis for Facility, Officer and Inmate scores also show a few departures from the overall results. Perhaps the most interesting finding concerns how inmates from the two facilities evaluated correctional officers depending upon their length of stay in custody. As noted earlier, overall, inmates view officers more favorably in the MADF than in the MAF. However, this

a favorable evaluation is greater among MADF inmates who have been incarcerated for somewhat shorter periods of time, i.e., generally speaking, those who had spent under 66 days in custody but especially for those who had spent under 22 days.¹¹ There is little difference in inmate evaluations of correctional officers among those who have spent 66 or more days in either facility.

The Officer evaluation scores for MAF inmates who spent 66 to 150 days in custody (mean=52.8, n=24) and 151 or more days (mean=55.9, n=20) are very similar to those of MADF inmates in these categories (mean for 66 to 150 days=51.2, n=25 and mean=54.7, n=20, respectively). Another way of saying this is that the shorter term inmates have experienced the greatest improvements in their evaluations of correctional officers in the MADF. This is shown by the scores of MADF inmates who spent less than 22 days in custody (mean=39.7), which are substantially better than those spending similar lengths of time in the MAF (mean=50.6). (It is important to remember that lower scores indicate more positive evaluation on this measure of outcome.) It is unclear why officer scores vary by inmate length of stay and facility. The absence of this pattern among females may reflect their general unhappiness with the transfer. Among males, who otherwise showed more positive results in MADF, one may speculate that the implications of deprivation of liberty, no matter how diluted by the new MADF environment, become more evident with time, along with a recognition of the centrality of officers in defining the terms of their confinement. Seemingly, differences in decisions by module officers regarding

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showed improvement in the scales measuring Safety ($t=1.69$, $df=44$, $p=.099$) and Privacy ($t=2.05$, $df=43$, $p < .05$). However, they show declines, some significant, on the other scale items.

Female Scores on Jail Environment and Evaluations

<u>Scale/Index</u>	<u>NCDF</u>			<u>MADF</u>		
	<u>Mean</u>	<u>s.d.</u>	<u>N</u>	<u>Mean</u>	<u>s.d.</u>	<u>N</u>
Safety ^a	10.059	2.045	17	8.900	2.568	29 ^{**}
Structure	18.278	2.492	18	17.259	2.683	27
Privacy	15.313	2.301	16	16.966	3.029	29 [*]
Support	14.333	2.722	18	13.345	2.755	29
Social						
stimulation	20.177	2.481	17	16.929	3.877	28 [*]
Freedom	15.889	1.967	18	13.700	3.229	30 [*]
Emotional						
feedback	20.389	1.852	18	16.724	3.326	29 [*]
Activity	16.889	2.805	18	13.862	3.367	29 [*]
Facility score ^c	22.882	3.621	17	24.800	6.880	25
Officer score ^c	34.059	14.885	17	50.261	7.956	23 [*]
Inmate score ^c	45.882	9.854	17	47.370	12.777	27
Psychological						
anxiety ^b	4.889	1.745	18	4.484	1.568	31
Physical health ^b	5.647	0.786	17	5.800	1.095	30
Immobilization ^b	6.000	1.414	18	5.581	1.544	31
Physical						
anxiety ^b	7.000	1.369	17	5.968	1.888	31 [*]

The difference in means is statistically significant at the .05 level or below using a two-tailed test.

^{**}The difference in means is statistically significant at the $> .05 < .10$ level using a two-tailed test.

^aA higher score on this scale/item represents a worse evaluation.

^bHigher scores mean lower stress and vice versa.

^cThe items in this index are scored such that a low mean score represents a more positive evaluation.

Insignificant declines are shown for Structure and Support. Statistically significant declines are shown on the scales measuring Social Stimulation ($t=3.4$, $df=43$, $p=.001$), Freedom ($t=2.6$, $df=46$, $p=.005$), Emotional Feedback ($t=4.3$, $df=45$, $p < .001$) and Activity ($t=3.33$, $df=45$, $p=.002$).

Inspection of the evaluative scores also suggests that female evaluations of the Facility, Inmates and Officers deteriorated. The most dramatic and only statistically significant decline is in their perceptions of correctional officers (NCDF mean=34.1 (n=17); MADF mean=50.3 (n=23), $t=4.44$, $df=38$, $p < .001$). The Facility and Inmate scores also declined but not by nearly as much (for Facility, from 22.9 (n=17) in the NCDF to 24.8 (n=25) in the MADF; for the Inmate score, the NCDF mean=45.9 (n=17), and the MADF mean=47.4 (n=27). Recall that a higher score means a less favorable rating).

One might argue that the gender differences in perceptions as reflected in the Officer, Inmate and Facility indices are spurious because the differences have to do with the facility they were previously housed in. We test that argument in the table below by showing the performance of males at the NCDF and MADF. One would expect that male NCDF inmates would show similar patterns as females if this argument were true. The data show in contrast that males show improved scores on both Facility (NCDF mean=30.8 (n=52), MADF mean=22.8 (n=107)) and Inmate (NCDF mean=55.2 (n=50) MADF mean=47.8 (n=101)) indices, but no change on the Officer index (NCDF mean=45.7 (n=49) MADF mean=45.7 (n=97)). These data suggest that the prior housing unit of females alone does not entirely explain their poor showing on the indices in question.

The same table can be used to compare male and female changes on the prison environment scales. NCDF males also show statistically significant improvement in the scales measuring Safety and Privacy and a significant decline in Social Stimulation,

Male NCDF vs. MADF Outcomes

<u>Scale/Index</u>	Direction of Outcome <u>MADF</u>	Significance <u>Level</u>
Safety ^a	Better	.10
Structure	No difference	-
Privacy	Better	<.05
Support	No difference	-
Social		
stimulation	Worse	<.05
Freedom	Better	<.05
Emotional		
feedback	No difference	-
Activity	Better	<.05
Facility score	Better	<.05
Officer score	No difference	-
Inmate score	Better	<.05
Psychological		
anxiety ^b	Better	<.05
Physical health ^b	No difference	-
Immobilization ^b	Better	<.05
Physical anxiety ^b	Better	<.05

^aA higher score on this scale/item represents a worse evaluation.

^bHigher scores mean lower stress and vice versa.

each of which was also true of females. Just the opposite of females, however, NCDF males showed statistically significant improvements in Freedom and Activity. While it is unclear how to explain these differences in performance in their entirety, discussions with detention facility personnel suggest that the poor outcomes of females reflect the loss of privileges they enjoyed at the NCDF, such as: an ability to wear makeup, to talk to male inmates, to an unknown extent access to drugs, more spacious surroundings and an outdoor feeling, an ability to smoke until January 1991 (also true for males) and less security, among others.

The only stress item that shows a significant change for the

females is that measuring Physical Anxiety, which worsened in the MADF (NCDF mean=7.0 (n=17), MADF mean=5.97 (n=31), $t=2.17$, $df=46$, $p = .04$)).

Results of the subgroup analysis of the physical anxiety difference can only be suggestive because of the small number of cases involved. The data suggest nonetheless that physical anxiety decreased as length of stay increased in the NCDF but that this was not so in the MADF. The respective mean scores on this item for those in MAF custody for periods of 0-21 days (6.4, n=5), 22-65 days (6.75, n=4), 66-150 days (7.5, n=6) or 151+ days (7.5, n=2) and for the respective time periods in MADF only 5.818 (n=11), 6.556 (n=9), 5.778 (n=9) and 5.0 (n=2). Other MADF inmates whose physical anxiety levels were higher than the NCDF inmates included those who were serving sentences (MADF mean=5.4, n=12, NCDF mean=7.5, n=6) compared to those either in pretrial custody or pretrial custody and serving sentence (MADF mean=6.2, n=16, NCDF mean=6.6, n=10). Further analysis of how various subgroups performed overall is taken up while making comparisons in performance for specific facilities (see below).

MADF vs. MAF and NCDF Combined. The data in the table below show that inmates evaluate the MADF more positively than the MAF and NCDF combined on all dimensions of the prison environment inventory and the additional indexes of inmate perceptions of facility, officer and other inmates. Five of the eight prison environment inventory differences are statistically significant at the .05 level or below, while the other three (structure, social stimulation

Overall MAF and NCDF vs. MADF Outcomes

<u>Scale</u>	<u>MAF & NCDF</u> [*]		<u>MADF</u> [*]	
	<u>Mean</u>	<u>s.d.</u>	<u>Mean</u>	<u>s.d.</u>
Safety ^a	11.98	3.18	9.93	3.06 ^b
Structure	16.44	3.00	16.75	2.79
Privacy	13.42	3.45	17.73	3.34 ^b
Support	12.09	3.04	12.79	3.20 ^b
Social				
Stimulation	15.76	3.64	15.79	3.59
Freedom	14.33	2.83	16.66	3.81 ^b
Emotional				
feedback	15.73	3.04	15.30	2.95 ^b
Activity	13.81	3.76	15.93	3.34 ^b
<u>Index</u>				
Facility score ^c	31.44	8.94	23.14	7.35 ^b
Officer score ^c	48.56	17.60	46.82	14.09 ^b
Inmate score ^c	53.20	13.02	47.79	13.44 ^b

^{*}The number of cases ranges from 164-180. It does not drop below n=171 for the scale items.

^{**}The number of cases ranges from 124-146. It does not drop below n=142 for the scale items.

^aA higher score on this scale/item represents a worse evaluation.

^bThe difference in mean scores is significant at the .05 level or below using a two-tailed test.

^cThe items in this index are scored such that a low mean score represents a more positive evaluation.

and emotional feedback) are not significant. It bears repeating that the Freedom dimension of the inventory was not extremely reliable (see above). Two of the three other inmate indices (Facility and Inmate) are also statistically significant. Only the item relating to correctional officer characteristics is not.

It is of interest to note those scale items which indicate the largest improvement. The scale tapping Privacy shows a great improvement, from a mean of 13.4 to a mean of 17.7. Certainly a major improvement from an inmate point of view is a single cell in

the MADF, along with other aspects of privacy captured by this scale. There are also larger than average improvements in the Freedom and Activity scales. Compared to the older facilities, the MADF would be superior in these areas. It is relatively easy to comprehend why inmates would show more positive evaluations of the facility. However, the lack of change in perceptions of correctional officers is unclear. (It may reflect the fact that direct supervision was previously used among Dayroom inmates in the MAF.)

In order to assess whether differences in inmate characteristics across facilities might explain the improvement associated with transfer to the MADF, subsequent analyses controlled for various background characteristics of the inmates for those scales with significant change. Controls for the offense leading to the current stay showed no differences in performance across the prison environment scales and inmate evaluations of officer, facility and other inmates.

Overall Results. Comparisons of the pretest and posttest means for the scale and index items are made below for the MADF, the MAF and NCDF. This analysis (not displayed) compared scale and index items of the three subgroups available for analysis: the MAF, NCDF and the MADF. The statistical analysis performed (a oneway analysis of variance) indicated statistically significant differences between the means of the three subgroups on all scales and items. These results suggest that, overall, the new, podular design facility was associated with more favorable inmate evaluations of climate,

officer, facility and inmate evaluations.

As shown above, however, going further, visual inspection of the results indicated that the differences in mean scores were somewhat greater between the MAF and the MADF and NCDF than between the NCDF and the MADF. For example, in some instances the scale means tapping the prison environment were fairly similar between NCDF and the MADF, such as with the Support, Emotional Feedback, and Activity scales. In fact, the NCDF mean on Emotional Feedback is slightly (but insignificantly) higher than the MADF. Moreover, the Officer score for the MADF inmates (mean=46.82, s.d.=14.09) is between that of the NCDF (mean=43.0, s.d.=16.73) and the MAF (mean=52.49, s.d.=17.20). So, while MADF inmates feel more positively about correctional officers than they did in the MAF, the MADF inmate evaluations are still not as high as those at the pretest for NCDF inmates.

Inmate Stress Scores. The final table displaying the main results of the study is shown below. It compares the inmates across the MAF, NCDF and MADF with respect to their levels of stress, as measured by the stress scales of psychological anxiety, physical health symptoms, immobilization and physical anxiety (Gurin et al., 1960). The results indicate that inmates in the MADF show the least amount of stress across facilities. A major exception to this, noted above, is females. The overall difference is nonetheless statistically significant for three of the four stress measures; it is not statistically significant for the stress measure relating to physical health symptoms but the results are in the expected

direction. The largest improvement in stress level (as indicated by the size of the mean difference) is in reduced physical anxiety.

Inmate Stress Levels by Facility

<u>Scale</u>	MAF*		NCDF**		MADF***	
	<u>Mean</u>	<u>s.d.</u>	<u>Mean</u>	<u>s.d.</u>	<u>Mean</u>	<u>s.d.</u>
Immobilization ^a	5.30	1.55	5.49	1.68	5.94	1.55 ^b
Physical anxiety ^a	5.58	1.69	5.93	1.75	6.36	1.66 ^b
Physical health symptoms ^a	5.50	1.08	5.69	0.87	5.73	1.04
Psychological anxiety ^a	4.33	1.54	4.60	1.72	4.89	1.61 ^b

*The number of cases ranges from 100 to 103.

**The number of cases ranges from 72 to 75.

***The number of cases ranges from 146 to 148.

^aHigher scores mean lower stress and vice versa.

^bThe overall difference in means across facilities is significant at the .05 level or below.

The results were also examined by making comparisons between pretest scores and posttest scores for different subgroups of interest, i.e., by combining the MAF and NCDF into one group, and by looking specifically at the MAF and MADF difference in particular, excluding females. These analyses (data not shown) indicated that the original finding of MADF inmates showing less stress was replicated for each subgroup comparison, except that the difference between MAF and MADF inmates became marginally significant ($F=2.72$, $df=1,244$, $p=.10$) for the scale on physical health symptoms. Had a more liberal one-tailed test of statistical significance been used the difference would probably be statistically significant.

Overall, these results suggest that male inmates experience less stress in the MADF than they did in either the NCDF or MAF, and that this difference is greater between the MAF and the MADF.

As shown above, these positive results only apply to men. Women, who were held at NCDF at the pretest, actually did worse in the MADF on three out of the four scales and did significantly worse on the scale measuring psychological anxiety. Removing females from the overall analysis does not alter the original general conclusion, but the poor showing of females may pose important policy issues and research questions.

For male inmates, the difference in Psychological Anxiety does not exist for personal offenders; the difference in Physical Anxiety does not exist for those held for drug-related offenses; and the overall difference in Immobilization does not exist for those whose current offense is "all other".

Outcomes by Inmate Module

It seemed worth examining whether inmate responses varied by module. While policies and procedures are intended to help ensure continuity across modules, it seems likely that the personality and styles of individual correctional officers and the slightly different characteristics of inmates in various modules (such as protective custody, administrative segregation in particular) might have an aggregate "module" effect on inmates. Quite a few officers had spent two or months in the same module at the time of the survey. Inmates were in fact given the questionnaires a short while before correctional officers were to be rotated into another module.

The analysis performed compared the mean scores across the seven modules, which included protective custody, administrative segregation, one female module and four male modules. Because of

Inmate Outcomes by Module

<u>Scale/Index</u>	<u>Module</u> [*]							<u>Sig.</u>
	<u>D</u>	<u>B</u>	<u>C</u>	<u>A</u>	<u>PC</u>	<u>AS</u>	<u>F</u>	
N of cases	20	25	13	34	16	9	29	
Safety ^a	11.6	9.0	11.5	9.8	9.3	11.3	8.9	<.05
Structure	14.7	16.8	17.4	17.5	16.3	16.8	17.3	<.05
Privacy	15.7	19.0	18.6	18.8	17.7	16.3	17.0	<.05
Support	12.4	13.2	10.8	12.6	13.0	13.9	13.3	n.s.
Social Stimulation	14.8	16.2	14.8	16.9	14.3	13.8	16.9	<.05
Freedom	15.9	18.1	17.2	17.9	16.9	18.1	13.7	<.05
Emotional Feedback	14.1	15.2	14.2	15.2	15.5	15.2	16.7	.06
Activity	14.6	16.9	15.5	16.4	17.6	16.9	13.9	<.05
Facility score	25.5	21.5	23.5	21.7	23.4	22.2	24.8	n.s.
Officer score	47.3	46.5	53.5	42.0	48.7	44.0	50.3	n.s.
Inmate score	51.0	45.3	46.7	47.3	47.9	52.6	47.4	n.s.

* PC is protective custody; AS is administrative segregation; and F is females.

^aA higher score on this scale/item represents a worse evaluation. The items for facility, officer and inmate scores are summed in such a way that a low mean score represents a more positive evaluation.

the relatively small numbers of inmates per module it was difficult to perform subgroup analysis. In any case, the results of these comparisons are shown above, along with the statistical significance of the differences in means.

OTHER DATA SOURCES

Inmate Incident Reports. Information on all incidents for the pre and post periods is shown in the table below. Incidents are categorized in terms of staff assaults; inmate assaults; all assaults (staff and inmate combined); medical emergency, attempted suicide, mental health and illness combined; group disturbances; contraband; nonpunitive safety cell placement; cell searches; rule violations not covered under assaults; and miscellaneous accidents

and injuries and "all other". (Punitive disciplinary isolation is examined in the next section.) Inmate incidents are standardized by converting raw numbers of incidents into rates per 100 inmates.

While the overall total rates shown at the bottom of the table have not been dramatically affected by the transition, these totals are heavily weighted by the most frequent but generally less serious rule violations and miscellaneous incidents near the bottom of the table. Perhaps of greater interest are changes in assaultiveness between staff and inmates, contraband, and the like, things that the new generation philosophy has more specifically addressed.

As can be seen, overall rates of assault are more than cut in half after the transfer to the MADF. Given the relatively low rates of assault against staff to begin with the major reduction occurs for inmate assaults--i.e., in minor assaults and to a much lesser extent suspected assaults. For example, the inmate rate of assaults declined from 3.702 per 100 inmates during the second quarter of the pre period to 1.312 per 100 inmates during the first quarter after the transition, a substantial drop.

There are also declines in rates of medical/attempted suicide incidents etc. (as combined), cell searches and group disturbances (albeit smaller declines), and a possible decrease in the use of safety cells.

There is, however, a surprising increase in the rate of contraband incidents. The rate increased from 0.740 per 100 inmates in the quarter before the transition to a rate of 2.826 during the next quarter, and increased again to 3.442 in the last quarter of

the followup. It is not clear why these increases occurred. One possibility is that illicit cigarette possession and/or use has increased, since smoking was banned in January of 1991 in the MAF and continued in the MADF. This does not explain, however, why the pre period contraband rates actually decreased in the quarter before the transition--just prior to their steep increase in the post transition period. This dip might be explained by the extra effort being spent on training for the MADF. Whatever the reason for the decrease, it may also be, however, that officers simply have had more time, opportunity and/or incentives to uncover contraband violations after the transition, whereas at MAF it might have been a major effort to uncover a contraband violation. Individual rooms and private space at MADF have also led to accountability for individual inmates, whereas dormitory situations at MAF diffused accountability. Random cell searches at MADF have also been turning up extra underwear, pants, blankets, and the like, each of which ends up counted as contraband but may well have escaped notice or not been written up at the MAF.

Inmate Disciplinary Hearing Data. Another data source examined was the monthly logs of all criminal (Section 100) incidents resulting in a disciplinary hearing at the MADF. Hearing logs obviously only include incidents which resulted in a disciplinary hearing. It is unclear which if any incidents were charged by the county prosecutor. Because of the difficulty in interpreting hearing data on other kinds of rule violations, the study only examines events treated as criminal violations. The

Rate of Inmate Incident Reports,
Pre and Post Transition, by
Type of Incidents

Rate of Incidents

Incident type	Pre Transition		Post Transition	
	4/1/91- 6/30/91	7/1/91- 9/31/91	11/1/91- 1/31/92	2/1/92- 4/31/92
Staff assaults	0.592	1.036	0.606	0.709
w/injury	0.296	0.000	0.101	0.101
No injury	0.296	0.592	0.303	0.405
Verbal only	0.000	0.444	0.202	0.202
Inmate assaults	3.849	3.702	1.312	1.316
Minor	2.665	2.961	0.808	0.810
Minor	0.592	0.296	0.505	0.405
Suspected	0.592	0.444	0.000	0.101
All assaults	4.441	4.738	1.918	2.025
Medical/mental	2.703	2.665	1.918	1.519
Suicide attempt	0.740	0.296	0.505	0.000
Mental health	0.148	0.444	0.000	0.101
Illness	0.740	1.036	1.211	1.215
Medical emergency	0.444	0.888	0.202	0.202
Group disturbance	1.776	0.148	0.606	0.304
Major	0.444	0.000	0.000	0.000
Minor	1.332	0.148	0.606	0.304
Contraband	1.924	0.740	2.826	3.442
Safety cell	9.771	11.697	6.157	9.517
Cell searches	3.553	5.034	1.413	2.734
Rule violations	20.577	14.214	23.216	22.983
Miscellaneous	17.765	14.658	12.718	17.718
Injury/accident	8.142	7.699	6.056	9.011
Other	9.622	6.959	6.662	8.707
OVERALL	61.880	53.894	50.772	60.241
TOTAL				
INCIDENTS	(418)	(364)	(503)	(595)

*The rate of incidents =

the quarterly sum number of incidents
the sum of quarterly average daily population times 100.

The table excludes the month of transfer (October, 1991).

Rate of All Section 100 Inmate Disciplinary
Actions Before and After Transfer to MADF
April 1991 - April 1992

<u>Month of study</u>	<u>Total Incidents</u>	<u>Rate per 100 inmates*</u>
April 1991	16	7.048
May	13	5.827
June	25	11.091
July	16	7.133
August	24	10.662
September	13	5.752
April - September		<u>7.621¹</u>
October/transition . . .	21	8.314
November	7	2.165
December	14	4.274
January 1992	22	6.476
February	6	1.778
March	17	5.113
April	8	2.517
November - April		<u>3.623¹</u>

*The rate of incidents per 100 inmates is calculated as follows:

$$\frac{\text{the number of monthly incidents}}{\text{the monthly average daily population}} \text{ times } 100.$$

¹The quarterly rate is an unweighted average of the preceding six monthly periods.

results of this analysis, shown in the table below indicate that the rate of all such incidents was more than cut in half from the six month period before the transition to the MADF to the six month period after the transition. Between April and September of 1991 the rate of disciplinary actions for criminal incidents averaged 7.621, which decreased to 3.623 for the November 1991 through April 1992 period. This excludes the month of transition (October, 1991) from calculations.

Rate of Criminal (Section 100) Inmate Disciplinary
Actions Before and After Transfer to the MADF
April, 1991 - April 1992

<u>Month of study</u>	Rate* of:				
	<u>Staff Assaults¹</u>	<u>Inmate Assaults²</u>	<u>Any Assault³</u>	<u>Fighting</u>	<u>Other⁴</u>
April-June, 1991	1.184	0.888	2.221	2.073	1.480
July-September, 1991	0.444	1.036	1.925	3.109	0.296
April-September 1991	1.628	1.924	2.073	2.591	0.888 ⁵
November 1991-January 1992	0.101	0.202	0.404	2.523	0.606
February-April	0.709	0.202	1.012	1.012	0.405
November-April, 1992	0.405	0.202	1.416	1.768	0.506 ⁵

*The rate of incidents =

$\frac{\text{the number of monthly incidents}}{\text{the monthly average daily population}} \times 100.$

¹Includes assault, threatening staff, throwing object(s) or spitting at staff.

²Includes assault, threatening staff and throwing object(s) at other inmates. This does not include fighting.

³Includes all assaults, threats, throwing of objects, battery in which the victim was unspecified, spitting, etc. against staff or inmates. However, it excludes fighting between inmates.

⁴Includes property destruction, tampering with property and rioting. If riot related offenses are excluded the rate for the April - June, 1991 period becomes 0.296 while the remaining quarterly rates are unaffected; the rate for the first six month period then becomes 0.296.

⁵The rate is an unweighted average of the two preceding quarters.

The next tables display the rates of various categories of incidents resulting in disciplinary hearings and the outcome of disciplinary hearings, respectively. The first table breaks the results into quarterly rates and (for ease of presentation of the results) excludes the transition month. The results suggest that the greatest declines are found in rates of staff assault (a decline

of 25 percent, from a rate of 1.628 between April and September of 1991 to one of 0.405 between November 1991 and April, 1992); inmate assault (a 90 percent decline), all assaultiveness (a 68 percent decline), fighting (a 68 percent decline), and all other criminal offenses (a 57 percent decline). The assault data appear to be consistent with overall incident data examined earlier.

The analysis then turned to the nature of dispositions following disciplinary hearings. Most hearings resulted in a finding of guilt and, if the inmate was not released prior to a finding, most inmates received disciplinary isolation as the major disposition. For example, fully 56% of the 197 hearings resulted in a disposition of disciplinary isolation; only 4.6 percent or 9 of the 197 hearings resulted in a not guilty finding; 15 or 7.6 percent were unknown; 10 or 5.1 percent were released from custody before the hearing; 6 or 3 percent were counseled; 2 or 1 percent were given low diets; 9 or 4.6 percent lost good time; 6.1 percent received a combination of sentences; and dispositions were unclear for the remainder (data not shown).

It was of interest to see whether or how the dispositions of incidents were affected by the transition to MADF. The data displayed below suggest that the use of disciplinary isolation declined by 67 percent--a substantial drop. While instances of disciplinary isolation grew in number during the quarter following the transition to the MADF, the increase in average daily population actually resulted in a lower rate than found in the pretest period. During the month of transition (October, 1991), the rate of

disciplinary isolation was 3.959.

It is not clear how to interpret the decline in the rate of disciplinary isolation. After all, it is only a 33 percent decline (from 3.776 to 2.526). While a decline in this rate is positive

Rate of All Section 100 Inmate Disciplinary Dispositions
Involving Isolation Before and After Transfer to the MADF
April 1991 - April 1992

<u>Period of study</u>	<u>Total isolation dispositions</u>	<u>Rate per 100 inmates*</u>
April-June, 1991	25	3.701
July - September, 1991	26	3.850
April - September 1991	51	3.776 ¹
November 1991 - January 1992	33	3.331
February-April, 1992	17	1.721
November - April, 1992	50	2.526 ¹

*The rate of incidents is equal to the:

$$\frac{\text{the number of isolation dispositions}}{\text{the monthly average daily population}} \times 100.$$

¹This rate is an unweighted average of the two preceding quarterly periods.

relative to the rate at the MAF, the rate of decline is substantially less than the overall 50 percent decline in Section 100s observed above. In other words, we are left with the question of why the rate of isolation has not declined even more.

Further analysis (see next table) suggests that the answer to this puzzle lies in the greater likelihood of disciplinary isolation as a response to incidents in the post-transition period.

Specifically, during the six month period prior to the transition, 49.5 percent of the 103 inmates who had a disciplinary hearing received a disposition of isolation. During the post transition six month period, fully 68.5 percent of the 73 inmates who had a hearing

Section 100 Dispositions (in percent)		
	<u>Pre period</u>	<u>Post period</u>
Not guilty, no action taken, released before disposition, unclear. . . .	28.2%	13.7%
Counseled, low diet, restitu- tion, loss of canteen, yard or visits. . .	3.9	8.2
Loss of good time	6.8	1.4
Disciplinary isolation. . .	49.5	68.5
Other	<u>11.7</u>	<u>8.2</u>
Total	100.0%	100.0%
N	103	73
<u>Missing information 21 cases (October transition)</u>		

received a disposition of isolation. (Information was "missing" for 21 inmates with violations during the October 1991 transition period.) That is an absolute percent difference of about 19% and a relative increase of 38 percent in the use of isolation during the post-transition period.

The next table breaks down the dispositions by offense. Although the numbers are small for some comparisons, the greater likelihood of disciplinary isolation at MADF holds regardless of the hearing offense. It is especially high in the post period for the most frequent offenses (fighting, all assaults).

Disposition by Offense for the Pre and Post Periods

<u>Disposition</u>	Staff <u>Assaults</u> ¹	Inmate <u>Assaults</u> ²	Any <u>Assault</u> ³	Fighting	Other ⁴
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Pre Period (in percent)

Not guilty, no action taken, released before disposition, unclear. . . .	18.2%	23.1%	17.9%	45.7%	16.0%
Counseled, low diet, restitution, loss of canteen, yard or visits. . . .	9.1	7.7	10.7	0.0	4.0
Loss of good time	0.0	15.4	7.1	8.6	4.0
Disciplinary isolation. . . .	63.6	46.2	57.1	31.4	56.0
Other	<u>9.1</u>	<u>7.7</u>	<u>7.1</u>	<u>14.3</u>	<u>20.0</u>
Total	100.0	100.0	100.0	100.0	100.0
N	11	13	28	35	25

Post Period (in percent)

Not guilty, no action taken, released before disposition, unclear. . . .	25.0%	25.0%	28.6%	8.6%	12.5%
Counseled, low diet, restitution, loss of canteen, yard or visits. . . .	0.0	0.0	0.0	5.7	16.7
Loss of good time	0.0	0.0	0.0	0.0	25.0
Disciplinary isolation. . . .	75.0	75.0	71.4	82.9	45.8
Other	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>2.9</u>	<u>12.5</u>
Total	100.0	100.0	100.0	100.0	100.0
N	8	4	14	35	24

¹Includes assault, threatening staff, throwing object(s) or spitting at staff.

²Includes assault, threatening staff and throwing object(s) at other inmates. This does not include fighting.

³Includes all assaults, threats, throwing of objects, battery in which the victim was unspecified, spitting, etc. against staff or inmates. However, it excludes fighting between inmates.

⁴Includes property destruction, tampering with property and rioting, drug offenses, other miscellaneous offenses.

In summary, these data show that the rate of violations as measured by disciplinary hearings decreased after the move to the MADF. Disciplinary isolation as an outcome disposition of hearings has also decreased but not nearly as rapidly as hearings. The data suggest that disciplinary isolation is being used more extensively on the relatively smaller number of inmates who have hearings for criminal incidents.

Cost Data. The MADF cost a total of \$41.5 million to design and build. During the fiscal year August 1, 1991-July 31, 1992, the daily jail rate per inmate for the old main facility was \$82.50. The total allowable costs were \$9,749,518. During the fiscal year 1992-1993, the daily jail rate per inmate increased to \$101.86, and total allowable costs are \$12,997,744.¹²

There has therefore been a \$19.36 increase per inmate or a 23.47 percent increase in operating costs. The increase is due to a variety of factors, including inflation, higher costs of heating and cooling the new facility, and staff increases.

Conclusions

The study has examined Sonoma County's new, state-of-the-art new generation detention facility. It uses a simple before-after research design with standardized instruments, including surveys completed by correctional officers and inmates, along with other agency records on inmate incidents and disciplinary hearings and officer personnel performance.

The results suggest that male inmates feel significantly more positively about the MADF than they did the MAF. Females, in

contrast, feel far less positive about the new facility. They show an increase in stress and, at best, mixed impressions as revealed by the prison environment inventory. As discussed in the report, this mixed result may be due to the more relaxed and less restrictive environment the women previously enjoyed at NCDF.¹³ Nonetheless, information relating to the inmates' quality of life probably provide the strongest evidence to date that the MADF is working as intended: in addition to an improved social climate there have been substantial reductions in rates of inmate and staff assaults as well as many other incidents. While inmates do have a somewhat safer and probably more responsive environment, they are also more controlled. In a nutshell, based on the data collected, the new facility appears to be better serving inmates.

The correctional officers show some improved feelings after the move to the MADF. They certainly are happier with their pay and the new physical environment. Compared to the MAF officers, MADF officers do not feel that they receive sufficient feedback on their work which might come from supervisors, co-workers or the work itself. It may be that one cost of the relative isolation and autonomy of officers in the modules is their inability to receive sufficiently meaningful feedback to their work.

This study by no means provides a final answer to the question of the effectiveness of the new facility but the overall positive results of the study point out some useful directions for future inquiry and possible policy. There should be a longer term followup to determine whether the changes observed are merely short term.

There is no doubt that changes will occur.

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Endnotes

1. One reason for the decline in bookings and to some extent ADP has been the imposition of a booking fee on certain inmates booked at the jail. This fee is used by this county and others in California to generate revenue as local monies have become increasingly scarce. It is unclear what long term effect the booking fee will have on admissions and ADP. It is fairly clear that the economic situation has not improved and may be worse than it was a year ago.

2. See, for example, Nelson and O'Toole, (1983) and Sigurdson (1987).

3. This questionnaire and others were kindly provided by Linda Zupan.

4. Zupan and Menke (1988:617) obtained 76 and 59 percent response rates, respectively, in their pre and post surveys of staff.

5. The Motivating Potential Score is equal to:

$$\frac{\text{skill variety} + \text{task identity} + \text{task significance}}{3}$$

times autonomy times feedback.

This general formula says that an increase in any of the core dimensions of work will increase the motivating potential of a job. However, due to the multiplicative nature of the relationship among the components, if any of the major components is low the overall motivating potential of the job will be low.

6. Both data entry and quantitative data analysis were performed on an AT using SPSS/PC+ Version 4.0 and with an econometrics statistical package known as SHAZAM Version 6.1 (White et al., 1988).

7. "Statistically significant" here means that the differences observed have been determined to be "different" using a standard statistical procedure, here a t-test of means, at the .05 level of significance. A two-tailed test of significance is used, which makes for more conservative tests here even though the result is predicted. Elsewhere other procedures are used, such as a chi-square test or analysis of variance. Statistical significance should not be confused with "substantive" significance. Even a small mean difference may be statistically significant but of minor substantive importance. Because the populations being compared are not entirely independent, since some officers at the old MADF are also in the new MADF, a finding of a significant differences may not, strictly speaking, be tenable in all instances. Given the

alternatives, however, the procedures used appeared optimal.

8. The finding regarding level of pay was also reported by Zupan (1991:140). That study also found more positive results in favor of direct supervision on the dimensions of opportunities for promotion and character of work. Zupan did not report any differences between direct supervision workers and those in other facilities on any of the job diagnostic survey items or that tapping the motivating potential of the job (1991:138). For the most part, the present study findings are consistent with hers as it concerns the motivating potential of the job.

9. Officers who have fallen victim to the "Stockholm Syndrome" have often been found to have been isolated or to have had few interpersonal networks.

10. Cross sectional or "census" surveys like the one used in this study tend to exaggerate the seriousness of the prior record and offense characteristics of inmates because they center on inmates held for longer periods of time. In contrast, a longitudinal approach to the study of inmate populations yields a more dynamic look at rapidly changing populations of inmates. What few such studies that exist find that most people booked into jail spend very little time there, do not have extensive prior records, are charged with relatively minor offenses, etc.. For an example of such a study of jail inmates see Jackson (1988). Because of the dynamic character of jail populations it is difficult to know how shorter vs. longer term inmates adapt to jail environments. As shown below, length of time in confinement has important effects on (male) inmate attitudes toward officers. It is unclear whether a study using a longitudinal design would reveal the same patterns. Of course longitudinal studies have their own problems and some feel that cross sectional designs can accomplish the same goals.

11. This discussion applies to male inmates only. The pattern for female inmates appears to differ but the small number of females makes conclusions tenuous. Nonetheless, the differences in evaluations of officers by length of time in custody shown for males do not hold for females. Females in MADF held more negative views of officers than NCDF females regardless of their amount of time in custody.

12. The sources for these figures include two memos from Ron Rex, chief Audit/Rate Development Section, Department of Corrections, dated August 8, 1991 and July 1, 1992, respectively.

13. Women in institutions across the country often face a security of confinement in excess of what that they may require. Their program alternatives are often more limited than males' and often channel women into domestic careers.