

PLAYBOY INTERVIEW: MASTERS AND JOHNSON

a candid conversation with the celebrated sex researchers and best-selling authors of "human sexual response"

It was not by chance that Dr. William H. Masters and Mrs. Virginia E. Johnson chose staid Little, Brown & Co. to publish "Human Sexual Response." Anxious, almost to the point of obsession, that there be not a jot of titillation or a tittle of prurient interest connected with their potentially sensational book, the gynecologist and his psychologist associate sought—and found—a publishing house whose credentials for conservatism and circumspection were utterly beyond reproach. Accordingly, the proper Boston publisher covered the text in a plain brown wrapper, did not spend a penny on trade advertising and released an unprepossessing 15,000 copies to booksellers in April 1966. Little, Brown hoped only to reach a modest percentage of the estimated 250,000 American physicians for whom the book was primarily written as a text on the physiology of human sexual response.

It was with mixed feelings, therefore, that authors and publisher received the news that the initial printing was entirely sold out prior to the official publishing date. The book quickly earned a niche on Publisher's Weekly's best-seller list and remained there for six months; it has sold at this writing over 250,000 copies—at ten dollars per—and continues to move at the rate of 2000 to 3000 volumes a month. Even Kinsey's best seller, "Sexual Behavior in the Human Male," fell far short of this figure in its first year, and the average medical text sells only 10,000 copies in toto.

But "Human Sexual Response" is no average medical text. It contains an analysis of the most unusual experiments

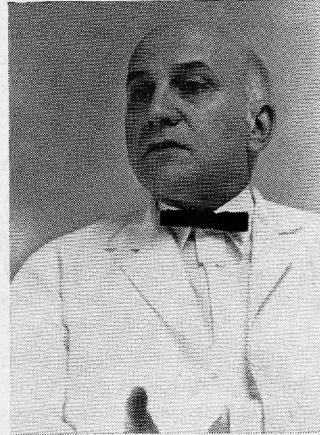
ever conducted in the history of science. In their St. Louis laboratory, financed originally by Washington University Medical School, Masters and Johnson observed and recorded—on color film, with conventional medical recording devices and with a unique invention of their own called an artificial phallus—the sexual response of 382 females and 312 males in the acts of intercourse and automanipulation.

The completed text, even though it contained a glossary of medical terms, may have been a disappointment to many of its nonmedical purchasers. Going out of their way not to appeal to the lay reader, the authors loaded the book with an almost impenetrable thicket of Latinate medicalese, woven into mind-boggling sentences such as: "This maculopapular type of erythematous rash first appears over the epigastrium." Not even the hyperactive imagination of an Anthony Comstock could have found this prose sexually stimulating.

The rewards for those who could pierce the linguistic barrier, however, made it worth the effort. Authoritative information about the very essence of human sexuality, long a subject of emotionally charged guesswork even among scientists, was here definitively recorded for the first time. After classifying the sexual response cycle into four phases—excitement, plateau, orgasm and resolution—and describing in minute detail the physiologic and anatomic reactions accompanying these phases, the authors continued in a clinical manner to shatter long-standing myths associated with sexual response. These included the function of

the clitoris, the relationship between penile size and effective sexual performance, the origin of vaginal lubrication, the nature of multiple orgasm in the female, the advisability of sex during pregnancy and among the aged.

Predictably, Masters and Johnson's research was initially subjected to sharp criticism—much of it related less to their findings than to their methods. The first salvo—fired by psychoanalyst Leslie H. Farber some time before the book was even published—set the tone for many of the subsequent attacks. In an article published in Commentary, Dr. Farber charged that Masters and Johnson had mechanized and dehumanized sex, that their research subjects were not typical and that they had neglected the psychological aspects of sex. "Qualities such as modesty, privacy, reticence, abstinence, chastity, fidelity, shame—could now be questioned as rather arbitrary matters that interfered with the health of the sexual parts," Farber wrote. He went on to accuse Masters and Johnson of endowing the female with orgasmic privileges that perhaps she had not earned. "My guess, which is not subject to laboratory proof," wrote Farber, "is that the female orgasm was always an occasional, though not essential, part of woman's whole sexual experience." Albert Goldman, a sociologist who wrote that the current sexual scene is dominated by "increasing homosexuality, rampant exhibitionism and voyeurism, fun-and-games rationalizations for promiscuity, masturbatory dances, sadism and other enormous proliferations of sexual fantasy," thought the text should be called



"A woman who serves three different men, and enjoys all of them, is more honest than the 'faithful' wife who serves one man and thinks of another."

"The fact that so many people of both sexes feel sexual pleasure only in the sex organs is a manifestation of their rejection of their total sexuality."

"The greatest mistake a male can make is to feel that because he has a certain amount of technical competence, he is an effective sexual entity."

"Permissiveness about early genital expression—specifically masturbation—is not nearly so important as the absence of a negative approach."

"Sexual Body Mechanics" and keyed the greater part of a book review to this theme. Professor Goldman was appalled by the possibility that some of the subjects who participated in the experiments might actually have enjoyed themselves, and he was distressed by Masters and Johnson's efforts to enhance the sexuality of the elderly. "One wishes," Goldman wrote, "that we could return to the wisdom of an earlier time that accepted physical decline and sought compensations in pursuits that transcend the physical." The Ladies' Home Journal published an article by staffer Lois Chevalier, who expressed grave concern that Masters and Johnson's work "ignored all the questions that it immediately raised in any ordinary person's mind—questions of morality, decency, human values."

But after the initial shock had worn off, most commentary about "Human Sexual Response" was considerably less concerned with the "decency" of the project than with its immense scientific value—specifically, with the fact that light was being shed in an area that had always been what psychoanalyst George Krupp called "the dark side of the moon." The Journal of the American Medical Association—long a bastion of conservatism—editorialized: "To some, sex is the ultimate area of privacy, and hence not appropriate for study and evaluation. No scientific criteria can justify such a conclusion." The editorial went on to ask, "Why was this study so long in coming?" and then answered, "We may look upon Masters' investigation as a natural and inevitable consequence of changing cultural environment." Dr. Colin Hindley of the University of London commented in the Daily Mail, "If we are inclined to regard sexual union as something so sacrosanct that it should not be open to investigation, we should remember that a similar view was taken regarding the stars in Galileo's day."

Commenting on the specific nature of the work, MD magazine concluded in an editorial, "Very little of the research resembles the assumptions of some critics" and the "best measure of the study's professional acceptance . . . is that 25 medical schools have instituted courses in the physiology of human sexual response, and 14 more are beginning in the coming semester. The text in use is their book; there is no other." Medical biologist Alex Comfort predicted in the New Statesman that the critics of "Human Sexual Response" "will be coming round eventually for a consultation and will be glad to find that something is known about their particular problem and its management. . . . When I think of the prohibitive and moralistic hinks which have obsessed the medical men of the last two centuries, I cannot bring myself to be very anxious about Dr. Masters and his institute."

The man primarily responsible for all

this tumult would seem ill-cast for the role. Soft-spoken in manner, prudent in behavior, tweedy in appearance and moderate in almost all his views, William Howell Masters reminds one of the benign family physician rather than the mad scientist envisaged by some of his critics. Born in Cleveland in 1915, he was a better-than-average student with a strong penchant for sports, but no inkling of his medical bent until after he received his B. S. from Hamilton College at Clinton, New York, in 1938. He entered the University of Rochester School of Medicine and Dentistry in 1939 with the idea of becoming a laboratory researcher, but changed his mind under the tutelage of Dr. George Washington Corner, a famous anatomist and an unsung pioneer in the pre-Kinsey era of sex research and education. By the time he married Elisabeth Ellis in 1942, and received his M. D. degree in 1943, Masters had already set his sights on research in the physiology of sex. But he was advised by Corner to wait until he was somewhat more mature in years, until he had achieved a reputation in some research area not related to sex and until he could call upon the resources of a great university medical school to support him. (With the exception of medical-school support, these were the criteria established by Alfred Kinsey before he began his interviewing in the sociology of sex.) Accordingly, Masters trained—from 1943 to 1947—in obstetrics and gynecology, and then taught these subjects at Washington University. His two children, a girl and a boy, were born in 1950 and 1951; and it was during the latter year that he was certified in his specialties. By 1954, he had published 25 papers in the medical literature and had established expertise in hormone-replacement therapy for postmenopausal women. He decided then that he was ready to begin the study of human sexual response.

He met Mary Virginia Eshelman Johnson in a highly undramatic manner—through the employment bureau of Washington University, where she had filed a job application. "I was looking for a mature woman who had a keen interest in people and who knew where babies come from," recalls Masters. "Mrs. Johnson fit all these qualifications." Born in 1925 in Springfield, Missouri, she studied music at Drury College from 1940 to 1942 and sociology at the University of Missouri from 1944 to 1947. Married in 1950, she had two children, a boy and a girl, before being divorced in 1956. Prior to joining Dr. Masters as his research associate the following year, she had had a varied background, including advertising research, administrative work and business writing. She was given a concurrent academic appointment by the Washington University School of Medicine as research assistant in 1960 and elevated to research instructor in 1962; she enrolled as a

doctoral candidate in psychology at the university in 1964.

It was Mrs. Johnson who greeted PLAYBOY Senior Editor Nat Lehrman in their headquarters, the offices of the Reproductive Biology Research Foundation, which occupy a large segment of a modern medical center and resemble any doctor's chambers—except that they're more spacious and contain more physiological testing equipment. The interview began here—and ended five sessions later in Mrs. Johnson's suburban ranch home. During the entire interview, both she and Dr. Masters evinced a finely tuned anticipation of each other's thoughts, occasionally finishing each other's sentences and frequently engaging each other in animated discussion of a particular point. Mrs. Johnson, outgoing and eloquent, tended to wrap layers of illuminating qualification around hard nuggets of fact; Dr. Masters, articulate and precise, often pressed his finger tips together thoughtfully beneath his chin and peered out the window before responding to a question. We began the interview by asking them about the controversial book that turned them into unexpected celebrities.

PLAYBOY: Did you anticipate censorship problems when you published *Human Sexual Response*?

MASTERS: No. Nor did we encounter any.

PLAYBOY: Some observers think you wrote the book in dense medical language in order to spike the censors' guns. Did you have that in mind?

MASTERS: It wasn't a question of censorship as such. Medicine had not, up to that time, accepted the concept of research in this area. Kinsey's work was fundamentally sociologic, while ours dealt with the physiology, anatomy and psychology of sexual response. We were well aware that *Human Sexual Response*—which covered the first two approaches—would be evaluated in depth by the medical and behavioral professions and we wanted to avoid even a hint of titillation. **JOHNSON:** After working in this field for many years, we knew the emotional impact—a reaction we call the "visceral clutch"—that this research would produce, and we felt if we could soften the impact, at least until the material could be absorbed and evaluated, it would be ultimately treated more objectively.

MASTERS: Exactly. We know that, in sexual matters, regardless of one's discipline or lack of it, one evaluates the material first emotionally and then intellectually—if the second evaluation ever has an opportunity to develop. If we've made the book pedantic, obtuse and difficult to read, we did it deliberately.

PLAYBOY: Why did you include a glossary of medical terms in the book?

MASTERS: Because we knew that many people in a variety of nonmedical disciplines would be interested—psychologists, theologians, sociologists and social workers

—in fact, people in all the behavior fields.

PLAYBOY: We've been told that there was a voluntary press blackout regarding your experiments while they were being conducted. Is this true?

MASTERS: Yes. We have no idea of its extent, but the St. Louis newspapers and wire services were well aware of our experiments for some years before publication of the book.

PLAYBOY: Did you encourage the blackout?

MASTERS: Yes. We were gravely concerned that we would not be able to get enough work done before premature disclosure prevented an objective evaluation of the entire program.

PLAYBOY: What broke the blackout?

MASTERS: A medical man wrote a highly critical article and released it to a non-medical magazine about 18 months before the book was completed. We would have liked another year before we published the text, since we had a great deal more research to do in cardiorespiratory physiology; the book is quite weak in this section. But by that time we had been working for about ten years, and we can only say that we were extremely fortunate that the voluntary blackout lasted as long as it did.

JOHNSON: It might be pertinent to say that we have no objection now, nor did we then, to valid criticism. Unfortunately, this premature and highly personalized criticism appeared in a factual void. That is, no material relative to our research concept or design was available for comparison. We were concerned that readers of this article would therefore have no opportunity to make an objective judgment.

MASTERS: I think it important at this stage of the interview to state an integral part of our basic philosophy. We absolutely refuse to defend ourselves except in open discussion. If, for instance, a critical review of our work appears, whether it's valid or a total farce, we never write a rebuttal. We think there is only one defense, and that is continued research productivity. In anything as emotionally charged as this area, inevitably there is going to be criticism—some of real value, some useless. But if we were to spend all our time answering the critics, we wouldn't get any work done.

PLAYBOY: Has there been an abundance of such criticism in the press?

MASTERS: Surprisingly little. Of approximately 700 reviews in both the medical and the lay press, some ten percent was critical; by critical, I mean the writers felt the work should not have been done for one reason or another. But 90 percent, if not totally supportive, was at least neutral; in other words, it reflected an attitude of "Let's wait and see what good can come of this research." This was a higher percentage than we dreamed of before the publication of the book. We had hoped that there would be at least half as many supportive as

destructive critics. We knew darn well that if we didn't have 25-percent support, we would be in major difficulty with the medical profession. But the support was such that there has never been any question about continuing the work.

PLAYBOY: What does your mail suggest about the public's attitude toward your research?

MASTERS: We've gotten thousands of letters. About eight percent of them fall into the "down with" category, of which half are vicious, obscene and unsigned. The other half of the negative letters are from fine people who simply feel that sexual behavior should not be investigated. They sign their names, they write well and we respect their opinions. Twenty-two percent of the mail has been supportive in character, and the remaining 70 percent—the part that really matters—comes from people asking for advice about their problems of sexual inadequacy.

PLAYBOY: How does the crackpot mail affect each of you personally?

MASTERS: I don't think it affects me in any way.

JOHNSON: Well, it's reinforcing. You always like to know that there is an applicable purpose for your work; and when you read these anonymous and scurrilous attacks, then you know that someone needs the work you're producing. As far as being personally affected—no, not really, because this mail is so obviously substandard. The only thing that really upsets me is when people like writers, scientists, physicians and other people who are generally knowledgeable blithely misinterpret what we're doing.

PLAYBOY: One of the greatest areas of misinterpretation relates to the purpose of the mechanical devices and equipment used in your experiments. Would you tell us about them?

MASTERS: Besides the artificial phallus, we used the routine cardiograph type of recordings for heart rate, blood pressure, pulse, respiratory rate, and so on. We also used cameras, so that we could study in slow motion what happened.

PLAYBOY: In your book, you described the artificial phallus as plastic, utilizing "cold light illumination" that allows observation and recording without distortion. You wrote: "The equipment can be adjusted for physical variations in size, weight and vaginal development. The rate and depth of penile thrust is initiated and controlled completely by the responding individual." Why did you construct this device?

MASTERS: First, let me point out that the artificial phallus was the only piece of mechanical equipment that would not be considered standard in any physiology laboratory. It was designed for intravaginal observation and photography—to show us what was happening inside the vagina during the various phases of sexual response. It was also used to evaluate

intravaginal contraceptive materials. In the old days—the pre-pill days—the method of evaluating contraceptives was to go to a distressed area, such as Puerto Rico, and disseminate the experimental contraceptive to the population. Then the number of pregnancies was recorded, in terms of theoretical years of exposure, and a graph was plotted. We avoided any unwanted pregnancies by actually observing the action of the contraceptive in the laboratory.

There was another use for the artificial phallus that I should mention. It was used on several occasions for women or girls who were born without vaginas, a condition called "vaginal agenesis." We developed a technique in which a vagina can be created without the necessity of surgery. But the artificial phallus has long since been disassembled and we have no plans for reconstructing it.

JOHNSON: This may be an appropriate time to put to rest a popular misconception created by the mass media—that is, the titillating assumption that the only purpose of the artificial phallus was to stimulate sexual response. This was not the case. During artificial coition, the research subjects never could achieve orgasm by use of the phallus alone—they all had to employ additional self-stimulation derived from their own personal preferences and previously established patterns. The point is, a female responds sexually to that which is endowed *for her* with sexual meaning. Over a period of time, all the women in our sample probably could have oriented themselves to respond to the exclusive use of a phallic device if they had been so motivated; but to them, the laboratory phallus was nothing in or of itself, and neither the situation nor their own personal interest required that they make it so. Consequently, the only reason for creating and using this device was to provide an opportunity for definition and measurement of the intravaginal environment.

PLAYBOY: In reference to your camera-work, some of your less informed critics have maintained that you were, in effect, producing stag films.

MASTERS: That's totally untrue. The camera was used solely to record specific physiologic reactions—skin changes, vaginal lubrication, and so on—and was directed only to one portion of the body at any time. Neither the face nor the total body was ever photographed.

PLAYBOY: Perhaps because of the abundance of mechanical equipment used in your experiments, you've frequently been criticized for "mechanizing" and "dehumanizing" sex. What's your reply?

MASTERS: I'm not sure the equipment really has anything to do with the criticism. The heart has been measured with mechanical equipment for years, but no one accuses cardiologists of mechanization. Perhaps this concern has been raised because of an error on our part, in not

clarifying the fact that we were separating two areas of focus, the physiological and the psychological. The latter will appear in a subsequent text. This was done for the purpose of clear and accurate reporting. You can't define physiologic reaction unless something happens, and this is what we were measuring. If this type of measurement is going to be called mechanization and dehumanization, then we will just have to accept it. Actually, nothing could be farther from the truth.

JOHNSON: Related to this accusation of mechanization, the point has been raised that in the entire text of *Human Sexual Response*, the word "love" isn't mentioned once.

MASTERS: That's right, it isn't. But that doesn't mean we haven't been aware throughout our work that the *why* of sexual response is far more important than the *what*. We started to define the physiological facts of sexual response fundamentally because there has been such an incredible amount of misconception, fantasy and fallacy about it. Rather than present an opinion—or psychologic interpretation—we felt it was long past time in this field to find out a few basic facts. That's what we tried to do.

PLAYBOY: Traditionalists also complain that investigations such as yours destroy the mystery of sex. Do you think that's true?

JOHNSON: We happen to think that the realistic, honest aspects of sexuality are a lot more exciting than the so-called mystery. The mystery to which the traditionalists usually refer has to do with superstition and myth. A knowledge of sex doesn't impair, but *enhances* it.

PLAYBOY: In *Human Sexual Response*, you discussed the investigative team that conducted the experiments. Of whom did it consist?

MASTERS: The basic research team consisted of Mrs. Johnson and myself. There were others at times, but both sexes were always represented. It was obvious from the beginning that factors of comfort and security provided by the presence of both sexes made it possible for the study subjects to adapt to the research environment.

PLAYBOY: Were the team members able to maintain their scientific objectivity in such an emotion-laden situation?

MASTERS: Perhaps if an individual had viewed the sex act only once in his life, he or she would have a problem; but, good heavens, we're talking about thousands and thousands of exposures!

JOHNSON: In the days when the work was new, there might conceivably have been some question of getting one's own emotions under control. But we were so incredibly busy, we were so short-staffed, we were working such long hours, we were so deeply involved in trying to produce results that I don't think the problem ever occurred. I can tell you, I had no personal reaction myself.

PLAYBOY: Isn't it possible that the nature

of the work could cause the investigators to become sexually jaded in their private lives?

JOHNSON: No more than physicians, who constantly examine people, become jaded.

PLAYBOY: Is the personal relationship of the team members—or lack of it—significant in terms of their investigative effectiveness?

MASTERS: I don't think so—with this exception: Obviously, if they were bitter enemies, they would not make a very effective team. Each has to have confidence in the other's ability to handle people and to communicate effectively, because this is one of the most delicate of all social situations. The longer you work together, the more you think alike and feel alike. You start or finish each other's sentences and concepts. It's like any other endeavor involving teamwork—athletics, for instance—the best teams are the ones with the most experience at working together. But let's talk about the experimental subjects themselves, because it's they who made this thing work. I think it's terribly important to emphasize that there are a lot of courageous people who cooperated with us.

PLAYBOY: How many?

MASTERS: Almost 700 by the time the book was published. Work in this field is possible only when the individual's personal value system is preserved under all circumstances. This created a situation of tremendous responsibility to protect the anonymity of all participants, which we did at all times. Secondly, we had to be sure, as much as was humanly possible, that there was no residual distress of a physiological or a psychological nature in any of our subjects, insofar as we could control it.

PLAYBOY: How did you find your subjects?

MASTERS: In the early stages, we talked to people who we thought might be interested in this research. After knowledge of the work started spreading in the local area, we began getting a large number of volunteers.

PLAYBOY: You did some work with prostitutes, too, didn't you?

MASTERS: Yes. But, with one exception, none of this work is reported in the book. We started with a prostitute population because we didn't know where else to start. They had a great deal to teach us and they helped in the development of recording techniques. But because we knew it would be relatively rare to find a normal pelvis in a prostitute—due to chronic pelvic blood congestion—we stopped working with them after the first 18 or 20 months and began working with the population I've described.

PLAYBOY: Did you reject many prospective subjects?

MASTERS: About 40 percent of those who wished to join us were eliminated, either for their own protection or, in a few instances, for ours. This left us with a highly selective population, of course—a

group chosen for their intelligence and for their ability to report subjectively what we were recording objectively.

PLAYBOY: Because of the selective nature of your study population, some of your critics claim that your conclusions cannot be applied to the population in general. Is this true?

MASTERS: As it pertains to physiology, this criticism doesn't hold up, because the identical reactions were observed under all laboratory conditions. Psychologically, the criticism might be true, but we didn't make any psychological generalizations in *Human Sexual Response*. I might add, we were also selective in that we accepted only subjects who had a history of successful sexual response. If you are going to find out what happens, obviously, you must work with those to whom it happens.

JOHNSON: When it came to making a choice among volunteers, we moved in the direction of those whose histories indicated stability in their past and present sexual relationships.

PLAYBOY: Have you been able to assess the motivations of your volunteers?

JOHNSON: When you're in a major medical center, where the use of donors and volunteers for research purposes is relatively common, the first thought concerns the money involved. We insisted on a small payment, because we wanted to be able to make and keep schedules; it might seem to have been an imposition if there were no tangible return. So, especially for the younger members of the academic community, money had to be thought of as a motivation.

MASTERS: But not the only one, of course. We provided the volunteers with little more than enough money to pay for babysitters and transportation.

JOHNSON: Yes, there were other motivations as well. Almost all the subjects—even the very young ones—revealed in their interviews real concern for the state of affairs and attitudes in society today relating to sexual problems. In older people, the prevalent motivation was a reflection of some encounter with a sexually oriented distress; it could have been as commonplace as, "My son and his wife are getting a divorce and we know it's because of sex." Or it could have been as dramatic as the rape of a neighbor's child, or trying to cope within the family or the community with an illegitimate pregnancy. I could give you more examples; but, to generalize, it almost always related to the thought that too little was known in the area and nobody had been doing anything about it.

PLAYBOY: Don't you think any of your subjects volunteered simply to achieve socially acceptable satisfaction of sexual desire?

JOHNSON: In some cases, yes. There were young women—divorcees with children, and so on—who had grave concern for their social image. They may not have had a relationship going at the time, and

so the experiments served as a legitimate release for them.

PLAYBOY: Were you criticized for mating unmarried subjects in the laboratory?

JOHNSON: Only by the same sources who would criticize it outside the laboratory.

MASTERS: What we're really talking about is: Do we approve or not approve of sexual intercourse outside of marriage? All I can say is that this is an individual decision. The only unmarried subjects who were placed together in our experiments were those who had a history of similar experience in nonexperimental situations.

PLAYBOY: Why did you think it necessary to study unmarried subjects?

MASTERS: As a matter of fact, we didn't think of it. The suggestion was made by a group of psychiatrists. They felt that a physical response pattern established within marriage might not be the same as for two individuals unaccustomed to each other. When we found that there was no difference in physical response, however, we returned to marital units.

PLAYBOY: In your book, you state that the subjects were recorded and observed performing "manual and mechanical manipulation, natural coition with the female partner in supine, superior or knee-chest position and, for many female study subjects, artificial coition in supine and knee-chest positions." We've discussed the reaction of the investigative team members to their role as observers. What was the reaction of the subjects to being observed?

JOHNSON: The subjects were taken through several steps of orientation before being placed in a research situation. It was a gradual process and included explanations of our motives for doing the work, of our techniques and of the laboratory environment. The individual was allowed to adapt at his own speed; some people indicated readiness faster than others. You see, it is our premise that the subjects bring their own patterns of response with them, and all we seek to do is to help preserve these patterns in a changed environment. The reassurance comes from knowing that the investigators are busy doing their particular work. There was never a situation where everyone was lined up looking. I might add, there is interrogation before each session; there is some communication during it and there is a great deal of interrogation afterward. This provides an abundance of knowledge of what the subjects think, the mood they express, the immediate past pattern of their own life outside the laboratory. In short, we sought to eliminate any outside intrusion into the experimental situation. The subjects' own statements indicated that many times they absolutely lost a sense of the environment.

MASTERS: I think even when they didn't completely lose awareness of the investigators' presence, they learned to pay no

attention to them or at least to ascribe no importance to them.

PLAYBOY: In other words, the desire for privacy during the sex act was quite easily shed. Wouldn't this indicate that it's a result of cultural conditioning rather than an inherent factor?

JOHNSON: Yes, there's no question that it's culturally induced. Let me mention some interesting examples related to the first part of your statement. Shy people, those who are accustomed to dressing and undressing behind closed doors, would develop enough assurance to place themselves in this environment, but they would still unconsciously preserve and observe those rituals that were important to them, even if only symbolically. They were in a situation where they had to be observed partially or totally unclothed; yet when they were leaving a room after a sexual session, they would always reach for a robe or place a sheet around themselves. It was a token invocation of privacy, but always present and usually spontaneous. On the other hand, technicians who were only occasionally present would do their work in an unself-conscious manner; but as soon as they were finished, they would almost reflexively turn away, so that the subjects would have some private time to leave the laboratory. So we found both the investigators and the research subjects complying with this unwritten, unexpressed requirement for modesty; and even if they were only symbolic or token gestures, they were nevertheless present.

PLAYBOY: Weren't you concerned that people who can perform under observation might have a response pattern different from those who require privacy?

MASTERS: If there were major variations between performing under observation and performing in private, then we would have observed them when we recorded the individual in the laboratory four or five years after his first recording. There were also multiple exposures in between, and the purported differences just did not show up. Now, we cannot state *empirically* that laboratory reaction and private reaction are identical—or, for that matter, markedly different—simply because there is no way to record a person's reactions in private. We could put an electrode in the uterus and record at a distance, but the complaint of artificiality would still be valid, because the person would know she's being recorded. We were faced with the fact that we had to move in the direction of laboratory recording or not move at all. I will say that, after thousands and thousands of recordings, we're convinced that we can translate physiological findings that we have acquired in the laboratory to the privacy of the bedroom. But I want to stress that this is just an opinion; perhaps we can never know for sure.

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publicized findings concerns the four phases of sexual response—excitement, plateau, orgasm and resolution. Quoting from your book: “The first or excitement phase of the human cycle of sexual response develops from any source of somatogenic or psychogenic stimulation. The stimulative factor is of major import in establishing sufficient increment of sexual tension to extend the cycle. . . .

“From excitement phase the human male or female enters the second or plateau phase of the sexual cycle, if effective sexual stimulation is continued. In this phase sexual tensions are intensified and subsequently reach the extreme level from which the individual ultimately may move to orgasm. . . .

“The orgasmic phase is limited to those few seconds during which the vasoconcentration [concentration of blood] and myotonia [muscle tension] developed from sexual stimuli are released. This involuntary climax is reached at any level that represents maximum sexual tension increment for the particular occasion. Subjective (sensual) awareness of orgasm is pelvic in focus, specifically concentrated in the clitoral body, vagina and uterus of the female and in the penis, prostate and seminal vesicles of the male. The human male and female resolve from the height of their orgasmic expressions into the last or resolution phase of the sexual cycle. This involuntary period of tension loss develops as a reverse reaction pattern that returns the individual through plateau and excitement levels to an unstimulated state. . . .”

You were, of course, discussing the cycle in a sexually responsive individual. But what happens to those individuals, particularly females, who don't go through the full cycle to orgasm?

MASTERS: There are periods of irritability, emotional instability, restlessness, pelvic discomfort, lack of sleep. Combinations of these symptoms may develop in the human female. You see, orgasm is a release point for the congestion of blood in the pelvis. This vasocongestion—which is the medical term for it—is relieved very rapidly if there is orgasm. If not, the release of vasocongestion is slowed, particularly if the woman has had babies and has enlarged blood vessels in the pelvis. Her period of frustration, irritation and pelvic discomfort may last for hours; sometimes—though rarely—a day or two.

PLAYBOY: How about the male? There is a well-known malady among young men, variously referred to in slang as “blueballs” or “lover's nuts,” in which the male complains of severe pain in the testicles if he is stimulated without reaching orgasm. Is there a similar explanation for this affliction?

MASTERS: Yes. We've discovered in our experiments that when the male is sexually excited and approaching ejaculation, the testicles increase in size; the average

size increase may be as much as 50 percent over the unstimulated norm. A young male who is forced to maintain this degree of local vasocongestion for a period of time—without release—may well develop some pain and tenderness. If he ultimately ejaculates, he never notices the local congestion, but long-standing vasocongestion can certainly be painful. Those males who suffer from long-continued “plateau phase” frustration usually either masturbate or have a nocturnal emission and the ejaculation relieves the congestion that way.

PLAYBOY: You used the term ejaculation, not orgasm. In the male, is there a distinction between the two?

MASTERS: Male orgasm is actually a two-stage affair. The first stage is identifiable by a sensation of “ejaculatory inevitability.” This is when he no longer can control the ejaculation but before he actually has any seminal-fluid emission. This stage of ejaculatory inevitability lasts two to four seconds and is occasioned by contractions of the prostate gland and possibly the seminal vesicles. This reaction pools the seminal fluid in that portion of the urethra that runs through the prostate, just outside the bladder. The remaining part of the male orgasm—that of actual ejaculation—is the expulsion of the seminal fluid throughout the length of the penile urethra by contractions of the penile and urethral musculature. The female orgasm, by contrast, is but a one-stage affair.

PLAYBOY: Did you discover any evidence that women ejaculate?

MASTERS: We have heard from four women who claimed that, with orgasm, they have an overwhelming release of fluid. But we've never had the opportunity to evaluate these women in the laboratory.

JOHNSON: There are large numbers of women who have physical manifestations that fit their belief that they ejaculate. The fact that many women urinate under the intensity of an emotional experience may very well be a factor here. But we don't know.

PLAYBOY: You have compiled data bearing on the belief that the size of a man's penis can influence a woman's sexual responsiveness. Would you tell us about it?

MASTERS: There has long been a myth that penile size relates to male stimulative prowess. We found this not to be true. In the first place, the size of the penis usually has been judged in its flaccid state. In this situation, the penis varies greatly in size. But as it becomes erect, the smaller penis goes through much more of an erective process than does the larger penis. So, at the moment of mounting with full erection, the major differences in flaccid penile size have been remarkably reduced. In addition, the female has the great facility of accommodating the penis, regardless of size, and not expanding the vagina beyond the size sufficient for containment.

Vaginal expansion, of course, is purely involuntary and is directed toward accommodation of the particular penis in its erect state.

JOHNSON: It helps to realize that the vagina is a potential rather than an actual space in its unstimulated state. Actually, the vagina is virtually an infinitely expandable organ. After all, it goes from a collapsed state to a size large enough to accommodate a baby's head.

MASTERS: Of course, we have been talking about physiological response. Psychologically, if the woman really believes that the larger penis in its flaccid state is going to make a difference when it becomes erect, then for her it might. But the really experienced woman would agree that size doesn't make a crucial difference. There are physical exceptions concerning obstetrical trauma that should be mentioned. Vaginal tears or alterations can result in a chronically distended organ that might have difficulty adjusting to the erect penis, *regardless* of its size.

PLAYBOY: Another penile myth concerns the sexual responsiveness of the circumcised versus the uncircumcised penis. What can you tell us about this?

MASTERS: The uncircumcised male—and, in some versions of the folklore, the *circumcised* male—is presumed to have a greater tendency toward premature ejaculation, because he can be more easily stimulated. We have no evidence that either presumption is true. Fundamentally, we can't find any differences in reaction time, or sensate focus, between the circumcised and the uncircumcised male.

PLAYBOY: Yet another misconception discussed in your book relates to the controversial Freudian theory about the clitoral versus the vaginal orgasm. Would you elaborate?

MASTERS: It was Freud's concept that if a woman's response was restricted to the masturbatory, or clitoral, orgasm, then it reflected psychic immaturity. She could be considered a fully responsive, hence mature, woman only if she had orgasm during intercourse—by definition, the vaginal orgasm. In order to delineate between these two types of orgasm, Freud presumed they were entirely separate physiological entities. Our research indicates that this is not the case. Certain clitoral changes occur with stimulation of either the clitoral area or the vaginal area, or from manipulation of the breasts or, for that matter, from simple fantasy. These changes are anatomically and physiologically *identical*, regardless of the source of stimulation. Secondarily, it is physically impossible *not* to stimulate the clitoris during intercourse. And I'm not referring to direct penile-clitoral contact.

PLAYBOY: Didn't Freud speculate that the sexually mature woman has transferred sexual sensation from the clitoris to the vagina?

MASTERS: Yes, but there is no longer any need to speculate about this, because, as

I started to say, the clitoris is stimulated during intercourse every time the female responds to a male thrust. This reaction occurs regardless of what position she may be in. You see, with each thrust, the minor labia are pulled down toward the rectum and, in the process, stimulate the shaft of the clitoris. So there is no physiological difference among clitoral orgasm, vaginal orgasm, breast orgasm or, for that matter, orgasm through fantasy. Incidentally, since the publication of the text, we've had the opportunity to evaluate three women who can fantasize to orgasm.

PLAYBOY: Manual stimulation of the clitoris by the male—as a form of foreplay—is strongly recommended in most marriage manuals. Does your research confirm the wisdom of this advice?

MASTERS: Not entirely. Many marriage manuals err in suggesting that the glans of the clitoris be manipulated; this is an extremely tender area, which the female rarely manipulates herself. She more or less stimulates herself along the shaft or just in the general clitoral area, which is called the *mons*.

PLAYBOY: What about "riding high"—another favored marriage-manual concept—in which the male maneuvers his body so that the shaft of the penis comes into direct contact with the clitoris?

MASTERS: This is a misconception. Our findings show that the clitoris elevates and withdraws from its overhang position during intercourse, making it extremely difficult to attain direct penile shaft-clitoral contact. It can be done, but it's an acrobatic maneuver in most cases and not really worth the effort.

PLAYBOY: Did your research shed any light on the folkloric connection between female orgasm and conception?

MASTERS: We have no sure knowledge of this. We certainly have some notion that an occasional and probably very rare female may ovulate more than once in a menstrual cycle, notably as the result of very effective sexual response. But this material has never been released, because we don't have enough information to support it scientifically. All we can say is that we are strongly suspicious. On the other side of the coin, there is reasonable evidence to suggest that, in some instances, a sexual inadequacy—a lack of effective response pattern for the female—may be part and parcel of a psychogenically induced infertility.

PLAYBOY: Some of your critics think that your work contributes to a general overemphasis of the subject of female orgasm. What's your reply?

MASTERS: We don't think you can overemphasize the importance of this subject. But it certainly has been belabored out of its proper context. The Sixties could be labeled the decade of orgasmic preoccupation. It's been only in the past seven or eight years that this focus on female orgasm has emerged. Some women are developing a fear of nonperformance

as a result of all the public discussion about its importance—particularly discussion not necessarily based on scientific objectivity. You can't read any women's magazine today without finding an article about some form of reproductive biology. It may sell magazines, but it also creates a scare type of philosophy that, in turn, may increase either male or female fears of inadequacy.

JOHNSON: Orgasmic preoccupation could occur only in a society in which sexuality has been so negated that many women have been unable to move confidently through all this discussion with a foundation of self-knowledge. A woman who has or has had a satisfactory relationship—and is secure in its effectiveness—can skim through the magazine article stressing orgasm or listen to the neighbor lady at the coffee klatch brag, "Oh, we have intercourse eight times a week and I'm orgasmic one hundred percent of the time," and still not feel threatened by this kind of discussion. But someone who lacks personal knowledge can be thrown into pure panic.

PLAYBOY: In your book, you also discussed female multiple orgasm. You wrote, "Women have the response potential of returning to another orgasmic experience from any point in the resolution phase if they submit to the reapplication of effective stimulation." Since multiple orgasm was discussed by Kinsey and earlier by L. M. Terman, what particular significance did you attach to it?

MASTERS: Apart from several physiologic observations of a technical nature, one of the important things we established—to our own satisfaction, at least—is that the female is *naturally* multiorgasmic. This had not been emphasized before.

JOHNSON: In spite of Terman and Kinsey, scientifically oriented people still imply that this is a freakish thing.

PLAYBOY: Picking up on the phrase "*naturally* multiorgasmic," do you believe that, all other things being equal, the female should achieve orgasm as easily as the male?

MASTERS: Yes, indeed. We have nothing to suggest otherwise. It would seem that puritan and Victorian social restraints have destroyed or altered significantly the female's natural responsiveness.

PLAYBOY: Another aspect of female sexuality discussed in your text is the notion that the female's sexual response is more diffuse than the male's—that is, that women respond sexually with more of their bodies than do men, whose pleasure seems to be centered in the penis. Would you comment on that?

JOHNSON: This, too, is probably culturally conditioned. We find that those men who value total expression undergo all the thrill and sensate experience of a total body phenomenon commonly attributed only to the female.

MASTERS: I think what should be stressed here is that physiologically, the male and

the female are incredibly *alike* in sexual response—not different. This is really what we tried to emphasize in the text.

JOHNSON: If I may be permitted to comment on the larger issue implicit in your question—the fact that so many people of *both* sexes feel sexual pleasure only in the sex organs themselves—this is a manifestation of their rejection of their total sexuality. For example, a lot of women do not respond to breast stimulation because of its implied impropriety. A young person exposed to this type of negation will frequently reject the concept of breast stimulation and/or response. An anesthesia comparable with self-hypnosis is induced. I mention the breasts particularly because this type of negation comes out so dramatically when women reject nursing.

MASTERS: Yes, and this negation may extend even to the genitals—as with the unresponsive woman who claims she never feels a thing during intercourse, no stimulation whatsoever. She has a certain amount of vaginal anesthesia that we're convinced—as are many others—is psychogenically induced and relates to attitude, circumstance and environment. I do want to stress, however, that we lack definitive data concerning the psychological deterrents to sexual response and sexual tension.

PLAYBOY: You use the phrase "sexual tension" frequently in your book. Would you define it?

MASTERS: Sexual tension is the physiological concomitant to, and reflection of, elevation in an individual's psychic sex interest, expressed in increased blood concentration and muscle tension.

JOHNSON: If that seems formidable, try to think of it as what the body does in response to sexual interest.

PLAYBOY: Does this tension differ in any way from what is usually referred to as the sex drive?

JOHNSON: Sex drive has become such a general term that it doesn't have a precise scientific meaning. It's often used to mean the basic drive to reproduce.

PLAYBOY: Can sexual tension be suppressed or denied?

JOHNSON: It can be denied and it can be displaced—that is, expressed in a nonsexual way. Most likely, if suppressed, it will be expressed involuntarily, through nocturnal emissions and erections or pelvic vasocongestion and vaginal lubrication. These cannot be put aside.

PLAYBOY: Do women experience anything analogous to the male nocturnal emission?

MASTERS: We have done no dream research, but we're certain that the female can be orgasmic in dreams.

JOHNSON: And there have been frequent reports of an increase in the volume of erotic dreaming by women who have been abstaining from sex.

MASTERS: Returning to your question about sexual denial, I'd like to add that

sexual demand seems to be a unique physiological entity. Unlike other demands, it can be withdrawn from; it can be delayed or postponed indefinitely. You can't do this with bowel function or cardiac or respiratory function. Perhaps because it can be influenced in this unique manner, sex has been pulled out of context. Lawyers and legislators have taken a hand in telling us how to regulate sexual activity. They don't, of course, presume to regulate heart rate; but, as I say, sexual demand can be denied, even on a lifetime basis.

PLAYBOY: With no ill effects?

MASTERS: That depends. We've already talked about irritability and pelvic discomfort that can result from not fulfilling sexual demand, but these effects are only temporary. On a long-term basis, many different types of neurosis can develop from continued suppression of sexual tension. But not always; there must be countless lifetime celibates who have not become neurotic.

PLAYBOY: It is common for women to abstain from sex during menstruation. Are their sex-tension levels lower then?

MASTERS: Not necessarily. A woman can certainly be responsive during her menstrual period—particularly the terminal part—if she is effectively stimulated. Only a small percentage of women, however, report their *greatest* level of sexual tension during menstruation.

JOHNSON: Physiologically, the explanation lies in the vasocongestive factor we discussed earlier. Obviously, the blood concentration in the pelvis increases during menstruation, especially in women who have had babies. This is translatable as sexual sensation. If a woman psychologically rejects the concept of sex during menstruation, she may successfully put her sexual feelings aside. Then, too, there are women who feel great discomfort during their periods, which can blunt sexual desire. On the other hand, if the psychosocial circumstance is overwhelming—such as being reunited with a partner—then this can be an overriding influence in favor of sexual desire.

PLAYBOY: Many sexologists have speculated that women have a recurring cycle of sexual desire, most commonly believed to occur the week before menstruation. Did your research confirm this?

MASTERS: If you're speaking of a physiological constant that's true for all women, the answer is no. Many women can identify a higher level of sexual tension the week or so before they menstruate. Fewer identify their highest level as the week after menstruation. An even smaller percentage are those who feel their highest tension during the ovulatory period. The smallest percentage, as I've said, are those whose desire is highest during menstruation. Probably the greatest number of women report *no* constantly identifiable pattern of response.

JOHNSON: There are so many factors

that make this difficult to pin down. For some women, sexual deprivation sends their need and interest up. On the other hand, we find that frequency of exposure with a high frequency of orgasmic return helps maintain a high level of sexual stimulation—in other words, success breeds success.

PLAYBOY: What role do such psychological factors as fantasy and imagination play in enhancing sexual response for either sex?

JOHNSON: It depends on how you define those terms. What some people call imagination could be described as recall. The only psychological constant in sexual response is the memory of, or the conditioned response to, the pleasure of sensation—in other words, to those things that have become sexually endowed for that person. These may be deliberately invoked during masturbation or during intercourse to help overcome a particular environment or occasion—a time or a place that doesn't turn the individual on.

MASTERS: Imagination, as we define it, plays a very real part in sexual response, but it varies tremendously with individuals. Usually, it is employed during the excitement or early-plateau phases; but at the moment of orgasmic expression, the individual usually is immersed in his own sensate focus.

JOHNSON: I do want to emphasize that imagination, as we understand it, relates not to fantasy but to reality, to a recall or use of the realities of a person's life. True fantasy—in other words, the invention of thought patterns related to sex or sexuality—is generally employed by those individuals who have had little or no previous successful experience.

PLAYBOY: Obviously, imagination would have great value with a sex partner who was not physically attractive. Have you found that physical attractiveness is important to successful sex response?

JOHNSON: Again, all these things are terribly individual. In this society, there are certain stereotypes of attractiveness, but even these have variations. If an individual reminds you of someone else who has brought pleasure, or connotes warmth or other valued attributes, that person is perceived as attractive and thereby sexually stimulating apart from the stereotype. We can't make a general statement—except to repeat the perceptible cliché that beauty is in the eye of the beholder.

PLAYBOY: In your experience as investigators, however, aren't there certain aspects of appearance that seem more stimulating than others for many American men—characteristics such as breast size, for example?

MASTERS: If you talk about breast size, you have to mention Madison Avenue and **PLAYBOY**, because they have created connotations of sexuality in connection with it. As a matter of fact, the larger-breasted female may not be more responsive.

JOHNSON: Worse yet, a woman's preoccupation with her symbolic sex quality might cancel out her attention to, or her involvement with, her real sexuality. I think that would be the most common pitfall. On the other hand, her symbolic sexual qualities might make her conceive of herself as more of a sexual person; consequently, she might involve herself with more enthusiasm. I'm not an anthropologist, but I think there is evidence that the attraction of the female breast relates to the mother-figure concept.

MASTERS: And yet, in the male population, there are hip watchers, leg watchers. It varies.

PLAYBOY: Do you have any idea how these individual predilections develop?

MASTERS: Personal conditioning, I would guess. Maybe the first exposure to sexuality was a woman with particularly attractive legs or breasts.

PLAYBOY: In your experience, are women aroused by the sight of male nudity?

MASTERS: Kinsey felt that the female was essentially unaroused by the unclothed male, but this has not been the case in our experience.

JOHNSON: We have come through an era in which the male body was considered quite unbeautiful. Men wore tops at the beaches, and so on. Many women built in a rejection. They weren't supposed to look, but sometimes they did and liked what they saw; so their private and public behavior were quite different. Given equal opportunity, women will react to sexual anatomy just as men do—just as much or just as little, if society permits them to and if they begin to think of themselves as sexual beings.

PLAYBOY: Would you make the same generalization about pornography—that it has equal erotic potential for women and for men?

MASTERS: According to our experience, yes. The greatest variations relate to an individual's background and personal preference, rather than to his or her sex.

PLAYBOY: Do you think pornography would continue to have its arousing effects if it were made more easily available and lost its taboo quality?

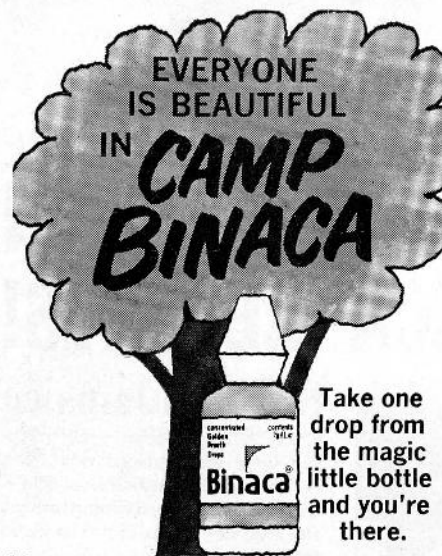
JOHNSON: Our attitude, like everyone else's, is purely speculative. But we think pornography certainly gains in its excitement by being forbidden.

PLAYBOY: Do you think it advisable to control its availability?

JOHNSON: I think the only control necessary is in the formation of attitudes by the individual throughout his or her life. As far as censorship is concerned, I don't think there's any real contribution to the goodness of an individual's life in telling him what he can or cannot read or see.

MASTERS: What is a matter of indifference to one individual may be repugnant to a second and incredibly erotic to a third. This is one of the reasons the legal

(continued on page 194)



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become pregnant, because his sperm count will never get the opportunity to reconstitute itself.

PLAYBOY: In your studies, have you reached any conclusions about the relative effectiveness of contraceptives?

MASTERS: Yes, but our conclusions don't differ substantially from what is already known. Far and away, the most effective contraceptive aid is the pill; second, in terms of statistical security from pregnancy, is the intra-uterine device—the I. U. D., or coil. In our experience, the chemical intravaginal contraceptives, together with recently developed foams and creams, are next in line, followed very closely by the diaphragm/jelly routine and the condom. The suppository and foam tablet are not as adequate as these other contraceptives.

JOHNSON: They don't cover the right places at the right times.

PLAYBOY: Do any of these birth-control devices affect sexual response?

MASTERS: Some women reject the intra-vaginal chemical contraceptives on an aesthetic basis, and that might interfere with sexual responsivity. In some women, the pills create a feeling of nausea; this detracts from the users' sense of well-being and, in turn, may blunt sexual response. The intra-uterine device sometimes causes cramping and bleeding. All of these factors are relevant. On the other side, some males find that condoms interfere with erectile adequacy during intercourse. This is rare, but it happens.

JOHNSON: And a few men are irritated by chemical contraceptives. We've had very few reports about this, but the reports we have seem quite authentic.

MASTERS: We can't discuss this subject in further detail, because our research isn't yet complete. And much of what we have discovered about conception and contraception hasn't been released yet to the medical press. There's an old medical saw—with which I happen to agree—that says, "Doctors don't like to read their medicine in *The Reader's Digest*."

PLAYBOY: Apparently there has been very little definitive sexual information circulated among physicians. For example, we noted that you devoted several paragraphs of your text to an explanation that masturbation doesn't cause insanity. Did you really think it necessary to stress this obvious fact in a book written for doctors?

MASTERS: Yes—simply because many times we have been asked that particular question by members of the medical profession at professional meetings. This isn't surprising when you consider that, with a few exceptions, medical courses in the basic area of sexual response were not initiated until as recently as 1964. Physicians who graduated from medical school before that time had no opportunity to be oriented specifically to the subject. Since 1964, it is my understanding that somewhere between 40 and 50 medical schools—out of a

possible 92—have begun teaching courses in sexual response. This represents a real revolution in medical education.

PLAYBOY: What are the significant areas of sexual ignorance among medical students and physicians?

MASTERS: They know no more and no less about the subject than other college graduates. They share most of the common misconceptions, taboos and fallacies of their nonmedical confreres.

PLAYBOY: A common medical taboo—which has recently come under fire in sex-education circles—concerns the prohibition of sex during certain stages of pregnancy. Some doctors forbid intercourse for as long as three months before and three months after birth. Did your research confirm the wisdom of this prohibition?

MASTERS: Most doctors we know of don't go this far in their prohibition of sexual activity—although in our interrogations we did hear of some. We found no reason for such long-continued abstinence, particularly during the last trimester of pregnancy—providing the female partner has no pain and providing the membranes aren't ruptured and that there is no postcoital bleeding. We firmly believe that there is no real reason not to continue sexual activity up to the very terminal stages of pregnancy. After childbirth, of course, the situation varies tremendously. Usually, any prohibition of a month to six weeks is reasonable because of the trauma to the vaginal canal occasioned by the delivery and/or the episiotomy—that accompanies childbirth.

PLAYBOY: Another area of medical uncertainty and misconception relates to sex among the aged. What can you tell us about your research on this subject?

MASTERS: There are two fundamental constants necessary for the human male and female to maintain effective sexual function into the 80-year age group: One, the individual must be in a reasonably good state of general health; and two, he or she must have an interested partner.

For the female, an effective sexual function in her earlier years encourages continued successful functioning as she ages, primarily because she isn't contending with fears of nonperformance. If the female has not been particularly effective before menopause, then the added concerns of the aging process may make her totally ineffective thereafter. But if she has been responsive and well-oriented sexually, she usually sails through the menopausal situation with no significant variation in her sexual-response pattern.

As for the male, if he has had satisfactorily active sexual experience during his teens, 20s, 30s and 40s, there's no reason he can't maintain sexual effectiveness into his 50s, 60s and 70s, if he meets the criteria already described.

JOHNSON: The only thing I'd like to add is that aging may cause some reduction in the urge to ejaculate—that is, in the need for frequency of ejaculation. But, contrary to popular belief, this has nothing to do with the older man's ability to achieve and maintain an erection.

PLAYBOY: Is any progress being made in training physicians to assume a responsible role as sex counselors?

MASTERS: The concerns of sexual behavior have probably received more attention in the medical profession than has any other topic in the past five years. The profession is making a massive effort at self-education and is to be congratulated for it.

PLAYBOY: How about sex education for laymen? At what age do you believe it should begin?

MASTERS: It should begin as soon as youngsters are old enough to observe their parents relating to each other.

PLAYBOY: What can you teach children about sex at such an early age?

MASTERS: I don't think you have to "teach" them anything. If there is real warmth and interpersonal exchange in the marital relationship, the kids absorb it.

PLAYBOY: Do you think sex education should be restricted to the home?

MASTERS: No. It should be taught in the church and in the school as well. I don't think you can teach it any one place and do it well. Most homes can't teach reproductive biology—apart from unsophisticated "where babies come from" answers. At the other extreme, some homes teach all the biology in the world, but the kids never see mom and dad holding hands. The point is that parents can and should demonstrate to children the importance of an effective and outgoing sexual relationship.

JOHNSON: There's a kind of pseudo-avant-garde parent who wants so much to be "in" that he or she will overtalk the subject of sex. There will be great freedom with terminology and a studied, self-conscious atmosphere will be created, but no values will be imparted.

MASTERS: Religious authorities should present their views, of course; and as for the schools, sex education should be a part of the curriculum, but I don't have any definitive opinions about how that should be done.

JOHNSON: One of the problems that hasn't been solved yet is who should do the teaching. A good teacher of sex education has to impart some of his personality. He has to teach that sexuality is good and that there is a place for it. He has to teach values that are realistic, that make sense in the context of how things really are. It seems sad to me that we feel it necessary to design sex-education "curricula" and put formidable barriers around the subject. We have not yet learned how to treat the subject naturally.

PLAYBOY: A. S. Neill makes a similar point in *Summerhill*—that once we are



"Why don't we go somewhere and unwind?"

faced with a concept of sex education, we have already failed at it. In other words, sexuality should be learned naturally, from life experience.

MASTERS: Yes; but, of course, Neill was dealing with a controlled environment in his progressive school. As American society is constituted today, we have to make the best of a sorry bargain, which means some sex education on a formal basis, at least for the foreseeable future.

JOHNSON: You know, there is a kind of natural sex education in the communication of children with one another.

MASTERS: The kids spread a lot of fallacies and misconceptions, but they have one thing going for them: They learn to talk about sex. Even if it's hush-hush or snicker-snicker, there's value in communication.

JOHNSON: The pitfall in this is that knowledge picked up from the peer group frequently works as a barrier to sex education from adults. Often a good job can't really be done at home because one has to contend with misinformation conveyed by other people's children, not to mention teachers who insist on making judgments.

PLAYBOY: What qualifications do you think are desirable for teachers of sex education?

MASTERS: A sense of confidence and a non-

judgmental approach to the concerns of sexual response. A certain amount of academic orientation is in order, but all the academic orientation in the world won't amount to a row of beans if the teacher isn't comfortable with the subject.

JOHNSON: Besides being well-informed, he or she should have lived the subject—in other words, should have had the experience of a stabilized sexual relationship.

PLAYBOY: When you say that teachers should be nonjudgmental, do you mean in terms of teaching when it's right and when it's wrong to engage in sex?

MASTERS: No, we don't mean that. Everyone has a right to teach his own basic concepts; but sexual activity must be taught as a perfectly natural, normal phenomenon of human expression and not one that should be hidden, avoided or discussed in whispers.

JOHNSON: If you're really going to guide and direct young people, you have to be willing to listen to and accept their experiences as they express them in a classroom situation. If you express any condemnation there, you can turn off a young person, as far as communicating his or her sexual experiences is concerned, and thereby lose a vital opportunity to provide guidance.

PLAYBOY: Do you think sex education should include contraceptive information?

MASTERS: Depending on the age group, certainly. To my mind, the greatest tragedy in the dissemination of contraceptive information is that it's usually disseminated after the young person has started having intercourse. Rarely is there pregnancy protection at the first opportunity.

PLAYBOY: What do you think of Wilhelm Reich's claim that society's taboos on infant, child and adolescent sexuality are responsible for impotence and frigidity in adults?

MASTERS: I think in some instances he is quite correct. This is a contributing cause in many of the cases we have seen.

JOHNSON: And the effect of these taboos is frequently a factor that has had to be overcome even by those who don't develop problems because of them.

PLAYBOY: Do you think masturbation plays an important role in an adolescent's sexual development?

MASTERS: That depends on the individual. There is a large number of people who have never masturbated and yet have developed into sexually responsive adults. So you can't say it's a requirement. But, obviously, it has played a major role in the sexual development of most individuals.

JOHNSON: I wonder if the negative side isn't more important. The fact of masturbation is nowhere near as dramatic a concern as the misconception that it's dirty, objectionable or what have you. Of course, this starts the individual out with a concept of guilt. A permissiveness about early genital expression is not nearly so important as the absence of a negative approach.

PLAYBOY: On the whole, how well do you think sex education is being handled in America today?

MASTERS: We have no scientific knowledge as to whether it's worth a damn. There are a lot of people who climb on the sex-education band wagon and say it's great. But somebody is going to have to take the time and effort to find out whether there is any real value in the entire concept of formally disseminating sexual information to youngsters. I don't mean to say that I think sex education is valueless; I just want to emphasize that there is absolutely no objective study that has been done in this area to determine its real value.

JOHNSON: Yes, but the fact that sex education is being done at all has greater value—at least at this point—than the actual material being disseminated. Wouldn't you agree?

MASTERS: Of course. The mere fact that one can talk about the subject and consider it with some degree of objectivity—all this shows incredible progress.

PLAYBOY: The kind of progress you're talking about is part of what's been called the Sexual Revolution—a revolution that is defined in many ways by many people. Can you give us your own definition?

JOHNSON: To begin with, we don't call it a revolution; we call it a renaissance. People tend to forget that the greatest deterrent to female freedom of sexual expression in this country was the invention of the steamboat—in other words, the Industrial Revolution.

MASTERS: It was this that pulled the men off the farms and into the city. In an agricultural community, female sexual equality never became an issue. Time and time again, mom—in order to avoid the kids—would take pop's lunch out into the back field. They had lunch—and something more—by the creek under a shade tree. Fulfillment was thus taken for granted. Sex in this culture was presumed, valued, enjoyed—and lived. Then, as we became an industrial culture, puritanism spread and eventually Victorianism took over. With it came the repression of female sexuality that has existed until very recent years—the “thou shalt nots,” the double standard, and so on.

JOHNSON: So you see, we're talking about a rebirth of natural sexuality. We're beginning to hark back to a time when there was an earthy acceptance of oneself as a sexual being, when sex was taken for granted as a healthy part of life. If I may inject a personal note, our work is very much a reflection of this renaissance. Even though people have been somewhat shaken by it, society has still permitted it.

MASTERS: Precisely. We have not existed in spite of our time; we have existed because of it.

JOHNSON: Actually, Kinsey was a pioneer—and so were R. L. Dickenson and Havelock Ellis before him. But they reflected a deep cultural need. We have emerged as a reflection of society's changing attitudes. For example, Bill started as a gynecologist—a physician—and I know that his early interest in the basic science of sex research developed almost parallel with the maturation of society's attitudes toward the subject. Kinsey, on the other hand, pioneered this renaissance; he helped lead it and make it what it is.

PLAYBOY: Many critics of this sexual renaissance, as you know, think that the pendulum has swung too far in the direction of permissiveness, that the new emphasis on sex has inflated its importance out of proper proportion. Are we correct in assuming that you disagree?

MASTERS: If the importance of sex was ever overemphasized—by its obsessive and moralistic negation—it was in the Victorian period, not now. It was then, not now, that sex could not be accepted and that sexuality was denied as a dimension of the total personality. If the pendulum has swung too far, I'm sure it will swing back. Let's put it this way: A certain amount of healthy objectivity needs to be injected into the field. We hope that something like this interview—appearing in the magazine I regard as the best available medium for sex educa-

tion in America today—will help do it.

PLAYBOY: You are obviously pleased to see the double standard disappear. But many clergymen fear that the vanishing “thou shalt nots” are being replaced by libertarian “thou shalt” that may deprive young women, by virtue of a kind of reverse puritanism, of their freedom of choice. Do you see this happening?

MASTERS: Absolutely not. What has developed with the use of contraception is a new sense of selectivity for young women. They now have more freedom to say no than they ever had before. It may have something to do with the fact that the female no longer makes her decisions on the basis of fear—fear of pregnancy, fear of disease, fear of social ostracism. In no sense does this imply a rejection of elective chastity, but chastity based on the innumerable fears is entirely a false premise; an objective decision cannot be made on this basis. Today the young woman is free to make her choice, pick her time, her place, her circumstance, without the old fears. With all the druthers now available to her, we have a hunch that the intelligent girl tends to be more sophisticated in her selection—simply because it is her selection.

JOHNSON: If effective contraception is being used, then a woman must be honest with herself and realize that she is engaging in sexual activity as an expression of herself within a relationship. She is not, consciously or unconsciously, playing the old game of sex for marriage entrapment nor is she using sex to represent her femaleness by “willful exposure to unwanted pregnancy”—to quote Dr. Hans Leffeldt's tongue-in-cheek but accurate comment.

PLAYBOY: Do you think it's possible, as some clergymen predict, that the elimination of fear will break down all the barriers?

MASTERS: Is it possible? Yes. But there is no reason to believe that removal of fear inevitably results in the destruction of value systems. In fact, there is some evidence that modern young men and women are much more concerned with the quality of interpersonal relationships than with sex per se.

JOHNSON: What I'm about to say may not go over well with some PLAYBOY readers, but the fact is that for the first time in many decades, the girl is running the sexual show. She is not a victim; she doesn't have to put up or shut up. Although this issue is still in limbo, we're on the right road toward placing value on sexual activity within a human relationship as opposed to simple emphasis on natural drives—you know, “Let's do it, even though the timing is wrong, the people are wrong and the place is wrong; we have to satisfy a natural human need.” The young woman now has many things to contemplate in making her choice. She can decide, after proper self-evaluation, whether her goal is

reproduction and homemaking or whether she wants to express herself in some other fashion while deferring—or even rejecting—marriage. There are so many options to consider, and the concerns of venereal disease, pregnancy or social ostracism need no longer be the foremost factors in influencing her decision.

PLAYBOY: Then you don't think that the pill culture necessarily leads to promiscuity.

MASTERS: It depends on what you mean by promiscuity.

PLAYBOY: What do *you* mean by it?

JOHNSON: In our concept of the term, someone who exploits another person sexually is promiscuous, regardless of the circumstances.

MASTERS: Sexual expression to me is either mutual orientation, satisfaction, enhancement and stimulation or it's promiscuous—inside or outside marriage. The old concept of sexual promiscuity, meaning excessive interest outside of socially approved channels, leaves me cold. A woman who adequately serves three different men sexually and enjoys all of them, and gives each as good as she gets, is more honest than the "faithful" wife in her own bedroom who serves one man but thinks of another. I think there is both mental and physical promiscuity—the latter being the old concept. The more dishonest concept, and the one that offers the least hope of effective development of mature sexuality, is mental promiscuity. Let me give you another example. Take the young male who makes seven chalk marks on the wall in one night. As far as I'm concerned, he may be promiscuous—mentally rather than physically—if he is interested in his partner only as a proving ground for his sexual athleticism.

PLAYBOY: There have been predictions that another by-product of increasing sexual freedom will be the proliferation of homosexuality. What do you think?

MASTERS: If the majority of reasons given by scientists and by homosexuals themselves for turning to homosexuality are true, a liberalization of sexual attitudes would remove some of these reasons; it would help lessen the homosexual's self-rejection. This is, of course, only theorizing. We have no evidence to support it.

PLAYBOY: Marshall McLuhan predicts that the gradual blurring of stereotyped psychosexual roles for men and women will soon make the differences between the sexes less significant than the similarities. Add to this the influence of the pill, he says, and it will become "possible for sexual woman to act like sexual man." Do you think we're heading toward a kind of unisexual society?

JOHNSON: "Unisex" is a rather unappealing term, but McLuhan is obviously correct in predicting that the old stereotypes of male and female will disappear; to an extent, they already have. We no longer require a stronger sex to go out

and kill the tigers and to defend the home. Most of us know that the football hero and the physically well-endowed woman are not necessarily more effective sexually than the rest of us. So why don't we turn to the important things—like real communication and re-enforcement of one another's reason for being? Why concentrate on wearing ruffles to prove we're women and unadorned clothing to prove we're men? It hardly seems important to have a program to tell the players apart; the players know very well who they are—or if they don't, clothing will hardly solve the problem.

PLAYBOY: One more prediction related to the sexual renaissance is that it will weaken and perhaps even obsolesce the institution of marriage. What are your views?

JOHNSON: Society has not yet come up with any social grouping more functional than marriage and the family. Quite obviously, we think the renaissance of sexuality will strengthen it, not weaken it.

PLAYBOY: How so?

JOHNSON: One of the most threatening things to the marital relationship is the separation of sex and sexuality—sex being the physical expression of sexual activity and sexuality being a dimension or expression of the total personality. The Victorians negated sexuality and thereby made sex a behind-the-stairs, in-the-dark sort of thing. Communication regarding sexual matters most likely did not exist. There may have been people who worked this out in the privacy of their own one-to-one relationship, but all the evidence tells us that this was the exception, not the rule. The point is that sexuality can hardly flourish in a forbidden atmosphere. If two people enter into a sexual relationship, they have to let it live on a 24-hour basis. Sexual response can be sparked by the fact of its being forbidden, just as it can be triggered by hostility—but that's hardly a lovely way to live and it certainly doesn't create an aura of love, of affection, of warmth to be conveyed to children. So I think that marriage has endured in spite of the Victorian attitudes, not because of them. I should add that, in my opinion, marriage is not a static institution; in the future, it may be constituted differently. It's undergoing change today, but I don't think it will be altered in a noticeable way during our lifetime.

PLAYBOY: What can you tell us about the future of sex research—specifically, your own?

MASTERS: At the moment, we're working on the biochemistry of reproductive fluids—that is, such things as vaginal lubrication, Bartholin's and Cowper's glands secretions. No work has ever been done in these areas. We're also doing a great deal of work in homosexuality and have been since early 1963. We're studying the female homosexual in particular, as we feel she has never been examined in

depth. We want to learn as much as we can from the sociological, physiological, biochemical, endocrinological—and, ultimately, the therapeutic—points of view. But any concept of therapy is far beyond our current concern and we won't have anything to report for perhaps a decade or more. At the moment we're merely learning about the subject.

PLAYBOY: What is your goal in the homosexual research?

MASTERS: We hope eventually to move into some concept of sexual reversal for those who wish it. From what we know now—which is very little—we can't conceive of homosexuality of itself as an inversion or abnormality. It seems to be a basic form of sexual expression—a minority form but a very definitive one.

We also want to continue working in sexual physiology, but hopefully we're well past the nose-counting stage of experimentation reflected in *Human Sexual Response*. Our future projects in this area are quite specific and include investigation of sexual response as it relates to the damaged heart—that is, the coronary, the hypertensive and rheumatic hearts. We're also particularly interested in studying the sexuality of the aging population, in terms of understanding metabolic, endocrinological and physiological changes involved, with the ultimate goal of enhancing the effectiveness of sexual response among the aged. And we certainly hope to do some work on the massive problem related to the sexuality of the physically handicapped.

PLAYBOY: What do you think the future holds for sex research in general?

MASTERS: Sufficient maturity and controlled expansion, we hope, so that research may be done in the *total* area of sexual behavior—not just from the psychological and physiological points of view, the "why" and the "what," but also, for example, from the sociological and theological perspectives.

Human sexual behavior is of vital concern to every single individual throughout his or her life. Aside from the instinct for self-preservation, it is the most forceful response we know. Yet it is the response about which we know least. Look at the massive amount of time and effort that has been spent on the control of poliomyelitis, for instance—an effort that was worthy, since it brought the disease under control—but compare the occasional individual who contracts polio with the daily concern of *every* individual about his or her sexuality. Although we are obviously in favor of any medical approach that helps eliminate the major pathologies, it must also be realized that the one physiological activity, after eating and sleeping, that occupies the greatest part of human life is no less worthy of definitive and objective research. We intend to devote the greatest part of *our* lives to that research.