



## Section V

# Powerful Insights: In-Depth Papers by Participants and Others

*Participants in A Seminar on the Cultural Impact of Extraterrestrial Contact contributed to the value of the event through preconference writing of statements on individual agenda topics and by sharing in discussion sessions the results of their considerable study and reflection on the subject. Further, several of the participants, along with two additional scientists, were invited to submit scholarly papers for this report to shed further light on particular aspects of this large issue. These papers include:*

### **The Role of the Social Sciences in SETI**

By Albert A. Harrison, John Billingham, Steven J. Dick, Ben Finney, Michael A. G. Michaud, Donald E. Tarter, Allen Tough, and Douglas A. Vakoch – Page 71

### **The Cosmic Environment for the Growth of Complexity**

By Eric J. Chaisson – Page 87

### **Cosmic Humanity**

By Steven J. Dick – Page 93

### **How Old Is ET?**

By Ray P. Norris – Page 103

### **Networking with Our Galactic Neighbors**

By Albert A. Harrison – Page 107

### **How to Achieve Contact: Five Promising Strategies**

By Allen Tough – Page 115

### **The Contact Hypothesis: On the Impossibility of Sustained and Mutually Beneficial Contact between Aliens, and Two Proofs to the Contrary**

By Reed D. Riner – Page 127

### **SETI, Consilience, and the Unity of Knowledge**

By Ben Finney – Page 139

### **Cultural Aspects of Astrobiology**

By Steven J. Dick – Page 145

### **Speculations on the First Contact: *Encyclopedia Galactica* or *the Music of the Spheres*?**

By Guillermo A. Lemarchand – Page 153

### **Roman Catholic Views of Extraterrestrial Intelligence: Anticipating the Future by Examining the Past**

By Douglas A. Vakoch – Page 165

