INTERVIEW WITH MONICA RILEY DEPARTMENT OF BIOLOGY

November 5, 1988

Dr. Hartzell: An interview with Monica Riley of the Biology Department on November 5, 1988, at my house. I've done 64, you're the 65th.

Monica Riley: That's a major effort.

Dr. Hartzell: Though I've taken my time about it, all the way from Florida up to Albany and Schenectady since people live in different parts of the country. Now I have a green light to go out to California and interview John Lee, who was the first president back in Oyster Bay. Basically, we are interested in those who were important in the creation and the development of Stony Brook unfortunately Rockefeller and Dewey and Harriman are all gone. Did you get this letter from Jerry Schubel?

Monica Riley: No.

Dr. Hartzell: Let me read it to you. "There has recently been considerable discussion of a need of a need for a history of the creation and the development of the State University of New York at Stony Brook. The record of Stony Brook's rise to a place of prominence in American higher education is one which we in the State of New York can be justly proud. How did this noteworthy development take place so quickly, and what combination of factors contributed to the present strength of this institution? Although no immediate problem is projected, it became clear during the discussions that many of those responsible for the early decisions were no longer living. Their memories are no longer available for answers to the questions who, why, or how. We can cite for example Governor Dewey, Harriman and Rockefeller, Board of Trustees Chairman Frank Moore, SUNY President Tom Hamilton, Stony Brook Council Chairman Ward Melville and Judge William L. Sullivan, Vice President for Personnel in the Central Office David Price, Stony Brook Dean Stanley Ross, Lester Evans and Arthur Muir of the Muir Commission. Former Provost Harry Porter is living but has had a stroke. Not

only can they not be interviewed but their files are either scattered, in mothballs or destroyed." This went to some of the older faculty who were either retired or active somewhere else, faculty and administration. I've interviewed Ed Pellegrino and John Toll and Sam Gould, who was Chancellor, and a good many others. So, I have some questions, and I'll start off with the simple ones just to take you to where you are. Name, department, rank or position.

Monica Riley: Monica Riley, Department of Biochemistry, Professor of Biochemistry.

Dr. Hartzell: What year did you come to Stony Brook?

Monica Riley: I came in the fall of 1966.

Dr. Hartzell: And how old were you at the time?

Monica Riley: I would have been 39.

Dr. Hartzell: From what institution and position did you come?

Monica Riley: I came from the University of California at Davis where I was an Assistant Professor. I had been there about five years.

Dr. Hartzell: Who was primarily responsible for your coming to Stony Brook?

Monica Riley: Frank Erk recruited me. Arthur Cardi who was my Ph. D. mentor

Dr. Hartzell: Where?

Monica Riley: When we were both at the University of California at Berkeley, but by this time Art Cardi was at Princeton and I was at Davis. And Art Cardi heard about the development of the Stony Brook campus, and he knew that I was looking to move somewhere, I had started interviewing around. And he suggested it both to me, and then he wrote, I suppose he wrote Frank Erk to suggest my name.

Dr. Hartzell: Was Frank chairman when you came?

Monica Riley: Yes.

Dr. Hartzell: And so when you came here, who interviewed you?

Monica Riley: Frank. Then, well into the process, I think really we had a verbal understanding that we were happy with each other. I was introduced to Mel Simpson,

who was also being recruited the same year, and so we were introduced to each other at a time when we were both visiting the campus and spoke together.

Dr. Hartzell: Biochemistry.

Monica Riley: Uh, huh. See the Biochemistry Department did not exist then. I was one Biology Department, but I think the presumption was that Mel was called head of a group or some such name that wasn't a department, but it was a subdivision within the biological department.

Dr. Hartzell: The department had started off in what way?

Monica Riley: The Biochemistry Department?

Dr. Hartzell: No, not biochemistry.

Monica Riley: Biology, Gosh that was before my time.

Dr. Hartzell: Was it descriptive?

Monica Riley: Oh, you mean the type of biology.

Dr. Hartzell: Yes.

Monica Riley: Well, I guess it started as a science teachers in the beginning, it was oriented towards a normal school type of curriculum to turn out teachers in areas of science for junior and senior high school. And then in the transition of changing that mandate into a broader one which would include setting up research programs and entering into forefront scientific investigations, that was a huge change that took place as the department, sort of took a while.

Dr. Hartzell: Why did you come, what factors were important in your decision?

Monica Riley: Well, I was very taken by the fact that this was a developing and growing campus. It was very rare. All the other places that I went to, and by the way one of the places I interviewed was Buffalo in the SUNY system, and to me there was no comparison between the two because of the fact that Stony Brook was at this exciting beginning stage of major growth and shaping and so personally I felt that I would have a chance to be in on the ground floor idea, to be a part of helping to make it grow.

Dr. Hartzell: John Toll was here then.

Monica Riley: Yes, in fact I remember the reception that he held for new faculty that fall of 1966, it was in the gym. And I was so impressed. There was a receiving line for new faculty. I think that the reception was for the entire faculty, which was around 300 people then, I think, and the new faculty were coming through, and I was so impressed that when given my name John Toll said, oh, it's good to have somebody here in DNA. He had learned what the specialties were of all the incoming faculty then.

Dr. Hartzell: He had a remarkable memory, knew many things right up front, all the time simultaneously. Now, let's see, what was your understanding of the purposes behind the creation of Stony Brook, what was the mission being transformed into reality? Monica Riley: Well, the way I understood it, which was partly reading TIME magazine, gave me the idea of where we were supposed to be going, was that Rockefeller, that Governor Rockefeller had looked at higher education in New York State and found it not up to the major state university systems like California and Michigan and so on, and that there was no reason for New York State to hide its candle and that he was, and Stony Brook was singled out among the four major university centers as one that would be developing from a very small unit to a very large unit. He had major responsibilities to become a forefront university in terms of the process of acquiring knowledge as well as the process of communicating knowledge to students.

Dr. Hartzell: In other words, both research and teaching.

Monica Riley: Yes.

Dr. Hartzell: And forefront on a national scale, rather than simply a state scale.

Monica Riley: Oh, yes.

Dr. Hartzell: Those two ideals have fought each other in the state. What were your impressions of Stony Brook when you first came to the campus, the people, the leadership, the spirit.

Monica Riley: I enjoyed it. The spirit was very good, very upbeat. The campus physically was kind of a mess because it was in the mud days when there were huge ditches being dug all the time, but that never bothered me because that was a necessary

part of this expansion. I remember a snow storm the first winter where many of us biology faculty found ourselves in the Biology Building on a Friday afternoon I think it was, and [taping disruption] I was just illustrating the fact that there was a camaraderie among us, there were only maybe 12 faculty in the Biology Department at that point, or 13, and being temporarily stranded in the building because of an unexpected snowstorm. It turned into a time of great fellowship and personal ties were developed from being kind of cooped up together under those circumstances.

Dr. Hartzell: Well, suppose you tell me how you saw or how you see the evolution of the department and take it right up to the present, you might as well.

Monica Riley: Well, as I said, it was a single biology department when I first came, and as I understood it, the plan was to gradually build specialty areas. It was not too clear just how administratively those specialty areas would be handled but that it would just develop and naturally fall into place, I think was the idea. Biochemistry was the first discipline too, because of the presence of Mel Simpson who had been brought on board specifically, I think he had the title Chief or something, it was not a chairman title, but he was chief of and responsible for recruiting in that area, so that the first area to get a sizable number of people to the point that it seemed to warrant making that a department. Well, if the biochemistry people were a department within the biology department, it didn't make sense to have the word department being used in a hierarchical situation. It was called division for a while, the biochemistry division. But then, of course, it didn't have it's own budget or have any formal administrative existence, and as the biochemistry unit developed its strange character and needed to follow its own course and to state its own needs specifically. Then it became an issue that it be a department, and I think that one probably went back and forth a while, because that meant that biology had to assume a hierarchically higher state in order to include a biochemistry department. And so ultimately that was done, and biology became a division in the same sense as arts and humanities or social sciences divisions, and then organizationally it made sense certainly on paper then you could foresee the establishment of other departments within that division in other areas of specialization in biology.

Dr. Hartzell: Such as what?

Monica Riley: At that time, that's right, that brings back to me that there was a problem with cellular biology.

Dr. Hartzell: Who was it, Bob Merriam?

Monica Riley: Well, yes, and with the concept of cell biology, whether cell biology should be a part of the biochemistry department or separate from it. Now a lot of the problems in setting a satisfactory administrative structure in the area of biology are due to the fact that disciplines overlap and you can arrange biology in two different ways that are at right angles to each other. One would be the level of investigation, starting the smallest with molecules and then organs and individuals and populations. The other is the nature of the creature you are investigating, whether it's bacteria or animals or plants, or pieces of animals, like the nervous system. And some of the trouble in trying to make it a coherent organizational structure came from the fact that those two ways of dividing biology up were being used simultaneously and that leads to trouble. Now biochemistry, the word says that you are investigating things at a chemical or molecular level. Cellular means that you're a unit more complex than that; you are investigating at the cellular level. And many chemists apply their molecular tools to cellular questions. Other types of biologists who don't use molecular tools, who use other kinds of tools, also are interested in how the cell works. And so this is typical of the many problems that came up in organizing biology. There were cell biologists in biochemistry department, and there were cell biologists that were not biochemists that investigated at the cellular level with other sorts of tools. So then who gets the word 'cellular' in their departmental title? Biochemistry wanted the word partly because it put them in a better position to get NIH training grant support, where NIH felt that a totally molecular department was too narrow, that it needed to also have cell biology in it. And in fact we got that critique on one of our, on our first attempt to get a training grant from NIH, which failed, and they

gave us a critique, and that was the main thing that was found wanting. So that was typical of many other that I wasn't directly involved in, so I don't remember as well, many other tussles about trying to carve out areas that were not overlapping area, and it was not possible. We ended up with overlapping areas of all kinds, and with graduate programs that had broader memberships than their departments did, and this is done in other places, it wasn't that Stony Brook was the only place. The nature of biology often leads to these overlapping arrangements, so that an individual faculty member often belonged to more than one graduate program because of the interdisciplinary nature of the work. But you can imagine the nightmare of complexity from the administrative standpoint. Now there was, cellular and comparative biology was the name of a department within the biology division in those early days. And then neurobiology and behavior, that's right.

Dr. Hartzell: It was not in psychology, then?

Monica Riley: No, in fact the ties to psychology were never strong, and you would think they might have been, but I don't know why they didn't develop.

Dr. Hartzell: What was your own field?

Monica Riley: Biochemistry, the first group that started off you might say, I was in that group, and then there were five altogether at the largest number, I think, of subgroups in biology division -- there was biochemistry; cellular and comparative biology, which contained many of the people who were here and started the department to begin with; neurobiology and behavior; ecology and evolution -- no, there were four. Those were the four divisions.

Dr. Hartzell: Ecology and evolution worked together.

Monica Riley: Yes.

Dr. Hartzell: Have your expectations for the department and your own career worked out as you had originally planned?

Monica Riley: I think by and large the answer would be yes to that. There have been some disappointments, more hassling along the area that we were just talking about, the

organizational hassling than I think any of us wanted. I think it took up time that we shouldn't have had to give to really unproductive back and forth.

Dr. Hartzell: Get any help from the administration on that?

Well, the administration would appoint us blue ribbon study **Monica Riley**: committees, and it was analyzed over and over. To this day I don't understand why we had more difficulties in that area here at Stony Brook than is typical of other universities. Other universities handle the biology question in one of two ways, and they work equally well, one is one huge biology department where there are no distinctions at all made in the different sub-disciplines, and there is one head who works for all included, and the other way is; MIT has a large, single biology department, they did butt off a little applied biology a few years ago, but they just canceled that as a separate unit, and those people are subsuming under the single biology once more. Harvard on the contrary has zillions of individual departments that we would classify as biology, both in the medical school and on the Harvard College itself, and both MIT and Harvard do extremely well in these areas and have people of great note and great accomplishment, so there is no right or wrong way to do it. But for some reason that I certainly don't know what it is, there was pulling and tugging, much too much pulling and tugging over the years. Now I would say it has settled down now, and there is much, well, or else I have withdrawn myself from the arena. I don't know, I started to say there is much less wasted motion in this respect now, but maybe that's because I'm not in that arena. I don't have an administrative role.

Dr. Hartzell: Now, when did Jones come?

Monica Riley: He was here when I came in 1966, as was Vince Cirillo, both of them were already here.

Dr. Hartzell: What was Jones' first name?

Monica Riley: Ray.

Dr. Hartzell: Ray Jones, he was an Englishman, wasn't he?

Monica Riley: Yes, he was English and his wife was Scottish, yes.

Dr. Hartzell: Trained in England?

Monica Riley: I think so. Yes, that's right, that brings back memories. He passed through Arthur Cardi's lab at some point, probably as a postdoc, the man who was my PH. D. mentor, because that made a tie when I first came, we knew some of the same people. I think he may have come to the States for postdoctoral training, but that's something I couldn't be sure about.

Dr. Hartzell: But he came as chairman?

No, he came as a faculty member, and I would have to go back in my **Monica Riley**: files to see what year it was, but there was a year when the pulling and tugging over biology got so acute that somehow at that time we saw as a solution, I suppose at the time it became a division, it was no longer a department, and the biochemistry department became an entity with Mel Simpson in charge, then who was to be head of the larger unit, the overall unit, would it be a continuing or new person, and the sentiment was for a new person, and Ray Jones took that job so he was head of biology division. There were a few things that in twenty-twenty hindsight one would do differently. One being that the biology building was the old red brick building was getting small for all of us, and the divisional office was set up across the way in the old chemistry building, so that Ray Jones and his assistant, secretarial help and so forth, was in a different building, and in looking back, I think we would all say that some other functions should have been put in the main building because there was kind of a separation there that was not good. We should have somehow maintained that camaraderie which Ray was a part of from the early days, but he became quite distant then.

Dr. Hartzell: I see. Okay, were your activities confined to the Stony Brook campus, did you have connections outside?

Monica Riley: I had lots of, we all in the area of science that I'm a part of, we are very much in touch with each other and from in our discipline. There are meetings, large meetings, small meetings and there are invitations to come and give talks to each other, and there is just a lot of, not only national, but international also, contact in your area.

Dr. Hartzell: Did you as a department or division invite other people to come to a conference here at Stony Brook?

Monica Riley: Well, we didn't hold a conference at Stony Brook, but we always had a series of invited speakers coming through, weekly series.

Dr. Hartzell: What kind of support did you get from the administration, from Stan Ross and did you yourself have anything to do with John Toll, how much understanding was their outside of the division of biology?

Monica Riley: I think, they have to speak for themselves, but I think that the administrative officers probably just threw up their hands and shook their head and did not understand what all this fuss was that kept coming year after year in one guise or another, biology never seemed to settle down and be content.

Dr. Hartzell: Were these personalities?

Monica Riley: Some of it was. But I think that in the beginning the research oriented people felt that the administration didn't notice their particular needs.

Dr. Hartzell: What do you feel that you have accomplished at Stony Brook, let's say by the time John Toll left?

Monica Riley: What year was that?

Dr. Hartzell: 1978.

Monica Riley: 1978, uh, huh, actually published in 1978 was probably my best work, it was in the guise of a review article, but it was actually a pop edition of ideas in the field that the specialty area that I ended up in, which was evolution of DNA and bacteria, and to this day that article is still highly cited, even though usually ten years you have long since lost the relevance of your remarks in a review article, but this was the best thing I had done. So, actually I could almost see my scientific contributions rising a peaking in that year. In order to do the science though, as is true everywhere, but mostly in state universities, you have to create the possibility yourself. You have to apply for external funds, hire people to be technicians in your lab, you have graduate students and there's where your efforts are going in two directions at once -- graduate education and research

are two sides of the same coin. So you're a little entrepreneur, a little business person in a way in doing research and the administration makes it possible by providing a building with space and the proper utilities and the rest is up to you.

Dr. Hartzell: Any other comments that you would like to make. What about the quality of students, what about faculty life outside the department, do we have a company of scholars?

Monica Riley: No, I don't think we do. Maybe in other areas, arts or humanities there is such a thing, but not as it has impinged on my life here. Even when we had the faculty club, which I thought was an excellent idea to have one in the Chemistry

Dr. Hartzell: It started underway well.

Monica Riley: And maybe this time it will play the role we would all hope for, but I

Dr. Hartzell: Jerry Schubel has that idea very strongly in mind.

Monica Riley: Well, it's going to need something besides making the physical space and food and service, I don't know what it is that makes it so hard at Stony Brook to get a collegiality established, I don't know what the extra ingredient is that is still missing.

Dr. Hartzell: Is it leadership of the administration or is it the qualities that people look for when they are hiring, do they get people who carry their specialty in a much broader context, much broader frame of reference?

Monica Riley: Well, you have more opportunity there in the non-science areas. I think if you are going to have a full-fledged research university, then in the science areas you are going to have specialists, there is no way around it. Specialists in their own work, but some scientists have a broad field, some don't, that's true. I hadn't thought of that from that point of view, and I can think now of particular scientists visits at Harvard who maintained their own specialized work and have a broad view at the same time. George Wald would be, and we don't have any Walds, at least not that I can think of at the moment anyway. I don't if the administration was in a position to help us, I think we had to help ourselves.

Dr. Hartzell: Why?

Monica Riley: Well, Bentley Glass, wait, let me go back on that because I'm just remembering the years when Bentley Glass was Academic Vice President so we had a biologist in a position of importance and he did help, he did do all he could; he had certain ideas that never worked out. For instance, establishing a genetics unit, and I agreed with him, I thought that would be an excellent thing to do, but for the reasons I gave before of things going in different directions, genetics goes across the board, it is used for many different purposes, all the way from populations to molecules, and so population people and molecular people thought they were being preempted if you said genetics, so you can see that this was endless, this turmoil was just endless. But Bentley Glass, I think it was definitely to our benefit when he had the job of Academic Vice President. We didn't always agree with what he was trying to do, but our existence and our promise for the future was well known because he never let that be forgotten. At other times I think we were sort of on our own to try and solve these internecine warfare and just try and do the best job we could. Now, I would say that, at last there is some maturity, that a lot of the furor has died away. For one thing, in fact, we do have a collection of very strong, at least we think we are, strong departments, and no one is totally overshadowing any of the others and that is a great help. There are many people now, particularly in the neurobiology department that are really forefront in their field. That helps because some of these little arguments that is so beneath them, that they can set a tone, that helps to set a tone. The biochemistry department continues to have a difficult, to be in a difficult in that it's the only department that has two bosses -- one in the medical school and one on the college campus -- and that means that everything the biochemistry department does in the way of recruiting, or anything that has fiscal consequences is a little harder to arrange, because each boss says go get what you need from the other one, so it uniquely continues to have that problem. And there are cycles of thinking that the solution is to move completely into the medical school or completely into the college of arts and sciences and looking back over the long years now, I would say there's just sort of a cycle that the subject comes up every so often and there are

reasons why being completely in one or other is not good, and so the department remains split, two bosses and two sources of funds for faculty and two sets of teaching responsibilities. The only, probably the only solution to that dichotomy would be to establish another biochemistry department either in the medical school or the college of arts and sciences, which is what many universities have. But with the history now of this many long, long years of a *status quo* I think that would not be workable fiscally. It might have been the thing to do years ago to be more traditional, we were very untraditional in having the idea, because it was John Toll's idea, having the idea of one department to serve both needs, the undergraduates and the professional students.

Dr. Hartzell: I think that was the basic concept of the Muir Commission.

Monica Riley: Oh, yes, that's right, it was that.

Dr. Hartzell: One reason they came in their report recommending that the first new health science center be at Stony Brook. They told me when they came in unannounced in my office, I had been there about three months, that they were inclined to place a new comprehensive health sciences center on the campus of a growing institution, and hopefully have the two administrative responsibilities mesh. They didn't want to start off in an institution where all the administrative structure was set in concrete, because they were afraid there would be too much of a split. They felt that they wanted to have a close connection between medicine and a Ph. D. in biology, as close as they could.

Dr. Hartzell: Agreement for some people is difficult, because it seems to result in a lack of individual autonomy. If you agree with somebody, then you've lost your

individuality. I think it's the basis of the rather humorous remark that faculty member, the definition of a faculty member is a person who thinks otherwise.

Monica Riley: Yeah, that's right. I think Sidney Gelber had a very synthetic mind; he could see constructive interrelationships and would foster them.

Dr. Hartzell: That's the philosophical inclination.

Monica Riley: Well, yes, that's true, it would be. And I imagine it would be frustrating to him to have to deal with this other attitude of separatism from the medical people.

Dr. Hartzell: Is there anything else you can think of that ought to go into the record for somebody later on who is trying to work out a history of the institution. What's the quality, or let's say what is the standing of Stony Brook in your field?

Monica Riley: I think probably realistically it would, of course it would be different in each one of the sub-divisions. Probably neurobiology is top of the heap right now as things stand now. But realistically with all the other academic institutions in the country I would put us maybe at 15 or 20, which may not sound too good, but actually there are so many institutions of top, top excellence -- Harvard, MIT, Cal Tech, University of California Berkeley -- that you've got the first ten locked up with these very eminent institutions; and really a new institution can only begin to try and establish itself after that, so to be certainly in 10 and maybe 5 of the excellent ones is, I think, a wonderful achievement over this short period of time. And I think the single most important moves that have been made that have that consequence in biology has been the recruitment, and this is something I was forgetting before where the administration was helpful. When a person of major accomplishment was being recruited, in our field it's the custom to offer a good deal of tangible assets to the person and equipment running into hundreds of thousands of dollars worth of equipment, rehabilitation of space along specialized lines

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to bring in an experimental biologist of note from one place to another, and that, of course, has been very hard to arrange because we always seem to be in fiscal irons of one

kind or another, but in the last analysis the administrators, whether Sidney Gelber or John Toll, sometimes John Toll having to twist the arm of Howard Oaks to get the medical school to kick in appropriately from Marv Kuschner. Somehow when it has been really important, they have come through with handsome offers, and that's how we were able to bring on board after that first flush where it wasn't that hard to bring on board and to establish a neurobiology department that's really very, it would have, it would be above the others right now by virtue of having been willing to take the chance and back some Ph. D.'s. I think looking back on what I have just been talking about these last minutes I've probably accented too much the pulling and tugging that went on because that just came to mind this morning, and it is a part of our history, but it was not something that occupied the same fraction of time and thought as would be indicated by how much time I spent on it here, so I wouldn't want to leave the wrong impression. These were

Dr. Hartzell: What about the quality of students?

Monica Riley: I think the Stony Brook undergraduates rank higher in the science majors than the graduate students do. They are really the best undergraduates, head and shoulders above the best graduate students. And in fact we have one who we couldn't resist hiring onto the faculty, as a matter of fact. He went elsewhere for, he was a Stony Brook undergraduate, he was a Stony Brook graduate student, then he went elsewhere for postdoctoral training or whatnot, we hired him back as an assistant professor and he has now gone on to do magnificent things, I think we may be losing him right about now, he's gone on to really establish a name for himself. And at that level the top 10%, the top 25% of our majors -- biology and biochemsitry majors -- are really superb. The graduate students are mixed and we have learned over the years that the assessment, the evaluation ahead of time by the paper that we have in front of us, we have their transcripts and their GRE scores, etc.; that none of that works when we do retrospective studies about which students ended up being the great achievers and which ones disappointed.

Dr. Hartzell: So that you're not that quality.

Monica Riley: That's right, and we haven't solved that problem yet, so our admissions work on that graduate student admissions is not effective. We can't tell ahead of time which are going to be the real winners. But of course it's all workable, but we lose maybe too much, I think we have an attrition rate, it may be as much as 15 or 20% of admitted first-year graduate students that don't make it through the first two years. And so a lot of our effort too is misdirected so that's a problem. The undergraduates I hope that we will begin to open out and draw from larger areas than we presently do. I've always felt that it's a mistake confine ourselves geographically, but we certainly ought to go statewide for undergraduates.

Dr. Hartzell: Well, here you have the concept of university centers are really regional institutions only.

Monica Riley: Well, that's right, and I guess basically then I don't agree with the way it's been set up. That's not true in California.

Dr. Hartzell: No.

Monica Riley: And since I came out of the California system as a graduate student and a beginning faculty member, I felt that their way of statewide was best, and then at the graduate level they are worldwide.

Dr. Hartzell: It's awfully hard to break down a very parochial state point of view, particularly in the state offices, and a certain amount of pride and even arrogance that New York does things better than any other, which has been true along certain lines, but only those and not education.

Monica Riley: Well, I think that we can be proud of how far Stony Brook has come in this short time, but not to rest on our laurels where other improvements are still possible.

Dr. Hartzell: All right, thank you very much.

[end of interview]