Respndents Demographics (N: 220)

Respondent ID	Gender	Age Group	Marital Status	EducationLevel	Stakeholder Role	Length Involvement	Tourism Livelihood	Negative_Impacts	Overtourism Experienc	Awareness Regenerative	Support Mitigation	Sustainability_ Priority
1	Female	30–40	Married	Bachelor's degree	Academia	>15 years	Yes	Yes	No	Yes	Yes	Economic
2	Female	>50	Married	High school or below	Business/Private sector	<5 years	No	No	Yes	No	Yes	Socio-cultural
3	Male	30–40	Single	Master's degree or above	Community/Local resident	>15 years	No	Yes	No	No	Yes	Socio-cultural
4	Female	>50	Single	Master's degree or above	Community/Local resident	<5 years	Yes	No	Yes	No	Yes	Environmental
5	Male	30–40	Married	Bachelor's degree	Business/Private sector	11–15 years	No	Yes	Yes	No	Yes	Environmental
6	Male	30–40	Single	Master's degree or above	Business/Private sector	6–10 years	Yes	No	Yes	No	No	Environmental
7	Female	>50	Married	Master's degree or above	Business/Private sector	>15 years	No	Yes	Yes	No	Yes	Socio-cultural
8	Female	>50	Married	Bachelor's degree	Academia	<5 years	No	Yes	Yes	No	Yes	Environmental
9	Male	41–50	Married	Bachelor's degree	Business/Private sector	11–15 years	Yes	No	Yes	Yes	Yes	Socio-cultural
10	Female	41–50	Single	Bachelor's degree	Business/Private sector	6–10 years	Yes	Yes	Yes	Yes	No	Economic
11	Male	30–40	Married	Master's degree or above	Government	6–10 years	Yes	Yes	No	No	Yes	Economic
12	Male	30–40	Married	Bachelor's degree	Business/Private sector	<5 years	Yes	Yes	No	No	Yes	Environmental
13	Female	41–50	Married	Bachelor's degree	Business/Private sector	11–15 years	Yes	Yes	Yes	No	No	Socio-cultural
14	Male	41–50	Married	Master's degree or above	Business/Private sector	>15 years	No	Yes	No	Yes	No	Socio-cultural
15	Male	30–40	Married	Master's degree or above	Community/Local resident	6–10 years	Yes	Yes	Yes	Yes	Yes	Economic
16	Female	41–50	Married	High school or below	Community/Local resident	6–10 years	Yes	Yes	Yes	Yes	Yes	Economic
17	Female	41–50	Single	Bachelor's degree	Community/Local resident	<5 years	Yes	Yes	Yes	No	No	Environmental
18	Male	41–50	Married	Bachelor's degree	Academia	11–15 years	Yes	No	Yes	Yes	No	Socio-cultural
19	Female	30–40	Single	High school or below	Academia	11–15 years	Yes	Yes	Yes	No	Yes	Environmental
20	Male	41–50	Single	Master's degree or above	Government	>15 years	Yes	Yes	No	No	Yes	Environmental
21	Female	<30	Married	Bachelor's degree	Business/Private sector	6–10 years	No	Yes	Yes	No	Yes	Environmental
22	Male	41–50	Married	High school or below	Business/Private sector	>15 years	Yes	Yes	No	No	Yes	Environmental
23	Female	30–40	Single	High school or below	Media	>15 years	Yes	No	No	Yes	Yes	Environmental
24	Male	30–40	Married	Bachelor's degree	Academia	6–10 years	No	No	No	Yes	Yes	Environmental
25	Male	30–40	Married	Bachelor's degree	Media	<5 years	Yes	Yes	Yes	Yes	Yes	Economic
26	Female	41–50	Single	Bachelor's degree	Government	6–10 years	Yes	Yes	Yes	No	Yes	Economic
27	Male	30–40	Married	High school or below	Media	11–15 years	Yes	Yes	No	Yes	No	Economic
28	Male	>50	Single	Bachelor's degree	Business/Private sector	>15 years	Yes	No	Yes	No	No	Environmental
29	Male	30–40	Married	Master's degree or above	Business/Private sector	11–15 years	No	Yes	Yes	Yes	No	Environmental
30	Female	41–50	Married	High school or below	Community/Local resident	<5 years	Yes	Yes	Yes	No	Yes	Environmental
31	Male	30–40	Single	High school or below	Academia	6–10 years	No	Yes	No	No	No	Economic
32	Male	30–40	Married	Master's degree or above	Community/Local resident	11–15 years	No	Yes	No	Yes	Yes	Socio-cultural
33	Male	30–40	Single	High school or below	Community/Local resident	6–10 years	No	Yes	Yes	Yes	Yes	Socio-cultural
34	Female	41–50	Married	Bachelor's degree	Government	6–10 years	Yes	No	Yes	No	Yes	Socio-cultural
35	Male	<30	Married	Bachelor's degree	Government	11–15 years	Yes	No	Yes	No	Yes	Economic
36	Male	30–40	Married	High school or below	Business/Private sector	>15 years	Yes	Yes	Yes	Yes	Yes	Economic
37	Male	30–40	Married	Bachelor's degree	Community/Local resident	6–10 years	No	Yes	Yes	Yes	Yes	Economic
38	Female	41–50	Married	Master's degree or above	Government	6–10 years	Yes	Yes	No	Yes	Yes	Environmental
39	Female	>50	Married	Bachelor's degree	Business/Private sector	11–15 years	Yes	No	No	Yes	Yes	Socio-cultural
40	Male	41–50	Single	Bachelor's degree	Business/Private sector	11–15 years	Yes	No	Yes	Yes	Yes	Economic
41	Male	30–40	Married	High school or below	Community/Local resident	11–15 years	Yes	Yes	Yes	No	Yes	Economic
42	Female	41–50	Single	Bachelor's degree	Academia	<5 years	No	Yes	No	Yes	Yes	Environmental
43	Male	41–50	Married	Bachelor's degree	Business/Private sector	<5 years	No	Yes	No	Yes	Yes	Environmental
44	Male	41–50	Married	Bachelor's degree	Academia	11–15 years	No	Yes	No	No	Yes	Socio-cultural
45	Male	>50	Single	Bachelor's degree	Business/Private sector	6–10 years	No	Yes	Yes	Yes	No	Environmental
46	Female	30–40	Married	Master's degree or above	Community/Local resident	6–10 years	Yes	Yes	Yes	Yes	Yes	Environmental
47	Male	30–40	Married	Master's degree or above	Community/Local resident	<5 years	Yes	Yes	Yes	Yes	Yes	Environmental
48	Female	30–40	Single	Bachelor's degree	Government	11–15 years	Yes	Yes	Yes	No	Yes	Socio-cultural
49	Male	>50	Married	Master's degree or above	Business/Private sector	>15 years	Yes	Yes	Yes	Yes	No	Socio-cultural
50	Female	<30	Married	Bachelor's degree	Business/Private sector	11–15 years	Yes	Yes	Yes	Yes	Yes	Economic
51	Female	30–40	Married	Bachelor's degree	Media	11–15 years	Yes	No	Yes	No	Yes	Socio-cultural
52	Male	41–50	Married	Bachelor's degree	Government	11–15 years	Yes	Yes	Yes	Yes	Yes	Socio-cultural
53	Male	<30	Single	Master's degree or above	Community/Local resident	<5 years	Yes	No	Yes	No	No	Environmental
54	Female	<30	Single	High school or below	Community/Local resident	6–10 years	Yes	Yes	Yes	No	No	Economic
55	Female	<30	Married	Bachelor's degree	Academia	>15 years	Yes	Yes	No	Yes	Yes	Environmental
56	Male	41–50	Married	Master's degree or above	Business/Private sector	11–15 years	Yes	Yes	Yes	Yes	Yes	Economic
57	Male	>50	Married	High school or below	Media	6–10 years	Yes	Yes	No	Yes	Yes	Economic
58	Male	<30	Married	Bachelor's degree	Business/Private sector	>15 years	Yes	No	Yes	No	No	Socio-cultural
59	Female	<30	Single	High school or below	Government	<5 years	No	Yes	No	No	No	Environmental
60	Male	30–40	Single	High school or below	Community/Local resident	<5 years	Yes	Yes	Yes	No	No	Socio-cultural
61	Male	30–40	Married	Bachelor's degree	Media	11–15 years	Yes	Yes	No	No	No	Socio-cultural
62	Male	30–40	Married	Bachelor's degree	Community/Local resident	11–15 years	No	Yes	Yes	Yes	No	Socio-cultural
63	Female	>50	Single	Bachelor's degree	Business/Private sector	<5 years	No	Yes	Yes	No	Yes	Environmental
64	Male	41–50	Married	Bachelor's degree	Community/Local resident	11–15 years	Yes	Yes	Yes	Yes	No	Socio-cultural
65	Female	>50	Married	Bachelor's degree	Business/Private sector	>15 years	No	Yes	No	No	Yes	Economic
66	Female	<30	Married	Master's degree or above	Academia	>15 years	Yes	Yes	Yes	No	Yes	Economic
67	Female	41–50	Single	High school or below	Community/Local resident	6–10 years	Yes	No	Yes	No	Yes	Environmental
68	Male	30–40	Married	Bachelor's degree	Business/Private sector	6–10 years	No	Yes	Yes	Yes	No	Socio-cultural
69	Male	30–40	Married	Bachelor's degree	Media	>15 years	No	Yes	Yes	No	Yes	Economic
70	Female	<30	Married	Bachelor's degree	Community/Local resident	<5 years	Yes	Yes	Yes	No	Yes	Socio-cultural
71	Female	>50	Married	Master's degree or above	Business/Private sector	6–10 years	No	Yes	Yes	No	Yes	Economic
72	Male	>50	Single	Master's degree or above	Government	6–10 years	No	No	Yes	Yes	No	Socio-cultural
73	Male	41–50	Single	Master's degree or above	Business/Private sector	11–15 years	No	Yes	Yes	No	Yes	Economic
74	Male	30–40	Married	Master's degree or above	Academia	6–10 years	Yes	Yes	Yes	No	Yes	Environmental
75	Male	41–50	Married	Bachelor's degree	Government	11–15 years	Yes	Yes	Yes	No	Yes	Socio-cultural
76	Male	41–50	Single	Bachelor's degree	Business/Private sector	<5 years	Yes	Yes	No	No	Yes	Socio-cultural
77	Male	41–50	Married	Master's degree or above	Government	11–15 years	Yes	No	Yes	Yes	Yes	Environmental
78	Male	>50	Married	Bachelor's degree	Business/Private sector	>15 years	Yes	Yes	Yes	No	Yes	Socio-cultural
79	Female	41–50	Married	Bachelor's degree	Community/Local resident	>15 years	Yes	Yes	Yes	No	Yes	Socio-cultural
80	Male	30–40	Single	Bachelor's degree	Government	<5 years	No	Yes	Yes	No	Yes	Socio-cultural
81	Male	<30	Married	Bachelor's degree	Community/Local resident	>15 years	No	Yes	Yes	No	Yes	Environmental
82	Female	30–40	Married	Bachelor's degree	Community/Local resident	>15 years	No	Yes	Yes	No	Yes	Environmental
83	Male	30–40	Married	Master's degree or above	Media	>15 years	No	No	Yes	Yes	Yes	Socio-cultural
84	Male	41–50	Married	Bachelor's degree	Community/Local resident	>15 years	Yes	No	No	No	Yes	Economic
85	Female	41–50	Single	Master's degree or above	Community/Local resident	>15 years	No	Yes	Yes	Yes	Yes	Environmental
86	Male	30–40	Married	Master's degree or above	Community/Local resident	11–15 years	Yes	Yes	Yes	Yes	Yes	Environmental
87	Female	30–40	Married	Bachelor's degree	Business/Private sector	11–15 years	Yes	Yes	Yes	No	Yes	Environmental
88	Male	41–50	Married	High school or below	Media	11–15 years	Yes	Yes	No	Yes	Yes	Environmental
89	Female	<30	Married	Bachelor's degree	Business/Private sector	6–10 years	No	No	Yes	Yes	Yes	Environmental
90	Female	<30	Married	Bachelor's degree	Business/Private sector	>15 years	No	No	Yes	No	No	Environmental
91	Female	30–40	Married	Master's degree or above	Government	6–10 years	Yes	Yes	No	No	No	Environmental

92	Male	41–50	Single	Master's degree or above	Business/Private sector	>15 years	Yes	Yes	No	Yes	Yes	Environmental
93	Male	30–40	Married	Bachelor's degree	Government	11–15 years	No	Yes	Yes	No	Yes	Socio-cultural
94	Male	30–40	Married	Bachelor's degree	Government	6–10 years	Yes	Yes	Yes	No	No	Economic
95	Male	30–40	Married	Master's degree or above	Business/Private sector	>15 years	Yes	Yes	Yes	No	Yes	Economic
96	Female	30–40	Married	Bachelor's degree	Business/Private sector	6–10 years	Yes	Yes	Yes	No	Yes	Economic
97	Male	41–50	Single	Master's degree or above	Community/Local resident	11–15 years	Yes	Yes	Yes	No	Yes	Environmental
98	Male	41–50	Married	Bachelor's degree	Community/Local resident	11–15 years	Yes	No	Yes	No	Yes	Environmental
99	Male	30–40	Married	Bachelor's degree	Government	<5 years	Yes	No	Yes	Yes	Yes	Environmental
100	Female	30–40	Single	Bachelor's degree	Community/Local resident	6–10 years	No	Yes	Yes	Yes	No	Socio-cultural
101	Male	41–50	Single	Master's degree or above	Media	>15 years	Yes	No	Yes	No	Yes	Socio-cultural
102	Male	41–50	Single	Master's degree or above	Community/Local resident	11–15 years	Yes	Yes	Yes	Yes	Yes	Environmental
103	Male	<30	Single	Bachelor's degree	Community/Local resident	11–15 years	Yes	Yes	Yes	No	Yes	Socio-cultural
104	Male	41–50	Married	Master's degree or above	Business/Private sector	6–10 years	Yes	No	No	No	Yes	Environmental
105	Male	41–50	Married	Bachelor's degree	Business/Private sector	11–15 years	Yes	Yes	Yes	No	No	Economic
106	Female	<30	Single	Bachelor's degree	Media	6–10 years	No	No	Yes	Yes	Yes	Economic
107	Male	30–40	Married	Bachelor's degree	Business/Private sector	6–10 years	Yes	No	Yes	Yes	Yes	Socio-cultural
108	Male	41–50	Married	High school or below	Business/Private sector	6–10 years	Yes	Yes	Yes	No	Yes	Environmental
109	Male	41–50	Married	Bachelor's degree	Business/Private sector	<5 years	Yes	Yes	No	No	Yes	Economic
110	Female	30–40	Married	Master's degree or above	Academia	>15 years	Yes	Yes	No	Yes	Yes	Socio-cultural
111	Female	30–40	Single	Bachelor's degree	Business/Private sector	<5 years	Yes	No	Yes	Yes	Yes	Socio-cultural
112	Male	<30	Married	Bachelor's degree	Academia	11–15 years	Yes	Yes	Yes	Yes	Yes	Environmental
113	Male	30–40	Married	High school or below	Community/Local resident	>15 years	Yes	Yes	No	No	No	Environmental
114	Female	41–50	Married	Master's degree or above	Business/Private sector	11–15 years	Yes	Yes	Yes	Yes	Yes	Environmental
115	Female	30–40	Married	Master's degree or above	Academia	<5 years	No	No	Yes	No	Yes	Economic
116	Female	<30	Single	Bachelor's degree	Community/Local resident	11–15 years	Yes	Yes	No	Yes	Yes	Socio-cultural
117	Male	<30	Married	Master's degree or above	Community/Local resident	<5 years	Yes	Yes	Yes	Yes	Yes	Environmental
118	Male	41–50	Married	Master's degree or above	Government	11–15 years	Yes	Yes	Yes	No	Yes	Socio-cultural
119	Male	30–40	Married	Bachelor's degree	Community/Local resident	>15 years	Yes	Yes	Yes	No	Yes	Economic
120	Female	30–40	Married	High school or below	Government	>15 years	Yes	Yes	No	Yes	Yes	Environmental
121	Male	41–50	Single	Bachelor's degree	Government	11–15 years	Yes	Yes	Yes	No	Yes	Socio-cultural
122	Female	30–40	Married	Bachelor's degree	Community/Local resident	>15 years	No	Yes	Yes	Yes	No	Socio-cultural
123	Male	41–50	Married	Bachelor's degree	Government	11–15 years	No	Yes	Yes	Yes	No	Economic
124	Male	<30	Single	Master's degree or above	Media	>15 years	Yes	Yes	Yes	No	Yes	Environmental
125	Male	>50	Married	Bachelor's degree	Business/Private sector	11–15 years	Yes	Yes	Yes	Yes	Yes	Socio-cultural
126	Female	30–40	Married	Master's degree or above	Community/Local resident	6–10 years	Yes	No	Yes	No	Yes	Environmental
127	Female	>50	Married	Master's degree or above	Academia	>15 years	No	Yes	No	No	Yes	Environmental
128	Female	30–40	Married	Master's degree or above	Academia	6–10 years	Yes	Yes	Yes	No	Yes	Socio-cultural
129	Male	41–50	Single	Bachelor's degree	Business/Private sector	>15 years	Yes	Yes	Yes	Yes	Yes	Environmental
130	Female	<30	Single	Bachelor's degree	Media	6–10 years	Yes	Yes	No	Yes	Yes	Environmental
131	Female	<30	Single	Bachelor's degree	Business/Private sector	11–15 years	Yes	Yes	No	Yes	Yes	Economic
132	Male	30–40	Married	Master's degree or above	Government	<5 years	Yes	Yes	Yes	No	No	Economic
133	Female	41–50	Married	High school or below	Government	<5 years	No	No	Yes	Yes	Yes	Environmental
134	Male	30–40	Single	Bachelor's degree	Government	<5 years	No	Yes	Yes	No	No	Environmental
135	Male	<30	Married	Master's degree or above	Business/Private sector	11–15 years	Yes	Yes	Yes	Yes	No	Environmental
136	Female	41–50	Single	Master's degree or above	Business/Private sector	>15 years	No	Yes	Yes	Yes	Yes	Environmental
137	Male	41–50	Married	High school or below	Media	<5 years	Yes	Yes	Yes	Yes	Yes	Environmental
138	Male	41–50	Married	High school or below	Government	6–10 years	No	Yes	Yes	No	Yes	Socio-cultural
139	Male	41–50	Single	Bachelor's degree	Government	11–15 years	Yes	No	Yes	No	Yes	Socio-cultural
140	Female	41–50	Single	High school or below	Community/Local resident	>15 years	No	Yes	Yes	Yes	Yes	Environmental
141	Female	41–50	Married	Bachelor's degree	Business/Private sector	6–10 years	Yes	Yes	Yes	Yes	Yes	Economic
142	Male	>50	Married	Master's degree or above	Government	11–15 years	Yes	Yes	Yes	Yes	No	Economic
143	Male	41–50	Married	Bachelor's degree	Academia	>15 years	Yes	Yes	No	No	No	Environmental
144	Female	<30	Married	Bachelor's degree	Community/Local resident	11–15 years	Yes	Yes	Yes	Yes	Yes	Socio-cultural
145	Male	41–50	Married	Master's degree or above	Community/Local resident	6–10 years	No	Yes	Yes	Yes	Yes	Environmental
146	Male	30–40	Married	Master's degree or above	Government	11–15 years	Yes	Yes	No	Yes	Yes	Economic
147	Female	30–40	Married	Bachelor's degree	Government	11–15 years	No	No	No	Yes	Yes	Economic
148	Male	41–50	Married	Bachelor's degree	Media	6–10 years	No	Yes	Yes	Yes	No	Socio-cultural
149	Female	>50	Single	High school or below	Community/Local resident	6–10 years	Yes	Yes	Yes	No	No	Environmental
150	Female	41–50	Single	Master's degree or above	Community/Local resident	6–10 years	No	No	No	Yes	Yes	Environmental
151	Male	>50	Married	Master's degree or above	Community/Local resident	11–15 years	Yes	Yes	No	No	Yes	Environmental
152	Male	41–50	Married	Bachelor's degree	Media	11–15 years	Yes	Yes	Yes	No	Yes	Socio-cultural
153	Male	>50	Married	Bachelor's degree	Community/Local resident	>15 years	Yes	No	Yes	No	Yes	Economic
154	Female	41–50	Married	High school or below	Community/Local resident	>15 years	Yes	Yes	Yes	No	Yes	Socio-cultural
155	Female	41–50	Married	Bachelor's degree	Community/Local resident	6–10 years	No	Yes	Yes	No	Yes	Environmental
156	Female	41–50	Married	Bachelor's degree	Community/Local resident	>15 years	No	Yes	Yes	Yes	Yes	Socio-cultural
157	Female	30–40	Married	Bachelor's degree	Community/Local resident	11–15 years	Yes	Yes	Yes	Yes	Yes	Socio-cultural
158	Male	>50	Single	Bachelor's degree	Media	11–15 years	Yes	Yes	Yes	Yes	Yes	Environmental
159	Male	41–50	Married	Bachelor's degree	Business/Private sector	11–15 years	Yes	Yes	Yes	Yes	Yes	Environmental
160	Male	30–40	Single	Bachelor's degree	Community/Local resident	<5 years	Yes	Yes	Yes	Yes	Yes	Socio-cultural
161	Male	41–50	Married	Master's degree or above	Business/Private sector	11–15 years	No	Yes	Yes	Yes	No	Environmental
162	Male	41–50	Married	High school or below	Community/Local resident	11–15 years	Yes	Yes	Yes	No	Yes	Environmental
163	Male	>50	Married	Bachelor's degree	Community/Local resident	11–15 years	Yes	Yes	Yes	No	No	Environmental
164	Male	41–50	Single	Bachelor's degree	Academia	6–10 years	Yes	Yes	Yes	No	No	Environmental
165	Female	30–40	Married	Bachelor's degree	Community/Local resident	6–10 years	Yes	No	No	Yes	Yes	Socio-cultural
166	Female	41–50	Married	High school or below	Community/Local resident	>15 years	Yes	Yes	No	Yes	Yes	Economic
167	Male	>50	Married	Bachelor's degree	Government	<5 years	Yes	Yes	Yes	No	No	Socio-cultural
168	Male	41–50	Single	High school or below	Government	>15 years	No	No	Yes	No	No	Environmental
169	Male	41–50	Single	Bachelor's degree	Government	6–10 years	Yes	Yes	Yes	Yes	Yes	Environmental
170	Male	>50	Single	Bachelor's degree	Business/Private sector	>15 years	No	Yes	Yes	Yes	Yes	Socio-cultural
171	Female	>50	Married	Master's degree or above	Community/Local resident	11–15 years	Yes	No	Yes	Yes	Yes	Socio-cultural
172	Male	<30	Single	High school or below	Academia	11–15 years	Yes	Yes	No	No	No	Socio-cultural
173	Male	41–50	Married	Bachelor's degree	Community/Local resident	>15 years	Yes	No	Yes	No	Yes	Environmental
174	Female	30–40	Single	High school or below	Business/Private sector	>15 years	No	Yes	No	No	Yes	Environmental
175	Male	41–50	Married	Bachelor's degree	Community/Local resident	6–10 years	Yes	Yes	Yes	Yes	Yes	Environmental
176	Female	30–40	Single	High school or below	Academia	>15 years	Yes	Yes	Yes	Yes	Yes	Environmental
177	Female	>50	Married	Bachelor's degree	Business/Private sector	>15 years	Yes	No	No	No	Yes	Economic
178	Female	<30	Married	High school or below	Business/Private sector	11–15 years	Yes	Yes	No	No	Yes	Environmental
179	Female	41–50	Married	Bachelor's degree	Government	>15 years	Yes	Yes	No	No	Yes	Environmental
180	Male	30–40	Married	Bachelor's degree	Business/Private sector	11–15 years	Yes	Yes	Yes	No	Yes	Socio-cultural
181	Male	41–50	Married	Bachelor's degree	Business/Private sector	6–10 years	Yes	Yes	Yes	Yes	Yes	Economic
182	Male	>50	Married	Bachelor's degree	Government	>15 years	No	Yes	Yes	No	Yes	Economic
183	Male	>50	Single	Bachelor's degree	Community/Local resident	6–10 years	No	Yes	Yes	Yes	Yes	Socio-cultural
184	Female	<30	Married	High school or below	Community/Local resident	>15 years	Yes	Yes	Yes	No	Yes	Environmental
185	Female	41–50	Married	Bachelor's degree	Government	6–10 years	Yes	Yes	Yes	Yes	Yes	Economic
186	Female	30–40	Single	Bachelor's degree	Business/Private sector	>15 years	No	Yes	Yes	No	No	Socio-cultural

187	Male	41–50	Single	Bachelor's degree	Media	>15 years	No	Yes	Yes	No	No	Environmental
188	Male	41–50	Married	Master's degree or above	Academia	11–15 years	Yes	Yes	Yes	Yes	Yes	Socio-cultural
189	Male	41–50	Single	Bachelor's degree	Community/Local resident	11–15 years	Yes	Yes	Yes	No	Yes	Economic
190	Male	>50	Married	Bachelor's degree	Community/Local resident	11–15 years	Yes	Yes	Yes	No	Yes	Socio-cultural
191	Male	<30	Single	Bachelor's degree	Academia	11–15 years	Yes	Yes	No	Yes	Yes	Environmental
192	Female	41–50	Single	Bachelor's degree	Government	6–10 years	Yes	Yes	No	Yes	Yes	Environmental
193	Female	41–50	Married	High school or below	Community/Local resident	<5 years	Yes	Yes	No	Yes	No	Socio-cultural
194	Female	30–40	Married	Master's degree or above	Government	11–15 years	Yes	Yes	Yes	No	No	Environmental
195	Female	30–40	Married	Bachelor's degree	Business/Private sector	<5 years	No	Yes	No	Yes	Yes	Socio-cultural
196	Male	41–50	Married	Master's degree or above	Community/Local resident	6–10 years	Yes	Yes	Yes	Yes	No	Environmental
197	Male	41–50	Married	Bachelor's degree	Government	6–10 years	No	No	Yes	Yes	Yes	Socio-cultural
198	Female	41–50	Married	Bachelor's degree	Business/Private sector	<5 years	Yes	Yes	Yes	Yes	Yes	Socio-cultural
199	Female	30–40	Married	Master's degree or above	Business/Private sector	6–10 years	Yes	No	Yes	Yes	Yes	Environmental
200	Male	>50	Single	Bachelor's degree	Community/Local resident	11–15 years	Yes	Yes	Yes	No	Yes	Environmental
201	Male	30–40	Single	Bachelor's degree	Government	11–15 years	Yes	Yes	No	Yes	Yes	Economic
202	Female	>50	Single	High school or below	Media	<5 years	Yes	Yes	Yes	No	Yes	Environmental
203	Male	>50	Single	Master's degree or above	Government	11–15 years	Yes	Yes	Yes	No	Yes	Environmental
204	Female	>50	Married	Bachelor's degree	Media	11–15 years	No	Yes	Yes	No	Yes	Socio-cultural
205	Male	30–40	Married	Bachelor's degree	Business/Private sector	11–15 years	Yes	Yes	No	No	No	Economic
206	Male	41–50	Single	Master's degree or above	Community/Local resident	6–10 years	Yes	Yes	Yes	No	Yes	Environmental
207	Male	41–50	Single	Bachelor's degree	Business/Private sector	6–10 years	No	Yes	Yes	No	Yes	Economic
208	Male	>50	Married	Master's degree or above	Business/Private sector	11–15 years	Yes	Yes	No	No	Yes	Economic
209	Female	41–50	Single	High school or below	Community/Local resident	11–15 years	No	Yes	No	No	Yes	Environmental
210	Male	<30	Married	Bachelor's degree	Business/Private sector	6–10 years	Yes	Yes	No	Yes	Yes	Environmental
211	Male	30–40	Single	High school or below	Media	11–15 years	Yes	Yes	Yes	Yes	Yes	Environmental
212	Female	>50	Married	Master's degree or above	Media	>15 years	Yes	Yes	Yes	No	No	Economic
213	Male	30–40	Single	Master's degree or above	Government	>15 years	No	Yes	Yes	Yes	Yes	Socio-cultural
214	Female	>50	Married	Bachelor's degree	Community/Local resident	6–10 years	Yes	Yes	Yes	No	Yes	Environmental
215	Male	41–50	Single	High school or below	Government	>15 years	Yes	Yes	Yes	No	No	Environmental
216	Male	>50	Married	Bachelor's degree	Government	11–15 years	Yes	No	Yes	No	Yes	Environmental
217	Male	30–40	Married	Bachelor's degree	Business/Private sector	>15 years	Yes	Yes	No	No	Yes	Socio-cultural
218	Male	41–50	Married	Bachelor's degree	Business/Private sector	>15 years	No	Yes	Yes	No	Yes	Environmental
219	Female	41–50	Single	High school or below	Government	>15 years	Yes	Yes	No	No	No	Economic
220	Male	>50	Single	Bachelor's degree	Community/Local resident	11–15 years	Yes	Yes	No	Yes	Yes	Socio-cultural

Items	Class	Number	Percentage
Gender	Male	132	60
Gender	Female	88	40
Age	<30	28	12,73
Age	30–40	70	31,82
Age	41–50	84	38,18
Age	>50	38	17,27
Marital Status	Married	146	66,36
Marital Status	Single	74	33,64
Education Level	High school or below	40	18,18
Education Level	Bachelor's degree	120	54,55
Education Level	Master's degree or above	60	27,27
Stakeholder Role	Government	44	20
Stakeholder Role	Academia	22	10
Stakeholder Role	Business/Private sector	66	30
Stakeholder Role	Community/Local resident	66	30
Stakeholder Role	Media	22	10
Length of Involvement in Tourism	<5 years	32	14,55
Length of Involvement in Tourism	6–10 years	56	25,45
Length of Involvement in Tourism	11–15 years	74	33,64
Length of Involvement in Tourism	>15 years	58	26,36
Primary Livelihood Dependence on Tourism	Yes	154	70
Primary Livelihood Dependence on Tourism	No	66	30
Observed Negative Tourism Impacts in Community	Yes	176	80
Observed Negative Tourism Impacts in Community	No	44	20
Experience of Overtourism	Yes	160	72,73
Experience of Overtourism	No	60	27,27
Awareness of Regenerative Tourism	Yes	102	46,36
Awareness of Regenerative Tourism	No	118	53,64
Support for Overtourism Mitigation Strategies	Yes	168	76,36
Support for Overtourism Mitigation Strategies	No	52	23,64
Priority Area for Sustainability in Bali	Economic	52	23,64
Priority Area for Sustainability in Bali	Socio-cultural	70	31,82
Priority Area for Sustainability in Bali	Environmental	98	44,55
Total		220	100

Table 1. Respondents' Demographics (N = 220)

Items	Class	Number	%
Gender	Male	132	60.00
	Female	88	40.00
Age	<30	28	12.73
	30–40	70	31.82
	41–50	84	38.18
	>50	38	17.27
Marital Status	Married	146	66.36
	Single	74	33.64
Education Level	High school or below	40	18.18
	Bachelor's degree	120	54.55
	Master's degree or above	60	27.27
Stakeholder Role (Penta-Helix)	Government	44	20.00
	Academia	22	10.00
	Business/Private sector	66	30.00
	Community/Local resident	66	30.00
	Media	22	10.00
Length of Involvement in Tourism	<5 years	32	14.55
	6–10 years	56	25.45
	11–15 years	74	33.64
	>15 years	58	26.36
Primary Livelihood Dependence on Tourism	Yes	154	70.00
	No	66	30.00
Observed Negative Tourism Impacts in Community	Yes	176	80.00
	No	44	20.00
Experience of Overtourism (e.g., overcrowding, congestion)	Yes	160	72.73
	No	60	27.27
Awareness of Regenerative Tourism	Yes	102	46.36
	No	118	53.64
Support for Overtourism Mitigation Strategies Even with Reduced Short-Term Economic Benefits	Yes	168	76.36
	No	52	23.64
Priority Area for Sustainability in Bali	Economic	52	23.64
	Socio-cultural	70	31.82
	Environmental	98	44.55
Total		220	100.00

Respondents Data

PH	RT	MS	ES	SS	EV
0,496714	1,540931	1,042237	0,471881	1,495349	0,989603
-0,13826	-1,08038	-0,63926	-0,61149	-0,56633	-1,36909
0,647689	0,767123	-0,35443	-0,24212	-0,38117	0,473507
1,52303	0,08522	0,01497	-0,18501	0,36848	-0,03714
-0,23415	-0,39656	-0,73437	-0,73279	-0,20585	-0,0929
-0,23414	0,434896	0,511165	0,370397	0,942509	-0,02494
1,579213	1,013353	0,729488	0,382795	0,638735	0,664034
0,767435	-0,09828	-0,4204	0,265697	-0,37594	-0,61633
-0,46947	-0,6721	-0,5885	-1,33251	-0,14974	-0,57888
0,54256	0,698394	-0,00447	0,388238	0,379037	0,635814
-0,46342	-0,67637	-0,41653	0,175794	0,03257	-0,32604
-0,46573	-0,17345	0,2687	-0,56835	0,335871	0,241829
0,241962	0,174292	-0,28004	-0,30483	0,199227	0,113881
-1,91328	-1,53333	-0,69444	-0,58449	-0,01408	-0,27211
-1,72492	0,072584	-0,16292	-0,61028	0,378115	-0,05245
-0,56229	-0,01094	-0,31291	-0,48212	0,035602	-0,07536
-1,01283	-1,7067	-1,03127	-1,0683	-0,6763	0,152216
0,314247	0,294154	-0,22966	0,47865	-0,08728	-0,16391
-0,90802	-0,91549	-0,74505	-0,14898	-0,03164	-0,40228
-1,4123	-0,42156	-0,70766	-0,00431	-0,70586	-0,09526
1,465649	0,486544	1,041846	0,935813	0,75204	1,02523
-0,22578	-0,2011	-0,103	-0,47155	-0,19723	0,331169
0,067528	0,310863	-0,09024	-0,24662	-0,04425	0,156263
-1,42475	-0,42217	-0,16213	0,069986	0,342887	-0,48351
-0,54438	-0,97689	-0,61003	-0,83447	-0,30022	0,160689
0,110923	-0,10941	-0,14889	0,158723	-0,07335	-0,47629
-1,15099	-0,96661	-0,32317	-0,29618	-0,66209	-0,10262
0,375698	-0,11508	0,226139	0,012673	0,392614	-0,1092
-0,60064	0,568023	0,124338	0,335594	0,296839	0,056933
-0,29169	0,034875	-0,20241	0,027636	0,623349	-0,01782
-0,60171	-1,0447	-0,71228	-0,59233	-0,53333	-0,34151
1,852278	1,637338	0,05963	0,454208	0,11123	0,178344
-0,0135	1,122058	0,064953	-0,34518	0,124833	0,579347
-1,05771	-0,10581	0,467126	0,524354	0,823383	0,445614
0,822545	-0,29936	0,462391	0,513093	0,244625	0,209842
-1,22084	-1,01486	-0,68491	-0,55612	-0,31488	-0,10982
0,208864	0,804352	0,689447	0,565011	0,622963	0,831227
-1,95967	-1,59196	-0,80299	-0,97028	-0,41755	-0,91548
-1,32819	-0,58706	0,849937	0,883586	0,356258	0,734787
0,196861	0,534685	0,742995	0,416687	0,512621	0,702038
0,738467	-0,03591	-0,07028	-0,233	0,327474	-0,14356
0,171368	0,07454	-0,32622	0,163871	-0,54916	0,253495
-0,11565	-1,79825	-1,66411	-1,33408	-0,95269	-1,09846

-0,3011	-0,73235	-0,3461	-0,72969	-0,44871	-0,17614
-1,47852	-1,05122	-0,90215	-1,14422	-0,12984	-0,6261
-0,71984	-1,11097	-1,19427	-0,55911	-1,24099	-0,74719
-0,46064	0,583954	0,088699	-0,40119	-0,13921	-0,3099
1,057122	-0,10639	-0,47988	0,316912	-0,15806	-0,78281
0,343618	-0,02136	0,639936	-0,33011	0,922962	0,935178
-1,76304	-1,02344	-0,25272	0,443664	-0,17427	-0,44181
0,324084	0,968667	0,558744	0,438802	0,144095	0,021224
-0,38508	-1,0036	-0,00988	-0,04108	0,641744	-0,72472
-0,67692	0,199901	0,145856	-0,10047	-0,41103	-0,1213
0,611676	0,38469	-0,10989	0,071602	-0,82297	-0,51069
1,031	0,116391	0,656415	0,413183	0,545343	0,961411
0,93128	0,823546	0,686024	0,841286	0,23876	0,769128
-0,83922	-0,41428	-0,64133	-0,37593	-0,7364	-0,63364
-0,30921	-0,51143	-0,37023	-0,18679	0,021747	0,518299
0,331263	0,242565	-0,19787	-0,25891	-0,03478	0,202918
0,975545	0,39959	-0,30289	-0,21729	-0,37594	-0,2992
-0,47917	-0,23662	0,220862	0,253862	-0,30828	-0,6948
-0,18566	0,237594	0,876071	-0,0434	0,826024	1,316314
-1,10633	0,158909	-0,44858	-0,7747	-0,04529	-0,74625
-1,19621	-1,40101	-0,59491	-0,12034	-0,39109	-0,92379
0,812526	1,639987	0,699625	0,515986	1,05556	0,781952
1,35624	-0,19897	-0,30374	-0,26336	-0,55067	0,622682
-0,07201	-0,1255	-0,30184	-0,18959	-0,70633	0,271716
1,003533	0,935574	0,208576	0,260131	-0,11307	0,319555
0,361636	0,373893	0,235618	-0,04027	0,125676	0,346884
-0,64512	-0,73167	-0,74565	-0,76358	-0,36361	-0,18501
0,361396	0,113203	0,170228	0,18083	0,019081	0,360466
1,538037	0,690972	0,381339	-0,10273	0,350014	0,334065
-0,03583	-0,33615	-0,28736	-0,04048	-0,60331	-0,14627
1,564644	1,422644	0,474229	-0,30188	0,781616	0,277879
-2,61975	-1,43407	-1,05476	-0,3168	-0,66114	-0,91607
0,821903	0,140482	0,373547	0,412162	0,608806	0,141686
0,087047	0,533167	0,502914	0,418643	0,419746	-0,24803
-0,29901	-0,02169	-0,39055	0,098293	-0,07707	-0,27886
0,091761	0,489886	0,32254	0,806478	0,389691	-0,12665
-1,98757	-0,8969	-0,22968	0,214207	0,016333	-0,51292
-0,21967	-0,57778	-0,98058	-1,29706	-0,36706	-0,55774
0,357113	-0,07699	0,165435	-0,35101	0,55688	0,568676
1,477894	1,314361	0,50613	0,105079	0,371339	0,625265
-0,51827	0,003804	0,222825	0,154186	0,377801	-0,38363
-0,80849	-0,5124	-0,5923	-0,19949	-0,38628	-0,70335
-0,50176	-0,24859	-0,84203	-0,80739	-0,0094	-0,21658
0,915402	1,248134	0,094637	0,128442	-0,1761	-0,26819
0,328751	-0,11129	-0,04596	-0,30057	0,592478	-0,1039
-0,52976	-0,03702	0,078946	-0,16782	0,033542	0,233265

0,513267	0,210522	-0,22755	-0,65199	-0,62913	-0,46645
0,097078	-0,05577	0,214564	-0,19138	0,172844	0,170335
0,968645	1,185855	0,045378	-0,45488	-0,20726	-0,41652
-0,70205	0,004409	-0,02299	-0,36465	0,275633	-0,21514
-0,32766	0,230188	-0,33472	0,160004	-0,42553	-0,10418
-0,39211	0,452293	0,010301	-0,33352	-0,14744	-0,52502
-1,46351	-0,89619	-0,50146	0,617368	-0,95144	-0,16895
0,29612	0,546856	-0,0155	0,166708	-0,16502	-0,01632
0,261055	-0,00342	-0,15067	-0,0317	-0,92493	0,089421
0,005113	0,175847	0,491069	0,0116	-0,25069	0,384084
-0,23459	-0,21477	-0,34762	0,025006	0,053235	0,236156
-1,41537	-0,82586	-0,15588	-0,30761	0,177016	-0,05642
-0,42065	0,056227	-0,40418	-0,219	-0,09603	-0,39791
-0,34271	-0,64833	-0,17119	0,806141	-0,43564	-0,06704
-0,80228	0,617158	0,915326	0,560539	0,532769	0,757931
-0,16129	-0,63588	-1,32446	-0,44905	-0,79592	-0,81811
0,404051	-0,39626	-0,53795	-0,60165	-0,72159	-0,32536
1,886186	1,786336	1,259197	0,80594	1,273129	0,559069
0,174578	0,52994	0,228859	0,783328	0,439385	-0,077
0,25755	0,492136	0,428941	0,054136	0,181288	-0,19776
-0,07445	0,28855	-0,06617	0,606485	-0,03044	0,542072
-1,91877	-1,19616	-0,66029	-0,17557	-0,32443	-0,83101
-0,02651	-0,49439	-0,34694	-0,42707	-0,91112	-0,44976
0,06023	0,077722	0,496596	0,549412	0,212856	0,073154
2,463242	1,166501	0,774941	0,852229	0,230162	0,786811
-0,19236	0,400161	0,362626	0,458534	-0,12728	0,130042
0,301547	0,108625	-0,09625	-0,62525	-0,15453	0,355682
-0,03471	-0,46125	-0,45605	-0,55701	0,3453	-0,51203
-1,16868	-0,89578	-0,6868	-0,53512	-0,19144	-0,33959
1,142823	0,92851	0,691049	0,422508	0,217976	0,156641
0,751933	0,165915	-0,06654	0,179168	0,157212	0,673823
0,791032	0,052461	0,142467	0,156283	0,56727	-0,3065
-0,90939	-0,43401	0,550715	-0,12056	0,648775	0,450324
1,402794	1,000221	0,916944	0,732258	0,570697	0,789139
-1,40185	-1,13919	-0,78678	-0,2926	-0,69481	-0,35761
0,586857	0,112939	0,529948	0,545068	0,558363	0,272045
2,190456	1,48169	0,7016	0,84334	0,556435	0,398693
-0,99054	-1,3855	-1,59162	-0,73571	-0,64676	-0,9881
-0,5663	-1,10083	-1,02825	-0,50382	-0,39827	-0,69685
0,099651	-0,32092	-0,90946	-0,6163	-0,18432	-0,25136
-0,50348	-0,42585	-0,38291	-0,8441	-0,41402	0,496326
-1,55066	-0,7958	-0,45444	-0,14143	0,180906	-0,47231
0,068563	0,828399	1,128657	0,808053	0,745227	0,25401
-1,0623	-0,20177	0,009377	0,103416	0,720126	-0,02355
0,473592	0,208432	0,036176	-0,43401	-0,21558	0,883529
-0,91942	-0,58017	-0,01581	-0,39768	0,588193	-0,27812

1,549934	0,426934	-0,6073	-0,01735	-0,29624	0,164302
-0,78325	-0,49548	-0,19628	-0,14176	-0,34205	0,436121
-0,32206	-0,35344	0,093056	0,304703	-0,11077	-0,12608
0,813517	0,676286	-0,17944	-0,10649	-0,21796	0,076797
-1,23086	-1,20378	-0,25597	-0,15572	-0,00754	0,382066
0,22746	0,41767	0,373126	0,578768	0,403885	0,108571
1,307143	1,626885	0,783025	0,32404	0,272293	0,425379
-1,60748	-1,05457	-0,36699	-0,2041	-0,22858	-0,42529
0,184634	0,328456	1,068456	0,528839	1,378644	0,334547
0,259883	0,528752	0,376994	0,089343	0,820979	0,02087
0,781823	0,271009	0,253158	0,05376	0,302118	-0,24889
-1,23695	-0,64754	-0,55318	-0,27997	-0,31883	-0,33713
-1,32046	-0,81198	-0,79953	-0,69126	-0,43839	-0,76061
0,521942	0,375634	0,538913	0,800296	0,534578	0,417519
0,296985	-0,22764	-0,46303	-0,62155	-0,62996	-0,81084
0,250493	0,168362	0,12532	0,014492	-0,01342	0,189352
0,346448	0,480071	0,093757	-0,09664	-0,51823	0,33718
-0,68002	0,351377	0,388994	0,771374	0,370846	-0,42016
0,232254	0,65498	0,508897	0,401219	0,528164	0,445412
0,293072	1,328659	1,171781	1,131422	0,536711	1,147843
-0,71435	-0,85165	-0,69115	-0,9816	0,127223	-0,83903
1,865775	1,621447	0,836093	0,639159	0,079633	1,084804
0,473833	0,391439	-0,1514	0,220392	-0,59501	0,044427
-1,1913	0,427852	0,076371	0,079128	0,1231	-0,18712
0,656554	-0,0235	0,132251	0,467781	0,43986	0,064711
-0,97468	-1,0516	-0,31724	-0,39158	0,389419	-0,01357
0,787085	0,168709	-0,2587	0,336888	-0,31321	-0,13762
1,158596	-0,41302	0,096675	0,886654	0,429388	0,240665
-0,82068	-0,78888	0,066599	-0,08673	0,026701	-0,26523
0,963376	0,19292	0,271746	0,016988	0,103613	0,227708
0,412781	0,336036	0,920554	1,119184	0,856571	0,108253
0,82206	0,691723	0,102018	0,632355	0,285801	0,02716
1,896793	2,175407	0,780497	0,319955	-0,07444	0,190118
-0,24539	0,35413	-0,48234	-0,46409	0,218961	-0,54929
-0,75374	-0,77462	0,129158	-0,01703	0,552651	0,493801
-0,88951	-1,03007	-0,34443	-0,70567	-0,42204	0,147132
-0,81581	-0,24377	-0,16288	-0,43507	0,038547	0,100631
-0,0771	-0,75106	-0,32737	-0,57263	-0,02633	-0,5707
0,341152	1,187093	0,253349	-0,11046	0,241758	0,054038
0,276691	0,799811	1,409527	0,903763	0,65625	1,292761
0,827183	0,262934	0,202464	0,215533	-0,10976	0,174837
0,013002	-0,90449	-0,48231	0,242126	-0,29818	0,470008
1,453534	1,62237	1,221588	0,43627	1,136716	0,900834
-0,26466	-0,2251	0,055422	0,388758	0,220411	0,098994
2,720169	2,345863	1,447164	0,863973	0,740698	0,808574
0,625667	-0,4614	-0,57325	-0,39034	-0,07826	-0,31659

-0,85716	-0,85071	-0,31112	0,039594	-1,16741	-0,24688
-1,07089	-0,66116	0,344202	-0,1786	0,602034	0,453113
0,482472	0,324158	0,708212	0,597375	-0,17405	0,765384
-0,22346	-0,37829	0,396591	0,317433	0,113168	-0,0124
0,714	0,774459	0,251527	0,339964	-0,23458	-0,28571
0,473238	-0,27529	-0,54229	-0,24887	-0,77113	-0,95431
-0,07283	-0,121	-0,11881	0,802634	0,328378	0,094643
-0,84679	-0,46093	-0,2458	-0,3883	-0,3085	-0,523
-1,51485	-0,66517	0,037262	-0,16606	0,141656	-0,69485
-0,44651	0,102223	-0,59509	-0,61011	-0,37321	-0,24526
0,856399	-0,06811	0,551892	0,159673	0,495377	1,179499
0,214094	-0,68445	-0,45807	-0,52616	-0,2484	-0,29061
-1,24574	-0,09177	-0,21828	0,284207	-0,57269	0,142254
0,173181	0,284389	-0,22638	0,361894	0,207181	-0,11532
0,385317	-0,15981	-0,73253	-0,68067	-0,60951	-0,49449
-0,88386	0,278273	0,479673	0,013511	-0,24812	0,608851
0,153725	0,156927	0,119366	0,24652	-0,07578	-0,02165
0,058209	0,664276	-0,11348	-0,27165	0,448616	0,017727
-1,14297	-0,67268	-0,89089	-0,35226	-0,24181	-0,45392
0,357787	1,319544	0,635506	0,485797	0,261265	0,177456
0,560785	1,282719	1,389295	0,359872	0,71333	1,206258
1,083051	0,538874	0,212177	0,692467	0,016569	0,075295
1,053802	1,170892	0,097935	0,707215	0,773772	-0,19046
-1,37767	-0,51038	-0,39103	-0,47377	-0,10312	-0,06734
-0,93783	0,147589	-0,01985	-0,15183	0,136153	-0,31228
0,515035	-0,19467	-1,15565	-0,64873	-0,33867	-0,71865
0,513786	0,683992	0,375723	0,364073	0,307647	0,233663
0,515048	0,883129	0,422925	0,510892	0,164569	0,62876
3,852731	1,451851	1,111258	1,442679	0,599153	0,858479
0,570891	-0,27634	0,55461	0,297087	0,308114	0,341054
1,135566	-0,3822	0,213902	-0,14704	0,115526	0,407612
0,954002	0,447974	0,15586	-0,39297	0,344035	0,562045
0,651391	0,786082	0,028095	-0,24367	0,034742	0,203817
-0,31527	0,604806	1,345764	0,862875	1,059702	0,851285
0,758969	0,51003	0,318714	0,850248	0,163438	-0,23691
-0,77283	0,388377	0,230644	-0,03557	0,16546	-0,21008
-0,23682	-0,88198	-0,52087	-0,25837	-1,00049	-0,42999
-0,48536	-1,20828	-0,62421	-0,41162	-0,05904	-0,59662
0,081874	0,021173	-0,04354	0,397565	0,093172	-0,08981

Regression Summary

Hypothesis	Path	β	t	p	R2	Result
H1	PH → RT	0,587	15,61	<0.001	0,528	Supported
H2	RT → MS	0,549	15,973	<0.001	0,539	Supported
H3	MS → ES	0,662	16,304	<0.001	0,549	Supported
H4	MS → SS	0,627	16,115	<0.001	0,544	Supported
H5	MS → EV	0,654	16,179	<0.001	0,546	Supported

Model Statistics

model	R_squared	adj_R2
RT~PH	0,527816	0,52565
MS~RT	0,539252	0,537138
ES~MS	0,549434	0,547367
SS~MS	0,543643	0,54155
EV~MS	0,545608	0,543524
ES~PH+RT+MS	0,555359	0,549184

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Network Analysis and Tourism

From Theory to Practice

Noel Scott, Rodolfo Baggio and Chris Cooper

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* * * * * *

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Chapter 1
Introduction

We live in a networked world. The concept of a network of friends, of businesses or indeed of computers is pervasive in our conversations, newspaper articles or business plans. For many, the increasing importance of innovation and adaptation to turbulent environments is changing the nature of interaction with other organisations and as a response we increasingly encounter more networked inter-organisational relationships such as alliances, partnerships, clusters and communities of practice. These organisational forms often involve interaction between numerous individual organisations such that the flows of information and resources between them are complex. As a result these networks of organisations are becoming a dominant organisational form in the 21st century (Cravens & Piercy, 1994).

For many business sectors, the development of networks of organisations may be new or novel. For example, 'Just In Time' manufacture, which requires a network of suppliers working together, has been in place since the early 1980s (Huson & Nanda, 1995). In comparison, tourism has always been a networked industry and the usual description of tourism as a fragmented and geographically dispersed industry belies a pervasive set of business and personal relationships between companies and managers in businesses such as national tourism offices, hotels, attractions, transport, tours, travel agents and restaurants. It is this network of relationships that allows the tourism industry to deliver its product and to overcome the problems of fragmentation. Therefore it can be argued that the tourism industry provides the ideal context for study of networks.

The network concept is based around relationships between entities such as organisations or people (termed nodes), and the properties of networks studied by researchers relate to the structure of these relationships. The study of networks may be considered to have a number of paradigmatic characteristics (Wellman, 1988: 82) focusing on:

- Structural advantages and constraints on behaviour.
- The discovery of groups through their relationships rather than a priori allocation to categories.

- The overall structure of multiple relationships in a group rather than that between a particular pair of alters (in the language of network analysis, a particular node is identified as 'ego' and those nodes that ego has relationships with are termed 'alters').

One consequence of this approach is that it makes problematic the classical economic concept of a market as a homogeneous collection of identical suppliers and buyers. Instead, studying networks presupposes that the individuals do not act in isolation and with perfect information, but that the behaviour of individuals is profoundly affected by the pattern of relations that they may (proactively) develop. In studying networks the focus therefore is on relations rather than attributes, and on structured patterns of interaction rather than isolated individual actors. A second implication is that the fundamental basis for the study of networks is different from other areas which study the attributes of people or organisations. Instead, network analysis studies relationships (Knoke & Kuklinski, 1991).

Definition of a Network and Network Analysis

Originally, the concept of a network was a metaphor for the complex interactions between people in the community. However, with the development of quantitative approaches the concept of a network became formalised and related to mathematical theory. In graph theory a network is a:

> finite set of points linked, or partly linked, by a set of lines (called arcs) … called a *net,* there being no restriction on the number of lines linking any pair of points or on the direction of those lines. A *relation* is a restricted sort of net in which there can only be one line linking one point to another in the same direction, i.e. there are no parallel arcs. (Mitchell, 1969: 2–3)

Transferred into sociology, a network is defined as a specific type of relation (ties) linking defined sets of persons, objects or events (Mitchell, 1969), and the sets of persons, objects or events on which a network is defined are called actors or nodes. Thus a network consists of a set of nodes, and ties representing some relationship between the nodes. Today, there are many definitions of a network but as pointed out by Jarillo (1988: 31), many have been developed by applying this basic definition to new areas such as the study of organisations where, for example, Gamm (1981) defines a network as a system or a field comprised of organisations and inter-organisational relationships.

Given this definition of a network, network analysis (or social network analysis) is an approach and set of techniques used to study the exchange of resources among actors such as individuals, groups, or organisations (Haythornthwaite, 1996). Because of this focus on relationships, the techniques used to analyse networks differ substantially from mainstream statistical methods that demand independent units of analysis. Network analysis therefore uses a set of integrated techniques to draw the patterns of relations among actors and to analyse their structure. The analysis is conducted by collecting relational data and organising it into a matrix and calculating various parameters such as density or centrality.

Network analysis has increased in popularity through the 1990s as an analytical framework, encouraged by the emergence of theories of society that emphasise relationships and integration. This is due in part to the effects of globalisation, which encourages alliances and linkages across organisations and nations, and to the greatly enhanced ease in communications encouraged by the wide diffusion of information technologies. In business and economics, network analysis represents a new organisational paradigm, drawing upon the competencies-based theories of the firm, where relationships shape and constrain organisational performance.

Within the tourism literature, the use of the concept of a network appears logical and delivers a number of useful outcomes for the analysis of tourism destinations and organisations. Tourism is a networked industry where loose clusters of organisations within a destination – as well as networks of cooperative and competitive organisations linking destinations – cooperate and compete in dynamic evolution. The concept of a network and the techniques of network analysis provide a means of conceptualising, visualising and analysing these complex sets of relationships. It provides a method for simplifying and communicating these relationships and so can be useful in promoting effective collaboration within destinations. It allows the identification of critical junctures in destination networks that cross functional, hierarchical or geographic boundaries, so ensuring integration within groups following strategic destination restructuring initiatives.

The aim of this book is to review the contribution of network analysis to the understanding of tourism destinations and organisations. We aim to provide an introduction to the use of quantitative network analysis for tourism and to provide some tourism applications of recent developments in network thinking derived from the physical and mathematical sciences. In working towards the achievement of these aims, we have reviewed the use of network analysis in tourism and found that the

primary approach used to study destination networks is qualitative in nature. In this qualitative approach, the emphasis is on analysis using thick description where network diagrams, if used, are illustrative and display the relationships between pre-identified groups, rather than individual organisations or stakeholders. In comparison, much network analysis research outside tourism adopts quantitative methods where the emphasis is on collecting data concerning relationships between entities. These are mapped using mathematical techniques with results displayed visually in network diagrams and network attributes quantitatively measured.

This qualitative/quantitative divide echoes the qualitative–quantitative debate encountered in tourism and other fields of study (Davies, 2003; Walle, 1997). Outside tourism, this debate may be seen by comparing the inter-organisational network paradigm (Borgatti & Foster, 2003; Podolny & Page, 1998) with the policy network research tradition that emphasises qualitative and ethnographic methods (Rhodes, 2002). In policy network research, the focus is on the dynamic processes of policy-making, implementation and action derived from a view that the important focus for research is the individual. From this perspective, the quantitative approach to network analysis is seen as positivist and ignoring the changing nature of relationships with substantial methodological issues. A more balanced perspective is provided by Dredge (2005) who provides a framework for analysis of tourism policy networks that embeds the dynamic processes of policy-making within a structural network. From this perspective, the quantitative network approach used in this paper provides information on structural properties of the network as a whole that supplements the study of the relationships between individuals. A second differentiating characteristic of the quantitative social network approach is that it does not a priori define groups and structures within the destination. Instead, the aggregate network of relationships between actors in the network is used to define a group, cluster or clique. As Monge (1987: 242) writes, 'groups emerge by being densely connected regions of the network'.

Which is the better approach? Perhaps, when beginning this book, the authors may have been biased towards quantitative network analysis. However, the journey involved in producing a book such as this requires an understanding of the perspectives of many different authors, and it is clear that no single approach to the study of tourism networks can provide all the answers. The book is structured to reflect this debate and is offered to readers for them to choose the best approach, or indeed perhaps to chart a new approach that blends these two approaches together.

We have written the book to provide core ideas of network analysis and tourism, and have invited contributions from several specialists to augment and extend our thinking. As noted above, the qualitative/quantitative categorisation provides the basis for the structure of this book, effectively providing four sections – introductions, qualitative approaches to network analysis, quantitative approaches, and a concluding chapter.

The introductory chapter provides an overview of network analysis for tourism. It is followed by two chapters that provide firstly a history of the network concept in the social sciences and secondly an examination of the use of the network concept in the tourism literature.

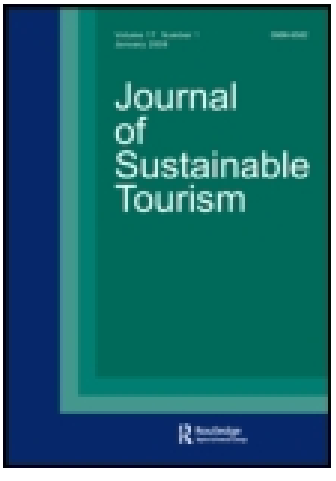
The second section of the book reviews qualitative approaches to network analysis and tourism. Chapter 4 by Ian Wilkinson and Roger March provides a managerial application of network research in tourism and an example of how network analysis as a conceptual tool can be used by tourism managers to evaluate the effectiveness of their business-to-business relationships and partnerships. The chapter reports on an Australian Sustainable Tourism Cooperative Research Centre project aimed at developing a best-practice model for the efficient monitoring and organisation of relationships between tourism stakeholders in a regional tourism destination. In Chapter 5, Chris Cooper examines the management of knowledge in tourism destinations from a network perspective. Here knowledge is seen as a resource shared amongst stakeholders whose 'value' is determined in part by its distribution within the destination. The chapter develops a framework for knowledge management in a tourism destination and examines policy implications. Chapter 6 by Dianne Dredge and Christof Pforr examines the development of tourism networks as a new organisational form. The chapter asks if these new networked approaches are more efficient and effective in producing tourism public policy than the more centralised and bureaucratic approaches and if networks promote better tourism governance. In Chapter 7, Kathryn Pavlovich continues the discussion on network governance and network leadership in a case study set within an 'icon' tourism destination in New Zealand, the Waitomo Caves. The chapter examines the evolution of networks in the destination over a period of a hundred years focusing on recent capacity building and the development of knowledge network over recent years. Carlos Costa, Zélia Breda, Rui Costa and Joana Miguéns in Chapter 8 examine whether networks and clusters can be used as an innovative means to support tourism enterprises. They have conducted an empirical study in Portugal, targeting sports and adventure tourism enterprises, mainly consisting of SMEs. They suggest that by cooperating in the form of geographical and product-based clusters, enterprises can function as dynamic and interesting

innovative organisations. In Chapter 9 Grace Wen Pan examines the cross-cultural context of network development. She examines the development of partnering relationships between Australian inbound tour operators and Chinese travel agents in the inbound Chinese travel trade to Australia. The study demonstrates the complexity of network development across cultural boundaries and concludes that the process is embedded with cultural factors, such as guanxi, ethnic preferences and regional cultural differences. In Chapter 10 Giuseppe Marzano examines the process of branding destinations through a network of stakeholders. Here networks are seen not as simple collaborative efforts but also as the vehicle for the exercise of power.

In the third section of this book quantitative approaches to network analysis and tourism are examined. We begin this section in Chapter 11 with a brief overview of formal network concepts and mathematical approaches. This is followed in Chapter 12 by an examination of network visualisation techniques, as one of the important advantages of network analysis is that output can include diagrams which help illustrate structural issues within destination networks. In the next two chapters we apply these quantitative methods to the analysis of tourism destinations. Chapter 13 places network methods within the broader context of complexity and chaos theories and goes on to present the study of two tourism destinations. It is shown how the quantitative approach can help in identifying the main structural characteristics of destination networks and how some of these measurements can be related to issues, such as collaboration and cooperation, which so far have been analysed only by using qualitative techniques. Chapter 14 analyses the technological counterpart of socio-economic systems: the Web space, and proposes the usage of the outcomes of this investigation as indicators to assess both technological and social conditions in a destination. This chapter closes with a consideration of numerical simulation methods. Their usage, it is shown, can prove very effective and useful in analysing special situations, in forecasting future scenarios and in providing destination managers with tools to improve their capabilities of adaptation and reaction to events.

In the final chapter of the book we synthesise the various approaches to network analysis and its application for tourism researchers and provide a discussion of future research opportunities and agendas. The study of tourism networks and the use of formal network analysis techniques have much to offer tourism researchers and we hope that this book will stimulate further development of network thinking. In particular we feel that tourism provides a rich context for research that will allow new theoretical developments of the concept to emerge.

The authors would like to thank a number of people who have helped and supported us in our work, in particular the specialist authors of the chapters in this book – their contribution has considerably enhanced the coverage of network applications to tourism. We are grateful to Dallen Timothy who provided constructive commentary on the manuscript. Noel Scott would like to thank his wife Trisha and family for their support during the last two years and would like to dedicate this book to the memory of his mother Jean Scott who died in February 2007. Rodolfo Baggio wishes to acknowledge Magda Antonioli Corigliano and the colleagues at the Master in Economics and Tourism, Bocconi University for their support and the fruitful discussions, and Valeria Tallinucci and Carla Catastini for the invaluable help in collecting much of the data used for the analyses presented here. Finally, without the patience and the assistance of his family, little of this book would have seen the light. Chris Cooper is grateful to Amy Cooper for putting the final manuscript together and to his two colleague authors – in part this book saw its genesis in fruitful discussions with Rodolfo in Milan and the enthusiastic adoption of the concept with Noel in Australia.



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Critical research on the governance of tourism and sustainability

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EDITORIAL INTRODUCTION

Critical research on the governance of tourism and sustainability

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Tailored and effective governance is a key requirement for implementing sustainable tourism: it can enhance democratic processes, provide direction and offer the means to make practical progress. This introduction explains how the papers in this collection provide critical assessments of the theory and practice of tourism governance and sustainability. It argues that theoretical frameworks are crucial to research on the subject as they affect the issues examined and the policy recommendations made. Several papers in the collection focus on relevant theoretical frameworks and concepts, while others consider governance at different geographical scales and the interconnections between those scales. The temporal dimensions of governance are also explored because sustainable development relates to long time horizons. Governance is also considered in relation to trade-offs, policy failures, learning processes, adaptive management, the public sphere and the principle of subsidiarity.

Keywords: governance; sustainable tourism; critical perspectives; geographical scale; adaptive governance

Introduction

This collection of papers examines the governance of tourism and sustainability. In the tourism literature, the term governance is used less frequently than the related terms of tourism politics, policy, policy-making and planning, and destination management (Dredge & Jenkins, 2007; Hall, 1994, 2008; Hall & Jenkins, 1995). While there seem to be differences between each of these terms and their tourism-related activities, they also overlap to varying degrees. For example, both planning and policy in tourism involve political debate about what the agenda is, what the issues are, who is involved or affected and the alternative courses of action that are available. The idea of governance includes within its compass all of these more established terms and activities. An understanding of these tourism activities can be enhanced by drawing on ideas from the rapidly expanding social science literature on governance (Kooiman, 2003; Rhodes, 1997). This literature often emphasises how governance cannot be understood in isolation from its relationships with society, including the societal groups that seek to influence the governance processes.

There are many potential uses of the concept of governance, and this diversity of uses exceeds any attempt to offer a short yet comprehensive account (Ruhanen, Scott, Ritchie, & Tkaczynski, 2010). Governance implies a focus on "systems of governing" and on the ways that societies are governed, ruled or "steered" (Bulkeley, 2005; Stoker, 1998). Governing systems provide means for "allocating resources and exercising control and

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co-ordination" (Rhodes, 1996, p. 653). Governance involves the processes for the regulation and mobilization of social action and for producing social order. According to Atkinson (2003, p. 103), governance involves processes "whereby some degree of societal order is achieved, goals decided on, policies elaborated and services delivered". The concept of governance is seen as broader than that of government, in recognition that often it is not just the formal agencies of government that are involved in governance tasks (Goodwin & Painter, 1996). Non-state actors that can be involved in governance include actors in the business, community and voluntary sectors.

The processes of tourism governance are likely to involve various mechanisms for governing, "steering", regulating and mobilizing action, such as institutions, decision-making rules and established practices. The forms of tourism governance can include hierarchical tiers of formal government, networks of actors beyond government, communities and also markets (Hall, 2011a). There are important power relations around tourism governance, with some groups in society, for example, having relatively more influence than others on the governance processes affecting tourism (Dredge & Jenkins, 2007; Hill, 1997). There can be significant conflicts around tourism governance as groups seek to secure their favoured policy decisions.

Tailored and effective governance is a key requirement for furthering the objectives of sustainable tourism in at least two senses. First, participation by a diverse range of actors in tourism decision-making potentially can enhance the democratic processes and ownership widely associated with sustainable development. At the local scale, for example, Mowforth and Munt (2009, p. 114) argue that "In the field of tourism, those who speak of sustainable development almost always include participation of the destination communities as one essential element or principle of that sustainability". Sustainable tourism also usually requires effective governance processes, adjusted to specific purposes and contexts, if it is to make progress towards securing the economic, socio-cultural and environmental goals of sustainable development. Such effective governance usually entails a need for appropriate institutions, decision-making rules and established practices. Subsequently, there is also a need to develop and apply suitable instruments to implement sustainable tourism. But governance guided by sustainable tourism objectives is likely to face major obstacles. These obstacles can arise, for example, because the concerns of sustainable tourism span numerous policy domains, many relevant policies are made in other policy domains and the relevant actors are diverse and have varied interests and priorities (Bramwell, 2011).

The papers in this collection assess aspects of the governance of tourism and sustainability. They show that a focus on governance can provide helpful insights into the issues related to tourism and sustainability. The contributions explore, first, some theoretical and conceptual frameworks that can assist in understanding the governance of tourism and sustainability. Second, some papers consider tourism governance at national, regional and local scales; one explores an example of how governance at the global scale can interact with local tourism practices. The third group of papers focuses on explaining temporal change in the governance of tourism and sustainability, and on social learning within such governance processes.

Two approaches to governance

It is helpful to recognise two distinctive approaches to conducting research on governance. The first approach considers the processes for governing, "steering", regulating and mobilizing social action that apply for the cases being studied (Bevir, 2009; Healey, 2006). The pattern of governing that arises may be led by government, but equally the state may play little or no role. In this approach, governance processes are likely to vary from case to

case, but governance processes of some form will always be found. This general use of the governance concept enables researchers to explore the construction of social order, social coordination or social practices irrespective of their specific content and context.

The second approach considers that governance relates to specific trends in the roles and activities of the state in some countries following neo-liberal public sector reforms begun in the 1980s and 1990s (Bevir, 2009; Dredge & Jenkins, 2007; Shone & Memon, 2008). Typically, these reforms are said to have led to a shift from a hierarchical bureaucracy based on the state towards a greater use of networks beyond the state, as well as markets and quasi-markets. This use of the governance concept is firmly related to specific trends in the state's activities that are said to have occurred since the late twentieth century and particularly in certain countries.

Sustainable tourism

The papers here focus on the governance of sustainable tourism. The ideas behind sustainable tourism emerged earlier, but the term became popular following the release of the Brundtland Report (World Commission on Environment and Development, 1987). In that context, it is often defined as tourism that meets the needs of present generations without compromising the ability of future generations to meet their own needs. Sustainable tourism may be regarded most basically as the application of the sustainable development idea to the tourism sector. The paper by Hall (2011b) outlines key organising ideas behind the sustainable tourism policies of the United Nations' Environment Programme (UNEP) and World Tourism Organisation (UNWTO). Their policies focus on three dimensions or "pillars" of sustainable development, namely economic, social-cultural and environmental sustainability, and sustainable tourism is considered to involve striking a balance between these three dimensions. For Hall, the cornerstone of their sustainable tourism policy paradigm is the notion of so-called "balance".

There are varying views about sustainable tourism, however, as it is a socially constructed and contested concept that reflects economic interests, the ethical beliefs of different actors and the strength and effectiveness of various lobbies. Differing sustainable tourism concepts can be used by actors to achieve their socio-economic and political objectives. Weaver and Oppermann (2000, p. 353) suggest that "sustainable tourism is ... susceptible to appropriation by those wishing to pursue a particular political agenda". The varied viewpoints and continuing debates mean that it is becoming more widely accepted that the quest for a universally applicable definition of sustainable tourism will not be successful. There are critics, for example, of the UNEP and UNWTO view of sustainable tourism based on the notion of "balance" between economic, social and environmental issues. Cater (1995) argues that the language of "balance" can be misleading as economic growth through tourism will often conflict with environmental protection, with difficult "trade-offs" needing to be made between economic, social and environmental dimensions. Hunter (2002, pp. 10–11) also asserts that the idea of "balance" may be "used to mask the reality that economic growth is generally the primary concern". Hall (2011b) contends that in practice the so-called "balanced" approach results in continued economic growth. This may reflect a widespread pro-growth presumption within the present political–economic system. Thus, Harvey (2010, p. 27) indicates that "The current consensus among economists and within the financial press is that a 'healthy' capitalist economy, in which most capitalists make a reasonable profit, expands at 3 per cent per annum".

The sustainable tourism concept has become a key discourse through which tourism industry owners and managers, environmentalists, host communities, developers, politicians and academics frame certain tourism issues (Macnaghten & Urry, 1998). In liberal

democracies, debates around disputed ideas such as sustainable tourism form an essential component of the political struggle over the direction of political and socio-economic development. Sustainable tourism has been useful in encouraging dialogue between individuals with different perspectives about tourism and its economic, social and environmental dimensions (Wall, 1997). The growing societal awareness of sustainable development issues has also helped to give prominence to the economic, environmental and socio-cultural problems connected with the tourism industry, although the evidence of continued growth in tourism's environmental impacts suggests that at best the practical achievements of sustainable tourism policies have been limited (Hall, 2011b). The burgeoning issues surrounding tourism's role in global warming and climate change have given new urgency to the sustainable tourism dialogue (Scott, 2011).

Critical perspectives

There is no single way to undertake "critical" research on tourism. The papers assembled here offer critical perspectives on the governance of tourism and sustainability, as suggested by the title of this collection. They challenge and re-conceptualise established ideas in the field, and thus they seek to advance conceptual thinking. In a discussion about innovation in sustainable tourism research, Liburd and Edwards (2010, p. 226) assert that "Critical thinking calls for an unrelenting examination of any form of knowledge . . . and underlying dogmas". Second, the contributions engage with theoretical frameworks from other social science fields, and this "permeability" across research domains provides new insights into tourism governance (Tribe, 2007).

Third, the papers provide assessments of the importance of interests, economic forces, power, institutional arrangements and governance processes; these are key aspects of society which interest researchers in many disciplines (Bianchi, 2009; Wilson, Harris, & Small, 2008). Finally, the authors present policy-relevant research, especially in relation to sustainable tourism policies, which potentially can help to improve society and reduce adverse environmental impacts. This policy relevance can also help to inform calls for social and political change and related action (Bramwell & Lane, 2006). Here, it should be noted that the collection provides numerous assessments of the practice of tourism governance. While there is discussion of prescriptive or normative approaches, these are grounded in assessments of what has actually happened and what has been more or less valuable in practice.

The organisation of the papers

Theoretical frameworks

The first four papers in the collection focus on identifying and assessing theoretical frameworks that explore and explain the governance of tourism and sustainability. Theoretical frameworks are crucial to research on tourism governance because they influence what is studied, how it is studied, the conclusions reached, the recommendations proposed as well as the political implications of the research.

Moscardo's (2011) paper examines the theoretical underpinnings behind the tourism policy and planning models found in the academic literature and in government and NGO guidelines. The diagrams used in these sources that visually summarise tourism policy and planning processes were subject to content analysis in order to assess their construction of knowledge. The diagrams are potentially important as they may indicate the social representations held by researchers and practitioners about how tourism should be managed and about whether and how destination residents should be involved in governance. Moscardo

finds that the diagrams convey a hegemonic social representation that has altered little over the past two decades or more. She suggests that this social representation is rooted in business theory, that it encourages a reactive rather than proactive concern for sustainability and that it suggests that the core actors in tourism development processes are tourists, followed by external agents, tourism businesses and government actors. It also indicates that residents have at best a limited role in destination tourism policy and planning processes. It is argued that it is necessary to recognise this dominant social representation of tourism governance, to critically assess it in relation to potential alternative frameworks and to change it.

The importance of understanding the conceptual frameworks behind approaches to tourism governance is emphasised in the first of two papers by Hall (2011a). By creating a tourism governance typology, he shows how the tourism literature has not focused sufficiently on understanding how governance is conceptualised. He advocates a broad view of tourism governance that embraces a diversity of types of governance. A typology of frameworks of governance in western liberal democratic countries is presented. These models are based on the extent to which governance uses hierarchical forms of regulation and on the relative balance of power between the state and other policy actors. The paper discusses the resulting four modes of coordination: hierarchies, markets, networks and communities. Hall asserts that this typology can help researchers to understand key aspects of tourism governance in different contexts and can provide them with consistency in the concepts they use. The typology can also facilitate comparisons between policy choices and governance systems that affect tourism, as well as comparisons between governance in tourism and in non-tourism fields.

The potential benefits of using social theory in research on tourism governance are discussed by Bramwell (2011). The use of social theory from other fields of study can enrich research on tourism governance, and in turn the resulting research can contribute to debates about governance across the social sciences. Bramwell examines how one social theory, a strategic-relational political economy approach, offers insights into governance by the state that affects tourism and sustainability in destinations. This approach is examined through a literature review and through case studies taken from Germany, China, Malta, Turkey and the UK. There is discussion of how this political economy approach offers distinctive research perspectives on the governance of tourism and sustainability. These perspectives include the approach's holistic, relational and dialectical perspective, its focus on the state's roles in regulating the economic and political system and its concern to understand interactions between agency and structures in specific conjunctures. Other distinctive perspectives relate to the importance of spatial and temporal variations, the adaptation of state activities at different spatial scales and at different times, and the interpretation of path dependence and path creation.

Governance involves matters of collective concern and associated actions in the public sphere. Dredge and Whitford (2011) explore the multiple spaces in the public sphere where individuals and organisations discuss and debate public matters. They contend that assessments of tourism governance should consider how these spaces in the public sphere are constituted, by whom and for what purposes and interests. They use the case of the 2009 Australian World Rally Championship, held in the Northern Rivers region of New South Wales, to assess whether or not the different public spaces associated with this event facilitated discussions about sustainable tourism and whether or not these discussions informed the event's governance. They found that the instant creation of the institutional public sphere associated with this event, and the practices of the event organiser and state government, restricted both how and by whom key issues could be raised, and how they could be dealt with. The rapid speed of the process also inhibited actors from developing an

awareness of the event's environmental and social impacts. While alternative public spheres emerged in opposition to the event that were characterised by activism and political protest, the actors involved in these alternative spheres generally lacked the resources to share their views.

National and regional governance

According to Williams (2009, p. 164), "The use of geographical scale is a particularly valuable device for drawing out key differences in emphasis and application within tourism planning", and this also applies for tourism governance. Governance occurs at different geographical scales, which may be transnational, national, regional or local. Because of widely differing situations in different places, the functions and activities of governance often vary within and also between the spatial scales. Although various geographic scales of tourism governance can be distinguished, these scales are interconnected rather than separate spheres (Hall, 2008). Geographical scale also has complex connections with sustainable tourism. Hall (2011b) notes, for example, how sustainability and environmental problems often cross geographical boundaries, with problems like climate change being global in scale. The issues around mobilising interest and action in response to sustainability problems may also vary between global and local scales. Included in this collection are papers that focus on tourism governance at national, regional and local scales, and one paper explores an example of how governance at the global scale can interact with local tourism practices.

The paper by Sofield and Li (2011) explores an evolving regime of governance and planning for tourism and sustainable development at a national scale. Their study of China adopts a holistic and multidisciplinary political economy perspective. They believe that this macro-level perspective enables them to appreciate how the governance of tourism and sustainability in China reflects the complex interactions between the nation's socio-political environment, economic structures, political institutions and cultural and philosophical heritage. Using this approach, Sofield and Li examine government interventions since the beginning of the "Open Door" policies of 1978 that allowed tourism development in China. Tourism has grown to become a major and multi-purpose "pillar industry" that includes economic, social, political and environmental contributions to national development. They consider how tourism policies have been affected in the last decade by government grappling with sustainability and structural issues. This has been influenced by the anthropocentrism and anthropomorphism inherent in the Chinese value systems derived from Confucian philosophy and Daoism. There have also been notable tensions between national policies encouraging sustainability and the problems that occur because economic development priorities are still dominant, particularly at the local scale.

Zahra (2011) examines regional-scale tourism governance in relation to subsidiarity as a normative principle of authority allocation. The principle of subsidiarity indicates that tasks should be accomplished by the lowest and most subordinate organisations that can do them, and that only in the case of failure is a larger or higher organisation justified in taking over these tasks. This principle is assessed in relation to Tourism Waikato, a regional tourism organisation (RTO) in New Zealand that before 2006 was supported by several local authorities. In 2006, a higher organisation, Hamilton City Council, withdrew its funding for this subordinate RTO because the RTO's branding conflicted with its own new image. Hamilton City Council took over tasks previously conducted by the subordinate RTO, and the RTO was disbanded. Zahra argues that the Council's actions contradict the principles of subsidiarity. She asserts that among RTO participants there should be a shift

from interest based on self to an ethos of service to others, including to the wider community. Of course, the subsidiarity concept is contestable and affected by interests. Lafferty and Coenen (2001, p. 296), for example, suggest that in the case of subsidiarity in the European Union "What at first appears to be a clear-cut norm in favour of decentralisation emerges on closer investigation as a very elastic norm in favour of integrated, multi-level pragmatic governance".

Local and global–local governance

Higgins-Desbiolles (2011) evaluates government decisions concerning a development application to construct a tourist lodge at a pristine coastal site on Kangaroo Island in South Australia. The scheme was promoted as an "ecolodge" and as an ecotourism facility. She contends that, while ecotourism is credited with being a win–win option as it can create both development and conservation benefits, in practice trade-offs between development and the environment are often involved. It is argued that for the Kangaroo Island site government agencies allowed environmental protection to be traded-off in the pursuit of tourism development, income and employment. The agencies that focused on environmental protection at the site had much less influence on policymaking and policy outcomes than the government's more development-oriented organisations. Higgins-Desbiolles highlights the important point that decision makers in governance systems are likely often to focus on individual development proposals, potentially neglecting the bigger picture where impacts accrue incrementally and cumulatively. She urges a research agenda and also governance practices that fully recognise the cumulative macro-effects of numerous micro-level decisions; micro-level decisions can entail "death by a thousand cuts".

The potential roles of destination managers in taking educational and practical actions to engage residents and tourists in the management of sustainability within destinations are examined by Jamal and Watt (2011). They argue that destination organisations, including local government, national park authorities and destination marketing organisations, are often slow to inform citizens and tourists about conservation, managing resource use and climate change. There is an assessment of two NGO-facilitated initiatives to address sustainability and climate change through community-based social marketing and participatory local action in the mountain resort of Canmore in Canada. These initiatives directly involved local residents, short- and long-term visitors and also taxi drivers as key tourism-related actors. Jamal and Watt assess these initiatives in relation to Hannah Arendt's political theory of action. This theory indicates that the governance of tourism and sustainability in destinations should involve multiple participants and not just lie in the hands of a few. It should be a "performative" endeavour based on a flourishing public sphere of informed actors that are active creators of knowledge, understanding and action. Arendt also regards both contestation and consensus as potentially positive features of local democratic politics.

The paper by Duffy and Moore (2011) explores an example of how governance at the global scale can interact with local tourism practices. This is evaluated from a political economy perspective which asks who governs and who is governed, how are they governed and in whose interests and what are the implications for power and other relationships between the global and local scales? These questions are considered for the case of global NGOs concerned about the welfare of elephants used for trekking and safaris in tourist destinations within Thailand and Botswana. The NGOs have produced "expert" knowledge on good practices in elephant welfare and they seek to apply global standards across diverse locations. Duffy and Moore argue that attempts to establish global standards and regulation need to engage closely with local contexts and practices if the standards are to be acceptable

and workable for actors in specific destinations. The NGOs often see elephants as "wild" animals, while local practices, especially in Thailand, value elephants as working animals. The NGOs can also fail to appreciate the genuine barriers to moving elephants out of tourism and into the wild, which are especially significant in Thailand. There are potential implications here for the governance of various environmental issues where global NGOs seek to have global standards applied in different localities.

Evolving and adaptive governance

Tourism governance often alters over time due to changing political contexts and other circumstances and as lessons are learnt from previous approaches and policies. Temporal trends in governance are especially important for sustainable development because its objectives relate to long time horizons. A significant trend in tourism governance is its growing emphasis on social learning, where actors share their knowledge, ideas and aspirations, and co-construct new visions and plans for action (Koutsouris, 2009). Social learning in governance has a temporal dimension when it is a continuing process that allows participants to react to changing circumstances and to learn lessons from evolving experience. Temporal changes in social and natural systems are often complex and unpredictable, and thus sustainable tourism planning is likely to be improved if it is flexible and adaptive (Bramwell & Pomfret, 2007; Liburd & Edwards, 2010). Miller and Twining-Ward (2005, p. 285) note that "adaptive management has been found to be a valuable technique allowing managers progressively to learn more about the systems they manage through trial and error, close stakeholder involvement and continuous monitoring". The last three papers in the collection focus on change in sustainable tourism governance and learning within governance processes.

Wray (2011) assesses whether the application of a planning approach based on interactions and shared learning among actors was successful in two destinations within New South Wales and Victoria in Australia. The approach involved a research team with expertise in sustainable tourism and participative planning working for a period of 2 years with local actors from government, business and the community. The research team sought to build a "transactive relationship" with the other participants, which brought together information, knowledge and skills from various actor perspectives, and developed mutual learning, a sense of ownership of the resulting policies and support for implementing those policies. Wray shows that the outcomes of the planning approach were different in the two destinations. The transactive planning process was largely successful where it had been assisted by a key state tourism organisation, and where local government had worked hard on relationship building. In the other destination, however, local government had been much less helpful, the actors were distrustful of local government and the final adopted plan did not fully represent the actors' views. Wray's findings suggest that efforts to foster learning and dialogue may be ineffectual if the main destination agencies are not committed to this approach.

The evolution of governance in the Canadian ski resort of Whistler is examined by Gill and Williams (2011). They use political economy and path dependence ideas to assess changes in the resort's development goals and governance system. Whistler's early pro-growth goals and management benefitted most actors because "development bonuses" from real estate projects provided residents with social and environmental benefits, creating a positive feedback that reinforced the established development path. Continued growth was allowed up to an agreed limit linked to an ambiguously defined environmental quality standard. Gill and Williams conclude that the resort's early regulatory system

had "locked" development into a controlled growth path. Power remained with the same decision-makers who were still committed to growth up to an agreed capacity limit. When Whistler approached this capacity, however, a broad range of actors were included in developing an alternative governance model based on a fairly comprehensive and integrated sustainability strategy. Yet Gill and Williams suggest that Whistler has not abandoned its earlier pro-growth governance in favour of a more community-driven approach guided by sustainability principles. Instead, they identify a hybrid combination of these governance forms.

Hall (2011b) contends that among policy-makers there has been a failure to recognise that the claimed adoption of sustainable tourism objectives has not halted continued growth in tourism's contribution to environmental change. He suggests that sustainable tourism governance will be improved by considering the potential reasons for this "policy failure" and also how failures may be reduced. This requires "policy learning" based on previous and new experiences. Hall suggests that in practice much sustainable tourism policy learning has only been technical in nature, connected with adjustments to existing policy instruments, and he labels this as first-order governance change. At least some policy learning around sustainable tourism has concerned strategic changes, but within the existing policy paradigm of "balanced" sustainable development, and he labels this as second-order governance change. He argues, however, that there has been little progress among policy-makers in adopting third-order governance change, which is depicted as involving more profound shifts in the policy paradigm and goals, and which depends on conceptual learning. Thus, among policy-makers there is little sign of acceptance of a developing alternative sustainability paradigm based on ideas such as "degrowth", "steady state tourism" and "slow tourism".

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Using thematic analysis in psychology

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Using thematic analysis in psychology

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Using thematic analysis in psychology

Thematic analysis is a poorly demarcated, rarely-acknowledged, yet widely-used qualitative analytic method within psychology. In this paper, we argue that it offers an accessible and theoretically-flexible approach to analysing qualitative data. We outline what thematic analysis is, locating it in relation to other qualitative analytic methods that search for themes or patterns, and in relation to different epistemological and ontological positions. We then provide clear guidelines to those wanting to start thematic analysis, or conduct it in a more deliberate and rigorous way, and consider potential pitfalls in conducting thematic analysis. Finally, we outline the disadvantages and advantages of thematic analysis. We conclude by advocating thematic analysis as a useful and flexible method for qualitative research in and beyond psychology.

Keywords: thematic analysis, qualitative psychology, patterns, epistemology, flexibility

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Using thematic analysis in psychology

Thematic analysis is a poorly demarcated and rarely-acknowledged, yet widely-used qualitative analytic method (see Boyatzis, 1998; Roulston, 2001) within and beyond psychology. In this paper, we aim to fill what we, as researchers and teachers in qualitative psychology, have experienced as a current gap: the absence of a paper which adequately outlines the theory, application, and evaluation of thematic analysis, and one which does so in a way accessible to students and those not particularly familiar with qualitative research.[1] That is, we aim to write a paper which will be useful as both a teaching and research tool in qualitative psychology. Therefore, in this paper we discuss theory and method for thematic analysis, and clarify the similarities and differences between different approaches that share features in common with a thematic approach.

Qualitative approaches are incredibly diverse, complex and nuanced (Holloway & Todres, 2003), and thematic analysis should be seen as a foundational method for qualitative analysis. It is the first qualitative method of analysis that researchers should learn, as it provides core skills that will be useful for conducting many other forms of qualitative analysis. Indeed, Holloway and Todres (2003: 347) identify "thematizing meanings" as one of a few shared generic skills across qualitative analysis.[2] For this reason, Boyatzis (1998) characterises it not as a specific method but as a tool to use across different methods. Similarly, Ryan and Bernard (2000) locate thematic coding as a process performed *within* 'major' analytic traditions (such as grounded theory), rather than a specific approach in its own right. We argue thematic analysis should be considered a method in its own right.

One of the benefits of thematic analysis is its flexibility. Qualitative analytic methods can be roughly divided into two camps. Within the first, there are those tied to, or stemming from, a particular theoretical or epistemological position. For some of these - such as conversation analysis ([CA] e.g., Hutchby & Wooffitt, 1998) and interpretative phenomenological analysis ([IPA] e.g., Smith & Osborn, 2003) – there is (as yet) relatively limited variability in how the method is applied, within that framework. In essence, one recipe guides analysis. For others of these – such as grounded theory (e.g., Glaser, 1992; Strauss & Corbin, 1998), discourse analysis ([DA] e.g., Burman & Parker, 1993; Potter & Wetherell, 1987; Willig, 2003) or narrative analysis (e.g., Murray, 2003; Riessman, 1993) – there are different manifestations of the method, from within the broad

theoretical framework. Second, there are methods that are essentially independent of theory and epistemology, and can be applied *across* a range of theoretical and epistemological approaches. Although often (implicitly) framed as a realist/experiential method (e.g., Aronson, 1994; Roulston, 2001), thematic analysis is actually firmly in the second camp, and is compatible with both essentialist and constructionist paradigms within psychology (we discuss this later). Through its theoretical freedom, thematic analysis provides a flexible and useful research tool, which can potentially provide a rich and detailed, yet complex account of data.

Given the advantages of the flexibility of thematic analysis, it is important that we are clear that we are not trying to limit this flexibility. However, an absence of clear and concise guidelines around thematic analysis means that the 'anything goes' critique of qualitative research (Antaki, Billig, Edwards, & Potter, 2002) may well apply in some instances. With this paper, we hope to strike a balance between demarcating thematic analysis clearly – i.e., explaining what it is, and how you do it - and ensuring flexibility in relation to how it is used, so that it does not become limited and constrained, and lose one of its key advantages. Indeed, a clear demarcation of this method will be useful to ensure that those who use thematic analysis can make active choices about the particular form of analysis they are engaged in. Therefore, this paper seeks to celebrate the flexibility of the method, *and* provide a vocabulary and 'recipe' for people to start doing thematic analysis in a way that is theoretically and methodologically sound.[3] As we will show, what is important is that as well as applying a method to data, researchers make their (epistemological and other) assumptions explicit (Holloway & Todres, 2003). Qualitative psychologists need to be clear about what they are doing and why, and include the often-omitted 'how' they did their analysis in their reports (Attride-Stirling, 2001).

In this paper we outline: what thematic analysis is; a 6-phase guide to doing thematic analysis; potential pitfalls to avoid when doing thematic analysis; what makes good thematic analysis; and advantages and disadvantages of thematic analysis. Throughout, we provide examples from the research literature, and our own research. By providing examples we show the types of research questions and topics that thematic analysis can be used to study.

Before we begin, we need to define a few of the terms used throughout the paper. Data *corpus* refers to *all* data collected for a particular research project, while data *set* refers to all the data

from the corpus that is being used for a particular analysis. There are two main ways of choosing your data set (which approach you take depends on whether you are coming to the data with a specific question or not – see 'a number of decisions' below). First, your data set may consist of many or all individual data items within your data corpus. So, for example, in a project on female genital cosmetic surgery, Virginia's data corpus consists of interviews with surgeons, media items on the topic, and surgeon websites. For any particular analysis, her data set might just be the surgeon interviews, just the websites (Braun, 2005b), or it might combine surgeon data with some media data (e.g., Braun, 2005a). Second, your data set might be identified by a particular analytic interest in some topic in the data, and your data set then becomes all instances in the corpus where that topic is referred to. So in Virginia's example, if she was interested in how 'sexual pleasure' was talked about, her data set would consist of all instances across the entire data corpus that had some relevance to sexual pleasure. These two approaches might sometimes be combined to produce the data set. Data *item* is used to refer to each individual piece of data collected, which together make up the data set or corpus. A data item in this instance would be an individual surgeon interview, a television documentary, or one particular website. Finally, data *extract* refers to an individual coded chunk of data, which has been identified within, and extracted from, a data item. There will be many of these, taken from throughout the entire data set, and only a selection of these extracts will feature in the final analysis.

What is thematic analysis?

Thematic analysis is a method for identifying, analysing, and reporting patterns (themes) within data. It minimally organises and describes your data set in (rich) detail. However, it also often goes further than this, and interprets various aspects of the research topic (Boyatzis, 1998). The *range* of different possible thematic analyses will further be highlighted in relation to a number of decisions regarding it as a method (see below).

Thematic analysis is widely used, but there is no clear agreement about what thematic analysis is and how you go about doing it (see Attride-Stirling, 2001; Boyatzis, 1998; Tuckett, 2005, for other examples). It can be seen as a very poorly 'branded' method, in that it does not appear to exist as a 'named' analysis in the same way that other methods do (e.g., narrative analysis, grounded theory). In this sense, it is often not explicitly claimed as the method of analysis, when, in actuality, we

argue that a lot of analysis is essentially thematic - but is either claimed as something else (such as discourse analysis, or even content analysis (e.g., Meehan, Vermeer, & Windsor, 2000)) or not identified as any particular method at all – for example, data were "subjected to qualitative analysis for commonly recurring themes" (Braun & Wilkinson, 2003: 30). If we do not know how people went about analysing their data, or what assumptions informed their analysis, it is difficult to evaluate their research, and to compare and/or synthesise it with other studies on that topic, and it can impede other researchers carrying out related projects in the future (Attride-Stirling, 2001). For these reasons alone, clarity around process and practice of method is vital. We hope that this paper will lead to more clarity around thematic analysis.

Relatedly, insufficient detail is often given to reporting the process and detail of analysis (Attride-Stirling, 2001). It is not uncommon to read of themes 'emerging' from the data (although this issue is not limited to thematic analysis). For example, Singer and Hunter's (1999: 67) thematic discourse analysis of women's experiences of early menopause identified that "several themes emerged" during the analysis. Rubin and Rubin (1995: 226) claim that analysis is exciting because "you discover themes and concepts embedded throughout your interviews". An account of themes 'emerging' or being 'discovered' is a passive account of the process of analysis, and it denies the *active* role the researcher always plays in identifying patterns/themes, selecting which are of interest, and reporting them to the readers (Taylor & Ussher, 2001).[4] The language of 'themes emerging':

> Can be misinterpreted to mean that themes 'reside' in the data, and if we just look hard enough they will 'emerge' like Venus on the half shell. If themes 'reside' anywhere, they reside in our heads from our thinking about our data and creating links as we understand them. (Ely, Vinz, Downing, & Anzul, 1997: 205-6)

It is important at this point for us to acknowledge our own theoretical positions and values in relation to qualitative research. We do not subscribe to a naïve realist view of qualitative research where the researcher can simply 'give voice' (see Fine, 2002) to their participants. As Fine (2002: 218) argues, even a 'giving voice' approach "involves carving out unacknowledged pieces of narrative evidence that we select, edit, and deploy to border our arguments". However, nor do we think there is one ideal theoretical framework for conducting qualitative research, or indeed one

ideal method. What is important is that the theoretical framework and methods match what the researcher wants to know, and that they acknowledge these decisions, and recognise them *as* decisions.

Thematic analysis differs from other analytic methods that seek to describe patterns across qualitative data – such as 'thematic' discourse analysis, thematic decomposition analysis, IPA and grounded theory.[5] Both IPA and grounded theory seek patterns in the data, but are theoretically bounded. IPA is wed to a phenomenological epistemology (Smith, Jarman, & Osborn, 1999; Smith & Osborn, 2003), which gives experience primacy (Holloway & Todres, 2003), and is about understanding people's everyday experience of reality, in great detail, so as to gain an understanding of the phenomenon in question (McLeod, 2001). To complicate matters, grounded theory comes in different versions (Charmaz, 2002). Regardless, the goal of a grounded theory analysis is to generate a plausible – and useful - theory of the phenomena that is grounded in the data (McLeod, 2001). However, in our experience, grounded theory seems increasingly to be used in a way that is essentially grounded theory 'lite' - as a set of procedures for coding data very much akin to thematic analysis. Such analyses do not appear to fully subscribe to the theoretical commitments of a 'full-fat' grounded theory, which requires analysis to be directed towards theory development (Holloway & Todres, 2003). We argue, therefore, that a 'named and claimed' *thematic* analysis means researchers need not subscribe to the implicit theoretical commitments of grounded theory if they do not wish to produce a fully worked-up grounded-theory analysis.
The term thematic discourse analysis is used to refer to a wide range of pattern-type analysis of data, ranging from thematic analysis within a social constructionist epistemology (i.e., where patterns are identified as socially produced, but no discursive analysis is conducted), to forms of analysis very much akin to the interpretative repertoire form of DA (Clarke, 2005). Thematic decomposition analysis (e.g., Stenner, 1993; Ussher & Mooney-Somers, 2000) is a specifically-named form of 'thematic' discourse analysis which identifies patterns (themes, stories) within data, and theorises language as constitutive of meaning and meaning as social.

These different methods share a search for certain themes or patterns across an (entire) data set, rather than *within* a data item, such as an individual interview or interviews from one person, as in the case of biographical or case-study forms of analysis such as narrative analysis (e.g., Murray, 2003; Riessman, 1993). In this sense they more or less overlap with thematic analysis. As thematic

analysis does not require the detailed theoretical and technological knowledge of approaches such as grounded theory and DA, it can offer a more accessible form of analysis, particularly for those early in a qualitative research career.

In contrast to IPA or grounded theory (and other methods like narrative, discourse or CA), thematic analysis is not wed to any pre-existing theoretical framework, and so it can be used within different theoretical frameworks (although not all), and can be used to do different things within them. Thematic analysis can be an essentialist or realist method, which reports experiences, meanings and the reality of participants, or it can be a constructionist method, which examines the ways in which events, realities, meanings, experiences and so on are the effects of a range of discourses operating within society. It can also be a 'contextualist' method, sitting between the two poles of essentialism and constructionism, and characterised by theories such as critical realism (e.g., Willig, 1999), which acknowledge the ways individuals make meaning of their experience, and, in turn, the ways the broader social context impinges on those meanings, while retaining focus on the material and other limits of 'reality'. Therefore, thematic analysis can be a method which works both to reflect reality, and to unpick or unravel the surface of 'reality'. However, it is important that the theoretical position of a thematic analysis is made clear, as this is all too often left unspoken (and is then typically a realist account). Any theoretical framework carries with it a number of assumptions about the nature of the data, what they represent in terms of the 'the world', 'reality', and so forth. A good thematic analysis will make this transparent.

A number of decisions

Thematic analysis involves a number of choices which are often not made explicit (or are certainly typically not discussed in the method section of papers), but which need *explicitly* to be considered and discussed. In practice, these questions should be considered before analysis (and sometimes even collection) of the data begins, and there needs to be an ongoing reflexive dialogue on the part of the researcher or researchers with regards to these issues, throughout the analytic process. The method section of Taylor and Ussher's (2001) thematic discourse analysis of S&M provides a good example of research which presents this process explicitly; the method section of Braun & Wilkinson (2003) does not.

What counts as a theme?

A theme captures something important about the data in relation to the research question, and represents some level of *patterned* response or meaning within the data set. An important question to address in terms of coding is what counts as a pattern/theme, or what 'size' does a theme need to be? This is a question of prevalence both in terms of space within each data item, and prevalence across the entire data set. Ideally there will be a number of instances of the theme across the data set, but more instances do not *necessarily* mean the theme itself is more crucial. As this is qualitative analysis, there is no hard-and-fast answer to the question of what proportion of your data set needs to display evidence of the theme for it to be considered a theme. It is not the case that if it was present in 50% of one's data items, it would be a theme, but if it was present only in 47%, then it would not be. Nor is it the case that a theme is only something that many data items give considerable attention to, rather than a sentence or two. A theme might be given considerable space in some data items, and little or none in others, or it might appear in relatively little of the data set. So researcher judgement is necessary to determine what a theme is. Our initial guidance around this is that you need to retain some flexibility, and rigid rules really do not work. (The question of prevalence gets revisited in relation to themes and sub-themes, as the refinement of analysis [see later] will often result in overall themes, and sub-themes within those.)

Furthermore, the 'keyness' of a theme is not necessarily dependent on quantifiable measures – but in terms of whether it captures something important in relation to the overall research question. For example, in Victoria's research on representations of lesbians and gay parents on 26 talk shows (Clarke & Kitzinger, 2004), she identified six 'key' themes. These six themes were not necessarily the most prevalent themes across the data set – they appeared in between 2 and 22 of the 26 talk shows - but together they captured an important element of the way in which lesbians and gay men 'normalise' their families in talk show debates. In this instance, her thematic analysis was driven by this particular analytic question. How she 'measured' prevalence is relevant, as prevalence can be determined in a number of different ways. Prevalence was counted at the level of the data item (i.e., did a theme appear anywhere in each individual talk show). Alternatively, it could have been counted in terms of the number of different speakers who articulated the theme, across the entire data set, or each individual occurrence of the theme across the entire data set (which raises complex questions about where an 'instance' begins and ends within an extended sequence of talk,

see Riessman, 1993). Because prevalence was not crucial to the analysis presented, Victoria chose the most straightforward form, but it is important to note there is no right or wrong method for determining prevalence. Part of the flexibility of thematic analysis is that it allows you to determine themes (and prevalence) in a number of ways. What is important is that you are consistent in how you do this within any particular analysis.

There are various 'conventions' for representing prevalence in thematic (and other qualitative) analysis that does not provide a quantified measure (unlike much content analysis, Wilkinson, 2000) – for instance: "the majority of participants" (Meehan et al., 2000: 372), "many participants" (Taylor & Ussher, 2001: 298), or "a number of participants" (Braun, Gavey, & McPhillips, 2003: 249). Such descriptors work rhetorically to suggest a theme *really* existed in the data, and to convince us they are reporting truthfully about the data. But do they tell us much? This is perhaps one area where more debate needs to occur about how and why we might represent the prevalence of themes in the data, and, indeed, whether, if, and why prevalence is particularly important.

A rich description of the data set, or a detailed account of one particular aspect

It is important to determine the type of analysis you want to do, and the claims you want to make, in relation to your data set. For instance, you might wish to provide a rich thematic description of your entire data set, so that the reader gets a sense of them predominant or important themes. In this case, the themes you identify, code, and analyse would need to be an accurate reflection of the content of the *entire* data set. In such an analysis, some depth and complexity is necessarily lost (particularly if you are writing a short dissertation or article with strict word limits), but a rich overall description is maintained. This might be a particularly useful method when you are investigating an under-researched area, or with participants whose views on the topic are not known.

An alternative use of thematic analysis is to provide a more detailed and nuanced account of one particular theme, or group of themes, within the data. This might relate to a specific question or area of interest within the data (a semantic approach – see below), or to a particular 'latent' theme (see below) across the whole or majority of the data set. An example of this would be Victoria's talk show paper, discussed previously (Clarke & Kitzinger, 2004), which examined normalisation in lesbians' and gay men's accounts of parenting.

Inductive vs theoretical thematic analysis

Themes or patterns within data can be identified in one of two primary ways in thematic analysis: in an inductive or 'bottom up' way (e.g., see Frith & Gleeson, 2004), or in a theoretical or deductive or 'top down' way (e.g., see Boyatzis, 1998; Hayes, 1997). An inductive approach means the themes identified are strongly linked to the data themselves (Patton, 1990) (as such, this form of thematic analysis bears some similarity to grounded theory). In this approach, if the data have been collected specifically for the research (e.g., via interview or focus group) the themes identified may bear little relationship to the specific question that were asked of the participants. They would also not be driven by the researcher's theoretical interest in the area or topic. Inductive analysis is therefore a process of coding the data *without* trying to fit it into a pre-existing coding frame, or the researcher's analytic preconceptions. In this sense, this form of thematic analysis is data-driven. However, it is important to note, as we discussed earlier, that researchers cannot free themselves of their theoretical and epistemological commitments, and data are not coded in an epistemological vacuum.

In contrast, a 'theoretical' thematic analysis would tend to be driven by the researcher's theoretical or analytic interest in the area, and is thus more explicitly analyst-driven. This form of thematic analysis tends to provide less a rich description of the data overall, and more a detailed analysis of some aspect of the data. The choice between inductive and theoretical maps onto how and why you are coding the data as well. You can either code for a quite specific research question (which maps onto the more theoretical approach) or the specific research question can evolve through the coding process (which maps onto the inductive approach).

For example, if a researcher was interested in talk about heterosex, and had collected interview data, with an inductive approach they would read and re-read the data for any themes related to heterosex, and code diversely, without paying attention to the themes that previous research on the topic might have identified. For example, the researcher would not look to Hollway's (1989) influential research identifying discourses of heterosex, and code *just* for male sexual drive, have/hold or permissive discourse themes. In contrast, with a theoretical approach, the researcher may well be interested in the way permissiveness plays out across the data, and focus on that particular feature in coding the data. What this would then result in is a number of themes around

permissiveness, which may include, speak to, or expand on something approximating Hollway's original theme.

Semantic or latent themes

Another decision revolves around the 'level' at which themes are to be identified: at a semantic or explicit level, or at a latent or interpretative level (Boyatzis, 1998).[6] A thematic analysis typically focuses exclusively or primarily on one level. With a semantic approach, the themes are identified within the explicit or surface meanings of the data and the analyst is not looking for anything *beyond* what a participant has said or what has been written. Ideally, the analytic process involves a progression from *description*, where the data have simply been organised to show patterns in semantic content, and summarised, to *interpretation*, where there is an attempt to theorise the significance of the patterns and their broader meanings and implications (Patton, 1990), often in relation to previous literature (see Frith & Gleeson, 2004, for an excellent example of this).

In contrast, a thematic analysis at the latent level goes beyond the semantic content of the data, and starts to identify or examine the *underlying* ideas, assumptions, and conceptualisations – and ideologies - that are theorised as shaping or informing the semantic content of the data. If we imagine our data three-dimensionally as an uneven blob of jelly, the semantic approach would seek to describe the surface of the jelly, its form and meaning, while the latent approach would seek identify the features that gave it that particular form and meaning. Thus for latent thematic analysis, the development of the themes themselves involves interpretative work, and the analysis that is produced is not just description, but is already theorised.

Analysis within this latter tradition tends to come from a constructionist paradigm (e.g., Burr, 1995), and in this form, thematic analysis overlaps with some forms of 'discourse analysis' (which are sometimes specifically referred to as 'thematic discourse analysis' (e.g., Singer & Hunter, 1999; Taylor & Ussher, 2001)), where broader assumptions, structures and/or meanings are theorised as underpinning what is actually articulated in the data. Increasingly, a number of discourse analysts are also revisiting psycho-analytic modes of interpretation (e.g., Hollway & Jefferson, 2000), and latent thematic analysis would also be compatible with that framework.

Epistemology: essentialist/realist vs constructionist thematic analysis

As we have argued, thematic analysis can be conducted within both realist/essentialist and constructionist paradigms, although the outcome and focus will be different from each. The question of epistemology is usually determined when a research project is being conceptualised, although epistemology may also raise its head again during analysis, when the research focus may shift to an interest in different aspects of the data. The research epistemology guides what you can say about your data, and informs how you theorise meaning. For instance, with an essentialist/realist approach, you can theorise motivations, experience, and meaning in a straight-forward way, because a simple, largely unidirectional relationship is assumed between meaning and experience and language (language reflects and enables us to articulate meaning and experience) (Potter & Wetherell, 1987; Widdicombe & Wooffitt, 1995).

In contrast, from a constructionist perspective, meaning and experience are socially produced and reproduced, rather than inhering within individuals (Burr, 1995). Therefore, thematic analysis conducted within a constructionist framework cannot and does not seek to focus on motivation or individual psychologies, but instead seeks to theorise the socio-cultural contexts, and structural conditions, that enable the individual accounts that are provided. Thematic analysis that focuses on 'latent' themes tends to be more constructionist, and it also tends to start to overlap with thematic discourse analysis at this point. However, not all 'latent' thematic analysis is constructionist.

The many questions of qualitative research

It is worth briefly noting that qualitative research involves a series of questions, and there is a need to be clear about the relationship between these different questions. First, there is the overall research question or questions that drive the project. A research question might be very broad (and exploratory), such as 'how is lesbian and gay parenting constructed?' or 'what are the meanings of the vagina?' Narrower research questions might be 'how and why is lesbian and gay parenting normalised?' (Clarke & Kitzinger, 2004), or 'what are the discourses around vaginal size?' (see Braun & Kitzinger, 2001). These narrow questions may be part of a broader overarching research question, and if so, the analyses they inform would also provide answers to the overall research question. Although all projects are guided by research questions, these may also be refined as a project progresses.

Second, if data from interviews or focus groups have been collected, there are the questions that participants have responded to. Finally, there are the questions that guide the coding and analysis of the data. There is no necessary relationship between these three, and indeed, it is often desirable that there is a disjuncture between them. Some of the worst examples of 'thematic' analysis we have read have simply used the questions put to participants as the 'themes' identified in the 'analysis' – although in such instances, there really is not any analysis done at all!

To sum up, thematic analysis involves the searching *across* a data set – be that a number of interviews or focus groups, or a range of texts – to find repeated patterns of meaning. The exact form and product of thematic analysis varies, as indicated above, and so it is important that the questions outlined above are considered before and during thematic analyses. Those approaches which consider *specific* aspects, latent themes and are constructionist tend to often cluster together, while those that consider meanings across the whole data set, semantic themes, and are realist often cluster together. However, there are no hard-and-fast rules in relation to this, and different combinations are possible. What is important is that the finished product contains an account – not necessarily that detailed – of what was done, and why. So what *does* one actually do? We now provide what is hopefully a straightforward step-by-step guide to conducting thematic analysis.

Doing thematic analysis: a step-by-step guide

Some of the phases of thematic analysis are similar to the phases of other qualitative research, so these stages are not necessarily all unique to thematic analysis. The process starts when the analyst begins to notice, and look for, patterns of meaning and issues of potential interest in the data – this may be during data collection. The endpoint is the reporting of the content and meaning of patterns (themes) in the data, where "themes are abstract (and often fuzzy) constructs the investigators identify [sic] before, during, and after analysis" (Ryan & Bernard, 2000: 780). Analysis involves a constant moving back and forward between the entire data set, the coded extracts of data that you are analysing, and the analysis of the data that you are producing. Writing is an integral *part* of analysis, not something that takes place at the end, as it does with statistical analyses. Therefore, writing should begin in phase one, with the jotting down of ideas and potential coding schemes, and continue right through the entire coding/analysis process.

There are different positions regarding when you should engage with the literature relevant to your analysis – with some arguing that early reading can narrow your analytic field of vision, leading you to focus on some aspects of the data at the expense of other potential crucial aspects. Others argue that engagement with the literature can enhance your analysis by sensitising you to more subtle features of the data (Tuckett, 2005). Therefore, there is no one right way to proceed with reading, for thematic analysis, although a more inductive approach would be enhanced by not engaging with literature in the early stages of analysis, whereas a theoretical approach requires engagement with the literature prior to analysis.

We provide an outline to guide you through the six phases of analysis, and offer examples to demonstrate the process.[7] The different phases are usefully summarised in Table 1. It is important to recognise that qualitative analysis guidelines are exactly that – they are not rules, and, following the basic precepts, will need to be applied flexibility to fit the research questions and data (Patton, 1990). Moreover, analysis is not a *linear* process where you simply move from one phase to the next. Instead, it is more *recursive* process, where you move back and forth as needed, throughout the phases. It is also a process that develops over time (Ely et al., 1997), and should not be rushed.

[INSERT TABLE 1 ABOUT HERE]

Phase 1: familiarising yourself with your data

When you engage in analysis, you may have collected the data yourself, or it may have been given to you. If you collected it through interactive means, you will come to the analysis with some prior knowledge of the data, and possibly some initial analytic interests or thoughts. Regardless, it is vital that you immerse yourself in the data to the extent that you are familiar with the depth and breadth of the content. Immersion usually involves 'repeated reading' of the data, and reading the data in an *active* way - searching for meanings, patterns and so on. It is ideal to read through the entire data set at least once before you begin your coding, as your ideas, identification of possible patterns will be shaped as you read through.

Whether or not you are aiming for an overall or detailed analysis, are searching for latent or semantic themes, or are data- or theoretically-driven will inform how the reading proceeds. Regardless, it is important to be familiar with all aspects of your data. At this phase, one of the reasons why qualitative research tends to use far smaller samples than, for example, questionnaire

data will become apparent – the reading and re-reading of data is time consuming. It is, therefore, tempting to skip over this phase, or be selective. We would strongly advise against this, as this phase provides the bedrock for the rest of the analysis.

During this phase, it is a good idea to start taking notes or marking ideas for coding that you will then go back to in subsequent phases. Once you have done this, you are ready to begin the more formal coding process. In essence, coding continues to be developed and defined throughout the entire analysis.

Transcription of verbal data

If you are working with verbal data such as interviews, television programmes or political speeches, the data will need to be transcribed into written form in order to conduct a thematic analysis. The process of transcription, while it may seen time-consuming, frustrating, and at times boring, can be an excellent way to start familiarising yourself with the data (Riessman, 1993). Further, some researchers even argue it should be seen as "a key phase of data analysis within interpretative qualitative methodology" (Bird, 2005: 227), and recognised as an *interpretative* act, where meanings are created, rather than simply a mechanical one of putting spoken sounds on paper (Lapadat & Lindsay, 1999).

Various conventions exist for transforming spoken texts into written texts (see Edwards & Lampert, 1993; Lapadat & Lindsay, 1999). Some systems of transcription have been developed for specific forms of analysis – such as the 'Jefferson' system for CA (see Atkinson & Heritage, 1984; Hutchby & Wooffitt, 1998). However, thematic analysis, even constructionist thematic analysis, does not require the same level of detail in the transcript as conversation, discourse or even narrative analysis. As there is no one way to conduct thematic analysis, there is no one set of guidelines to follow when producing a transcript. However, at a minimum it requires a rigorous and thorough 'orthographic' transcript – a 'verbatim' account of all verbal (and sometimes nonverbal [e.g., coughs]) utterances.[8] What is important is that the transcript retains the information you need, from the verbal account, and in a way which is 'true' to its original nature (e.g., punctuation added can alter the meaning of data - for example 'I hate it, you know. I do' versus 'I hate it. You know I do', Poland, 2002: 632), and that the transcription convention is practically suited to the purpose of analysis (Edwards, 1993).

As we have noted, the time spent in transcription is not wasted, as it informs the early stages of analysis, and you will develop a far more thorough understanding of your data through having transcribed it. Furthermore, the close attention needed to transcribe data may facilitate the close-reading and interpretative skills needed to analyse the data (Lapadat & Lindsay, 1999). If your data have already been, or will be, transcribed for you, it is important that you spend more time familiarising yourself with the data, and also check the transcripts back against the original audio recordings for 'accuracy' (as should always be done).

Phase 2: generating initial codes

Phase 2 begins when you have read and familiarised yourself with the data, and have generated an initial list of ideas about what is in the data and what is interesting about them. This phase then involves the production of initial codes from the data. Codes identify a feature of the data (semantic content or latent) that appears interesting to the analyst, and refer to "the most basic segment, or element, of the raw data or information that can be assessed in a meaningful way regarding the phenomenon" (Boyatzis, 1998: 63). See Figure 1 for an example of codes applied to a short segment of data. The process of coding is part of analysis (Miles & Huberman, 1994), as you are *organising* your data into meaningful groups (Tuckett, 2005). However, your coded data differs from the units of *analysis* (your themes) which are (often) broader. Your themes, which you start to develop in the next phase, are where the interpretative analysis of the data occurs, and in relation to which arguments about the phenomenon being examined are made (Boyatzis, 1998).

[INSERT FIGURE 1 ABOUT HERE]

Coding will to some extent depend on whether the themes are more 'data-driven' or 'theory-driven' – in the former, the themes will depend on the data, but in the latter, you might approach the data with specific questions in mind that you wish to code around. It will also depend on whether you are aiming to code the content of the entire data set, or whether you are coding to identify particular (and possibly limited) features of the data set. Coding can be done either manually or through a software programme (see, e.g., Kelle, 2004; Seale, 2000, for discussion of software programmes).

Work systematically through the entire data set, giving full and *equal* attention to each data item, and identify interesting aspects in the data items that may form the basis of repeated patterns (themes) across the data set. There are a number of ways of actually coding extracts. If coding

manually, you can code your data by writing notes on the texts you're analysing, by using highlighters or coloured pens to indicate potential patterns, or by using 'post-it' notes to identify segments of data. You may initially identify the codes, and then match them up with data extracts that demonstrate that code, but it is important in this phase to ensure that all actual data extracts are coded, and then collated together within each code. This may involve copying extracts of data from individual transcripts or photocopying extracts of printed data, and collating each code together in separate computer files or using file cards. If using computer software, you code by tagging and naming selections of text within each data item.

Key advice for this phase is: a) code for as many potential themes/patterns as possible (time permitting) – you never know what might be interesting later; b) code extracts of data inclusively – i.e., keep a little of the surrounding data if relevant, a common criticism of coding is that the context is lost (Bryman, 2001); and c) remember that you can code individual extracts of data in as many different 'themes' as they fit into - so an extract may be uncoded, coded once, or coded many times, as relevant. Note that no data set is without contradiction, and a satisfactory thematic 'map' that you will eventually produce - an overall conceptualisation of the data patterns, and relationships between them[9] - does not have to smooth out or ignore the tensions and inconsistencies within and across data items. It is important to retain accounts which depart from the dominant story in the analysis, so do not ignore these in your coding.

Phase 3: searching for themes

Phase 3 begins when all data have been initially coded & collated, and you have a long list of the different codes you have identified across your data set. This phase, which re-focuses the analysis at the broader level of themes, rather than codes, involves sorting the different codes into potential themes, and collating all the relevant coded data extracts within the identified themes. Essentially, you are starting to analyse your codes, and consider how different codes may combine to form an overarching theme. It may be helpful at this phase to use visual representations to help you sort the different codes into themes. You might use tables, mind-maps, or you might write the name of each code (and a brief description) on a separate piece of paper and play around with organising them into theme-piles. A thematic map of this early stage can be seen in Figure 2 (the examples in Figures 2 to 4 come from the analysis presented in Braun and Wilkinson (2003) of

women's talk about the vagina). This is when you start thinking about the relationship between codes, between themes, and between different levels of themes (e.g., main overarching themes and sub-themes within them). Some initial codes may go on to form main themes, whereas others may form sub-themes, and others still may be discarded. At this stage you may also have a set of codes that do not seem to belong anywhere, and it is perfectly acceptable to create a 'theme' called miscellaneous to house the codes – possibly temporarily - that do not seem to fit into your main themes.

[INSERT FIGURE 2 ABOUT HERE]

You end this phase with a collection of candidate themes, and sub-themes, and all extracts of data that have been coded in relation to them. At this point, you will start to have a sense of the significance of individual themes. However, do not abandon anything at this stage, as without looking at all the extracts in detail (the next phase) it is uncertain whether the themes hold as they are, or whether some need to be combined, refined and separated, or discarded.

Phase 4: reviewing themes

Phase 4 begins when you have devised a set of candidate themes, and it involves the refinement of those themes. During this phase, it will become evident that some candidate themes are not really themes (e.g., if there are not enough data to support them, or the data are too diverse), while others might collapse into each other (e.g., two apparently separate themes might form one theme). Other themes might need to be broken down into separate themes. Patton's (1990) dual criteria for judging categories - *internal homogeneity* and *external heterogeneity* - are worth considering here. Data within themes should cohere together meaningfully, while there should be clear and identifiable distinctions between themes.

This phase involves two levels of reviewing and refining your themes. Level one involves reviewing at the level of the coded data extracts. This means you need to read all the collated extracts for each theme, and consider whether they appear to form a coherent pattern. If your candidate themes appear to form a coherent pattern, you then move on to the second level of this phase. If your candidate themes do not fit, you will need to consider whether the theme itself is problematic, or whether some of the data extracts within it simply do not fit there – in which case, you would rework your theme, creating a new theme, finding a home for those extracts that do not

currently work in an already-existing theme, or discarding them from the analysis. Once you are satisfied that your candidate themes adequately capture the contours of the coded data – once you have a candidate 'thematic map' - you are ready to move on to level two of this phase. The outcome of this refinement process can be seen in the thematic map presented in Figure 3.

[INSERT FIGURE 3 ABOUT HERE]

Level two involves a similar process, but in relation to the entire data set. At this level, you consider the validity of individual themes in relation to the data set, but also whether your candidate thematic map 'accurately' reflects the meanings evident in the data set as a whole. To some extent, what counts as 'accurate representation' depends on your theoretical and analytic approach. However, in this phase you re-read your entire data set for two purposes. The first is, as discussed, to ascertain whether the themes 'work' in relation to the data set. The second is to code any additional data within themes that has been missed in earlier coding stages. The need for re-coding from the data set is to be expected as coding is an ongoing organic process.

If the thematic map works, then you move on to the next phase. However, if the map does not fit the data set, you need to return to further reviewing and refining your coding until you have devised a thematic map that you are satisfied with. In so doing, it is possible that you will identify potential new themes, and you might need to start coding for these as well, if you are interested in them. However, a word of warning: as coding data and generating themes could go on ad infinitum, it is important not to get over-enthusiastic with endless re-coding. It is impossible to provide clear guidelines on when to stop, but when your refinements are not adding anything substantial, stop! If the process of recoding is only fine-tuning and making more nuanced a coding frame that already works – i.e., it fits the data well – recognise this and stop. Consider it like editing written work - you could endlessly edit your sentences and paragraphs, but after a few editing turns, any further work is usually unnecessary refinement – like rearranging the hundreds and thousands on an already nicely decorated cake.

At the end of this phase, you should have a fairly good idea of what your different themes are, how they fit together, and the overall story they tell about the data.

Phase 5: defining and naming themes

Phase 5 begins when you have a satisfactory thematic map of your data – see Figure 4 for the final refinements of Virginia's thematic map. At this point, you then define and further refine the themes that you will present for your analysis, and analyse the data within them. By 'define and refine' we mean identifying the 'essence' of what each theme is about (as well as the themes overall), and determining what aspect of the data each theme captures. It is important not to try and get a theme to do too much, or to be too diverse and complex. You do this by going back to collated data extracts for each theme, and organising them into a coherent and internally consistent account, with accompanying narrative. It is vital that you do not *just* paraphrase the content of the data extracts presented, but identify what is interesting about them and why!

[INSERT FIGURE 4 ABOUT HERE]

For each individual theme, you need to conduct and write a detailed analysis. As well as identifying the 'story' that each theme tells, it is important to consider how it fits into the broader overall 'story' that you are telling about your data, in relation to your research question or questions, to ensure there is not too much overlap between themes. So you need to consider the themes themselves, and each theme in relation to the others. As part of the refinement, you will identify whether or not a theme contains any sub-themes. Sub-themes are essentially themes-within-a-theme. They can be useful for giving structure to a particularly large and complex theme, and also for demonstrating the hierarchy of meaning within the data. For instance, in one of Virginia's analyses of women's talk about the vagina, she identified two overarching themes in women's talk: the vagina as liability, and the vagina as asset (Braun & Wilkinson, 2003). Within each theme, three sub-themes were identified: for liability the sub-themes were 'nastiness and dirtiness', 'anxieties' and 'vulnerability'; for asset the sub-themes were 'satisfaction', 'power' and 'pleasure'. However, these eventual final themes and sub-themes resulted from a process of refinement of initial themes and sub-themes, as shown in Figures 2 to 4.

It is important that by the end of this phase you can clearly define what your themes are, and what they are not. One test for this is to see whether you can describe the scope and content of each theme in a couple of sentences. If you cannot do this, further refinement of that theme may be needed. Although you will have already given your themes working titles, this is also the point to

start thinking about the names that you will give them in the final analysis. Names need to be concise, punchy, and immediately give the reader a sense of what the theme is about.

Phase 6: producing the report

Phase 6 begins when you have a set of fully worked-out themes, and involves the final analysis and write-up of the report. The task of the write-up of a thematic analysis, whether it is for publication or for a research assignment or dissertation, is to tell the complicated story of your data in a way which convinces the reader of the merit and validity of your analysis. It is important that the analysis (the write-up of it, including data extracts) provides a concise, coherent, logical, non-repetitive, and interesting account of the story the data tell – within and across themes. Your write-up must provide sufficient evidence of the themes within the data – i.e., enough data extracts to demonstrate the prevalence of the theme. Choose particularly vivid examples, or extracts which capture the essence of the point you are demonstrating, without unnecessary complexity. The extract should be easily identifiable as an example of the issue. However, your write-up needs to do *more* than just provide data. Extracts need to be embedded within an analytic narrative that compelling illustrates the story that you are telling about your data, and your analytic narrative needs to go *beyond* description of the data, and make an *argument* in relation to your research question.

Pinning down what interpretative analysis actually entails

It is difficult to specify exactly *what* interpretative analysis actually entails, particularly as the specifics of it will vary from study to study. As a first step we recommend looking at published examples of thematic analysis, particularly of the specific version you are planning to use (this is made somewhat more difficult in that thematic analysis is often not a named method, but you can find examples, e.g., Ellis & Kitzinger, 2002; Kitzinger & Willmott, 2002; Toerien & Wilkinson, 2004). In order to provide a sense of the sorts of questions you should be asking of your data, and the sorts of analytic claims you should be seeking to make, we will discuss a particularly good example of an inductive thematic analysis, which emphasises understanding men's experiences in relation to the broader social context (see Frith & Gleeson, 2004).

Frith and Gleeson (2004) aim to explore how men's feelings about their bodies influence their clothing practices, and they use data gathered in qualitative questionnaires from 75 men to answer

this question. They report four themes: practicality of clothing choices; lack of concern about appearance; use of clothing to conceal or reveal the body; use of clothing to fit cultural ideals. Each theme is clearly linked back to the overall research question, but each is distinct. They provide a clear sense of the scope and diversity of each theme, using a combination of analyst narrative and illustrative data extracts. Where relevant, they broaden their analysis out, moving from a descriptive to an interpretative level (often relating their claims to existing literature). For example, in 'men value practicality' they make sense of men's accounts in relation to gender norms and stereotypes, linking the accounts individual men provided to the expectations that men – as members of society – face. What they do, as analysts, is relate the patterns of meaning in men's responses to an academic analysis of how gender operates. In so doing, they demonstrate the dual position that analysts need to take: as both cultural *members* and cultural *commentators*. Their 'discussion' section makes broader analytic statements about the overall story that the themes tell us about men's relationship with clothing. This story reveals that men "deliberately and strategically use clothing to manipulate their appearance to meet cultural ideals of masculinity" (Frith & Gleeson, 2004: 45), in a way more traditionally more associated with women. This analysis makes an important contribution in that it challenges perceived wisdom about clothing/appearance and masculinity.

As this example demonstrates, your analytic claims need to be grounded in, but go beyond, the 'surface' of the data, even for a 'semantic' level analysis. The sort of questions you need to be asking, towards the end phases of your analysis, include: 'what does this theme mean?' 'What are the assumptions underpinning it?' What are the implications of this theme?' 'What conditions are likely to have given rise to it?' 'Why do people talk about this thing in this particular way (as opposed to other ways)?' and 'What is the overall story the different themes reveal about the topic?' These sorts of questions should guide the analysis once you have a clear sense of your thematic map.

Potential pitfalls to avoid when doing thematic analysis

Thematic analysis is a relatively straight-forward form of qualitative analysis, which does not require the same detailed theoretical and technical knowledge that approaches like DA or CA do. It is relatively easy to conduct a good thematic analysis on qualitative data, even when you are still

learning qualitative techniques. However, there are a number of things which can result in a poor analysis. In this section, we identify these potential pitfalls, in the hope that they can be avoided.

The first of these is a failure to actually *analyse* the data at all! Thematic analysis is not just a collection of extracts strung together with little or no analytic narrative. Nor is it a selection of extracts with analytic comment that simply or primarily paraphrases their content. The extracts in thematic analysis are illustrative of the analytic points the researcher makes about the data, and should be used to illustrate/support an analysis that goes beyond their specific content, to make sense of the data, and tell the reader what it does or might mean – as discussed above. A second, associated, pitfall is the using of the data collection questions (such as from an interview schedule) as the 'themes' that are reported. In such a case, no analytic work has been done to identify themes across the entire data set, or make sense of the patterning of responses.

The third is a weak or unconvincing analysis, where the themes do not appear to work, where there is too much overlap between themes, or where the themes are not internally coherent and consistent. All aspects of the theme should cohere around a central idea or concept. This pitfall has occurred if, depending on what the analysis is trying to do, it fails adequately to capture the majority of the data, or fails to provide a rich description/interpretation of one or more aspects of the data. A weak or unconvincing analysis can also stem from a failure to provide adequate examples from the data – for example, only one or two extracts for a theme. This point is essentially about the rhetorics of presentation, and the need for the analysis to be convincing to someone who has not read your entire data set: "The 'analysis' of the material … is a deliberate and self-consciously artful creation by the researcher, and must be constructed to persuade the reader of the plausibility of an argument" (Foster & Parker, 1995: 204). In so doing, you avoid (the appearance of) what Bryman (1988) has referred to as 'anecdotalism' in qualitative research – where one or a few instances of a phenomenon are reified into a pattern or theme, when it or they are actually idiosyncratic. This is not to say that a few instances cannot be of interest, or revealing, but that it is important not to misrepresent them as an overarching theme.

The fourth pitfall is a mismatch between the data and the analytic claims that are made about it. In such an (unfounded) analysis, the claims cannot be supported by the data, or, in the worst case, the data extracts presented suggest another analysis or even contradict the claims. The researcher

needs to make sure that their interpretations and analytic points are consistent with the data extracts. A weak analysis does not appear to consider other obvious alternative readings of the data, or fails to consider variation (and even contradiction) in the account that is produced. A pattern in data is rarely, if ever, going to be 100% complete and non-contradicted, so an analysis which suggests that it is, without a thorough explanation, is open to suspicion. It is important to pick compelling examples to demonstrate the themes, so give this considerable thought.

The fifth involves a mismatch between theory and analytic claims, or between the research questions and the *form* of thematic analysis used. A good thematic analysis needs to make sure that the interpretations of the data are consistent with the theoretical framework. So, for instance, if you are working within an experiential framework, you would typically not make claims about the social construction of the research topic, and if you were doing constructionist thematic analysis you would not treat people's talk of experience as a transparent window on their world. Finally, even a good and interesting analysis which fails to spell out its theoretical assumptions, or clarify how it was undertaken, and for what purpose, is lacking crucial information (Holloway & Todres, 2003), and thus fails in one aspect.

What makes good thematic analysis?

One of the criticisms of qualitative research from those outside the field is the perception that 'anything goes'. For instance, this sentiment is echoed in the first sentence of Laubschagne's (2003) abstract: "For many scientists used to doing quantitative studies the whole concept of qualitative research is unclear, almost foreign, or 'airy fairy' - not 'real' research". However, although 'qualitative' research cannot be subjected to the same criteria as 'quantitative' approaches, it does provide methods of analysis that should be applied rigorously to the data. Furthermore, criteria for conducting good qualitative research – both data collection and analysis - do exist (e.g., Elliott, Fischer, & Rennie, 1999; Parker, 2004; Seale, 1999; Silverman, 2000; Yardley, 2000). The British Psychological Society offers relatively succinct online guidelines for assessing quality in qualitative research (see http://www.bps.org.uk/publications/journals/joop/qualitative-guidelines.cfm). 'Criteria' for assessing qualitative research is a not uncontroversial topic, with concerns raised about rigid criteria limiting freedom and stifling methodological development (Elliott et al., 1999;

Parker, 2004; Reicher, 2000). Reicher (2000) takes the critique further, by asking whether the incredibly diverse range of qualitative approaches *can* and *should* be subject to the same criteria.

Bracketing these critiques off, the issues raised in many general qualitative research assessment criteria can be more or less applied to thematic forms of analysis. As thematic analysis is a flexible method, you also need to be clear and explicit about what you are doing, and what you say you are doing needs to match up with what you actually do. In this sense, the theory and method need to be applied rigorously, and "rigour lies in devising a systematic method whose assumptions are congruent with the way one conceptualises the subject matter" (Reicher & Taylor, 2005: 549). A concise checklist of criteria to consider when determining whether you have generated a good thematic analysis is provided in Table 2.

[Insert Table 2 about here]

So what does thematic analysis offer psychologists?

We now end this paper with some brief comments on the advantages and disadvantages of thematic analysis. As we have shown throughout this paper, thematic analysis is not a complex method. Indeed, as you can see from Table 3, its advantages are many. However, it is not without some disadvantages, which we will now briefly consider. Many of the disadvantages depend more on poorly conducted analyses or inappropriate research question, than on the method itself. Further, the flexibility of the method – which allows for a wide range of analytic options - means that the potential range of things that can be said about your data is broad. While this is an advantage, it can also be a disadvantage in that it makes developing specific guidelines for higher-phase analysis difficult, and can be potentially paralysing to the researcher trying to decide what aspects of their data to focus on. Another issue to consider is that a thematic analysis has limited interpretative power beyond mere description if it is not used within an existing theoretical framework that anchors the analytic claims that are made.

[INSERT TABLE 3 about here]

Other disadvantages appear when you consider thematic analysis in relation to some of the other qualitative analytic methods. For instance, unlike narrative or other biographical approaches, you are unable to retain a sense of continuity and contradiction through any one individual account, and these contradictions and consistencies across individual accounts may be revealing. In contrast to

methods like DA and CA, a simple thematic analysis does not allow the researcher to make claims about language use, or the fine-grained functionality of talk.

Finally, it is worth noting that thematic analysis currently has no particular kudos as an analytic method – this, we argue, stems from the very fact that it is poorly demarcated and claimed, yet widely used. This means that thematic analysis is often, or appears often to be, what is simply done by someone without the knowledge or skills to perform a supposedly more sophisticated – certainly more kudos-bearing – 'branded' form of analysis like grounded theory, IPA or DA. We hope this paper will change this view, as, as we have argued, a rigorous thematic approach can produce an insightful analysis that answers particular research questions. What is important is choosing a method that is appropriate to your research question, rather than falling victim to 'methodolatry', where you are committed to method rather than topic/content or research questions (Holloway & Todres, 2003). Indeed, your method of analysis should be driven by both your research question and your broader theoretical assumptions. As we have demonstrated, thematic analysis is a flexible approach that can be used across a range of epistemologies and research questions.

Notes

[1] Boyatzis (1998) provides a much more detailed account of thematic analysis. However, we do not feel that it is a particularly accessible account for those unfamiliar with qualitative approaches. Moreover, his approach differs from ours in that, although he acknowledges the subjective dimension of qualitative analysis, his approach is ultimately, if often implicitly, located within a positivist empiricist paradigm.

[2] Dey's (1993) account of 'qualitative data analysis' which aims to identify shared techniques across the diverse range of qualitative methods, and demonstrate how to do 'qualitative analysis' reinforces this point in that his focus is largely thematic – but not claimed as such.

[3] Some authors, such as Potter (1997: 147-148) argue that one should not simply provide 'recipes' for qualitative methods, such as DA, because "a large part of doing discourse analysis is a craft skill, more like bike riding or sexing a chicken than following the recipe for a mild chicken rogan josh. … This makes it hard to describe and learn." While we do not disagree that the skills needed for qualitative analyses of all types need to be learned, others, such as McLeod (2001), argue that by not discussing the 'how to' of analysis, we keep certain methods mysterious (and thus elitist). Instead, if we want to make methods democratic and accessible – and indeed, to make qualitative research of all forms more understandable to those not trained in the methods, and arguably thus more popular – we need to provide concrete advice on how actually to do it. We are not questioning the importance of 'non-recipe' forms of training, but while 'recipes' necessarily diminish the complexity of certain methods, they are important for making methods accessible.

[4] Foster and Parker (1995) suggest one way to acknowledge the creative and active role of the analyst is to use the first person when writing.

[5] Content analysis is another method that can be used to identify patterns across qualitative data, and is sometimes treated as similar to thematic approaches (e.g., Wilkinson, 2000). However, content analysis tends to focus at a more micro level, often provides (frequency) counts (Wilkinson, 2000), and allows for quantitative analyses of initially qualitative data (Ryan & Bernard, 2000). Thematic analysis differs from this in that themes tend *not* to be quantified (although sometimes they may be; and Boyatzis (1998) suggests thematic analysis can be used to transform qualitative

data into a quantitative form, and subject them statistical analyses), and the unit of analysis tends to be more than a word or phrase, which it typically is in content analysis.

[6] Boyatzis' (1998) definition of latent and manifest is somewhat narrower than our identification of latent and semantic, and he identifies thematic analysis as incorporating *both* to latent and manifest aspects. However, this results from the fact that he associates the process of interpretation with latent analysis – whereas we would argue that it should also be an important element of a semantic approach.

[7] We are assuming that you will be working with a 'good quality' data corpus and data set. We would argue that 'good data' are defined by a particular set of criteria regarding what, why, and how they were collected, and offer rich, detailed and complex accounts of the topic. Good data do not just provide a *surface* overview of the topic of interest, or *simply* reiterate a common-sense account. The challenge for the novice researcher is to interact with research participants in such a way that they generate rich and complex insights. Producing a good analysis of poor quality data is a far more demanding task for the analyst, although it can potentially be done by a skilled and experienced analyst.

[8] See Poland (2002) for a discussion of the problems with the idea of a 'verbatim' transcript, and what is left out, and retained, through this process.

[9] What we mean by thematic map is similar, but less detailed, than the 'codebook' Ryan and Bernard (2000) refer to, which involves the a detailed account of the hierarchical relationship between codes, as well as a description of each, their criteria, exemplars and counter examples, and other such detail. Like Boyatzis' (1998) account of a thematic code, this model is then applied to (and revised in relation to) the data. See figures 2 to 4 for visual representations of a thematic maps and its refinement. Another example of a thematic map – this time in table form – can be found in Frith & Gleeson (2004).

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Table 1: Phases of Thematic Analysis

Phase	Description of the process
1. Familiarising yourself with your data:	Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.
2. Generating initial codes:	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes:	Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing themes:	Checking in the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis.
5. Defining and naming themes:	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells; generating clear definitions and names for each theme.
6. Producing the report:	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

Table 2: A 15-Point Checklist of Criteria for Good Thematic Analysis

Process	No.	Criteria
Transcription	1	The data have been transcribed to an appropriate level of detail, and the transcripts have been checked against the tapes for 'accuracy'.
Coding	2	Each data item has been given equal attention in the coding process.
	3	Themes have not been generated from a few vivid examples (an anecdotal approach), but instead the coding process has been thorough, inclusive and comprehensive.
	4	All relevant extracts for all each theme have been collated.
	5	Themes have been checked against each other and back to the original data set.
	6	Themes are internally coherent, consistent, and distinctive.
Analysis	7	Data have been analysed – interpreted, made sense of - rather than just paraphrased or described.
	8	Analysis and data match each other – the extracts illustrate the analytic claims.
	9	Analysis tells a convincing and well-organised story about the data and topic.
	10	A good balance between analytic narrative and illustrative extracts is provided.
Overall	11	Enough time has been allocated to complete all phases of the analysis adequately, without rushing a phase or giving it a once-over-lightly.
Written report	12	The assumptions about, and specific approach to, thematic analysis are clearly explicated.
	13	There is a good fit between what you claim you do, and what you show you have done – i.e., described method and reported analysis are consistent.
	14	The language and concepts used in the report are consistent with the epistemological position of the analysis.
	15	The researcher is positioned as *active* in the research process; themes do not just 'emerge'.

Table 3: Advantages of Thematic Analysis

Flexibility.
Relatively easy and quick method to learn, and do.
Accessible to researchers with little or no experience of qualitative research.
Results are generally accessible to educated general public.
Useful method for working within participatory research paradigm, with participants as collaborators.
Can usefully summarise key features of a large body of data, and/or offer a 'thick description' of the data set.
Can highlight similarities *and* differences across the data set.
Can generate unanticipated insights.
Allows for social as well as psychological interpretations of data.
Can be useful for producing qualitative analyses suited to informing policy development.

Data extract	Coded for
it's too much like hard work I mean how much paper have you got to sign to change a flippin' name no I I mean no I no we we have thought about it ((inaudible)) half heartedly and thought no no I jus- I can't be bothered, it's too much like hard work. (Kate F07a)	1. Talked about with partner 2. Too much hassle to change name

Figure 1: Data extract, with codes applied (from Clarke, Burns, & Burgoyne, 2005).

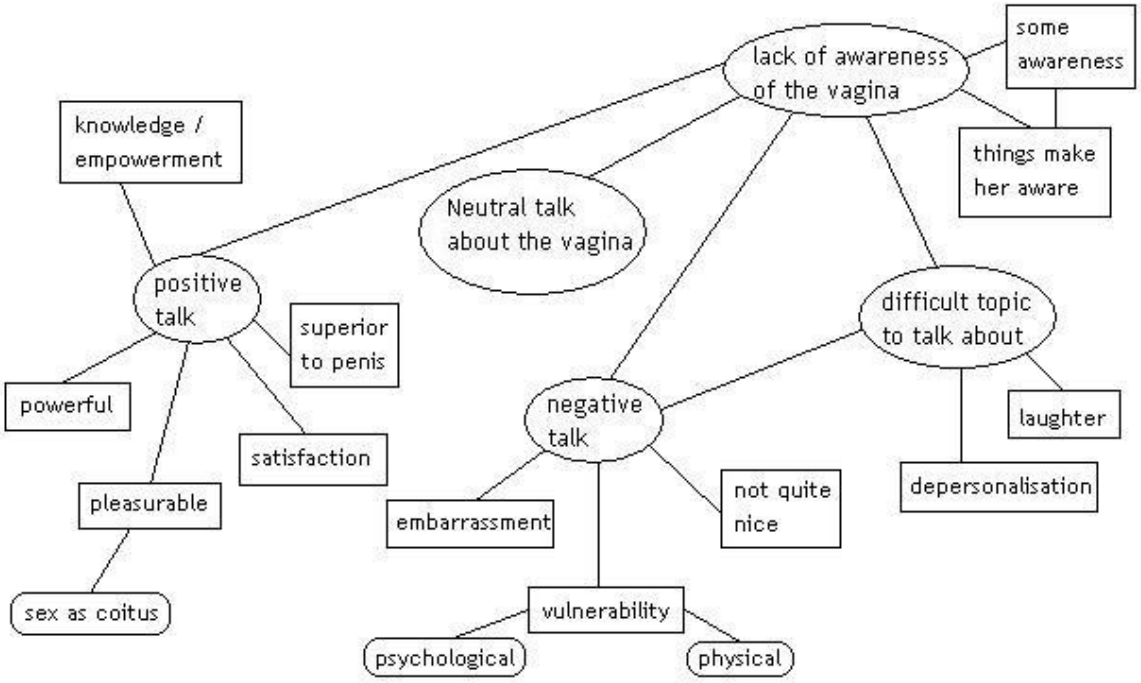

Figure 2: Initial thematic map, showing five main themes (final analysis presented in Braun & Wilkinson, 2003).

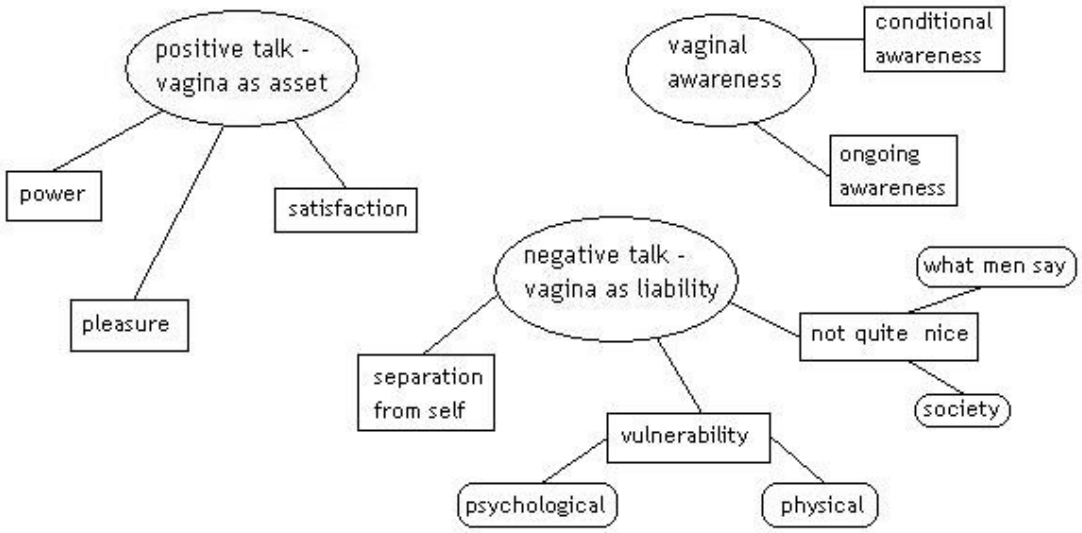

Figure 3: Developed thematic map, showing three main themes (final analysis presented in Braun & Wilkinson, 2003).

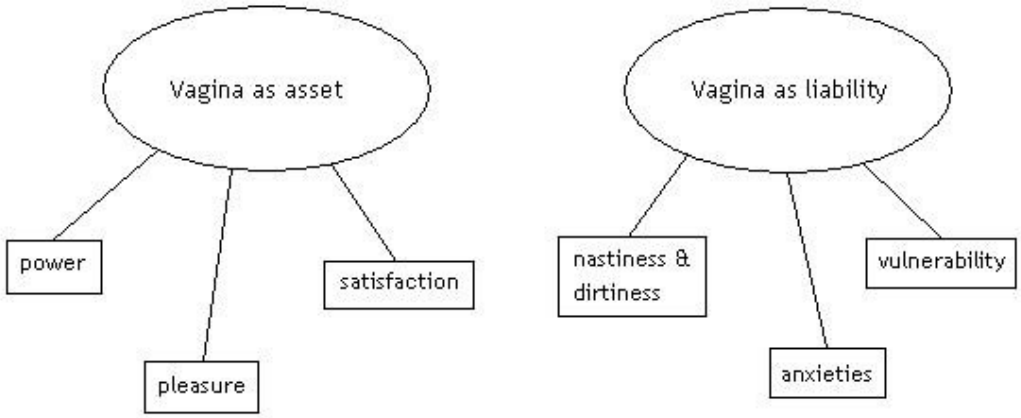

Figure 4: Final thematic map, showing final two main themes (see Braun & Wilkinson, 2003).

Social Research Methods

Alan Bryman

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1

The nature and process of social research

Chapter outline

Chapter guide

This chapter introduces some fundamental considerations in conducting social research. It begins by outlining what we mean by social research and the reasons why we conduct it. The bulk of the chapter then moves on to consider three areas:

- *The context of social research methods*. This entails considering issues such as the role of theory in relation to social research, the role of values and of ethical considerations in the research process, the significance of assumptions about the nature of the social world and about how knowledge about it should be produced, and the ways in which political considerations may emerge in social research.
- *The elements of the research process*. The whole book is dedicated to the elements of social research, but here the essential stages are given a preliminary treatment. The elements identified are: a literature review; formulating concepts and theories; devising research questions; sampling; data collection; data analysis; and writing up findings.
- *The messiness of social research*. This section acknowledges that social research often does not conform to a neat, linear process and that researchers may find themselves facing unexpected contingencies and difficulties. At the same time, it is suggested that a familiarity with the research process and its principles is crucial to navigating through the unexpected.

All of the issues presented in these three sections will be treated in much greater detail in later chapters, but they are introduced here to provide an early encounter with them.

Introduction

This book is concerned with the ways that social researchers go about their craft. This means that it is concerned with the approaches that are employed by social researchers when conducting research in all its phases—formulating research objectives, choosing research methods, securing research participants, collecting, analysing and interpreting data, and disseminating findings to others. An understanding of social research methods is important for several reasons, but two stand out. First, it is hoped that it will help readers to avoid some of the pitfalls that arise when relatively inexperienced people try to do social research, such as failing to match research questions to research methods, asking ambiguous questions in **questionnaires**, and engaging in practices that are ethically dubious. If you are expected to conduct a research project, an education in research methods is important, not just for ensuring that the correct procedures are followed but also for gaining an appreciation of the choices available to you. Second, an understanding of social research methods is important from the point of view of being a consumer of published research. When people take degrees in the social sciences, they read a lot of published research in the substantive areas they study. A grounding in the research process and a familiarity with potential pitfalls provides an invaluable critical edge when reading the research of others.

What is meant by 'social research'?

The term 'social research' as used in this book denotes *academic* research on topics relating to questions relevant to the social scientific fields, such as sociology, human geography, social policy, politics, and criminology. Thus, social research involves research that draws on the social sciences for conceptual and theoretical inspiration. Such research may be motivated by developments and changes in society, such as the rise in worries about security or binge-drinking, but it employs social scientific ideas to shed light on those changes. It draws upon the social sciences for ideas about how to formulate research topics and issues and how to interpret and draw implications from research findings. What distinguishes social research of the kind discussed in this book is that it is rooted in and draws on the ideas and intellectual traditions of the social sciences. This book is about the methods that are used to create that kind of research.

Why do social research?

The rationale for doing social research has been outlined in the previous section to a certain extent. Academics conduct such research because, in the course of reading the literature on a topic or when reflecting on what is going on in modern social life, questions occur to them. They may notice a gap in the literature or an inconsistency between a number of studies or an unresolved issue in the literature. These circumstances commonly act as springboards for social research. Another is when there is a development in society that provides an interesting point of departure for a research question. For example, noting the widespread use of social media on portable devices, a researcher might become interested in studying how far it has affected the nature and quality of interaction in social life. In exploring this issue, the researcher may draw upon the literature on technology and on social interaction to provide insights into how to approach the issue. There is no single reason why people do social research of the kind emphasized in this book, but, at its core, it is done because there is an aspect of our understanding of what goes on in society that is unresolved.

The context of social research methods

Social research and its associated methods do not take place in a vacuum. In this book, a number of factors that form the context of social research will be mentioned. The following factors form part of the context within which social research and its methods operate:

- The *theories* that social scientists use to understand the social world have an influence on what is researched and how research findings are interpreted. In other words, the topics that are investigated are profoundly influenced by the available theoretical ideas. Thus, if a

researcher was interested in the impact of the use of online social media on sociability, it is quite likely that he or she would take into account prevailing theories about how technology is used and its impacts. In this way, social research is informed and influenced by theory. It also contributes to theory because the findings of a study will feed into the stock of knowledge to which the theory relates.

- The existing knowledge about an area in which a researcher is interested forms an important part of the background within which social research takes place. This means that someone planning to conduct research must be familiar with the *literature* on the topic of interest. You must be acquainted with what is already known about the research area in which you are interested so that you can build on it and avoid covering the same ground as others.

Reviewing the literature is the main focus of Chapter 5 and is also an ingredient of other chapters, such as Chapter 28.

- The researcher's views about the nature of the *relationship between theory and research* also have implications for research. For some researchers, theory is addressed at the beginning of a research project. The researcher might engage in some theoretical reflections out of which a **hypothesis** is formulated and subsequently tested. An alternative position is to view theory as an outcome of the research process—that is, as something that is arrived at after research has been carried out. This difference has implications for research: the first approach implies that a set of theoretical ideas drive the collection and analysis of data, whereas the second suggests a more open-ended strategy in which theoretical ideas emerge out of the data. Of course, the choice is rarely as stark as this account of the relationship between theory and research implies, but it does suggest that there are contrasting views about the role of theory in relation to research.

The relationship between theory and research is a major focus of Chapter 2.

- The assumptions and views about how research should be conducted influence the research process. It is often assumed that a 'scientific' approach should be followed, in which a hypothesis is formulated and then tested using precise measurement techniques. Such research definitely exists, but the view that this is how research should be done is not universally shared. Considerations of this kind are referred to as **epistemological** ones. They raise questions about the issue of how the social world should be studied and whether a scientific approach is the right stance to adopt. Some researchers favour an approach that avoids a scientific model, arguing that people and social institutions are very different from the subject matter of the scientist and that an approach is needed that is more sensitive to the special qualities of people and their social institutions.

Epistemological issues are a major focus in Chapter 2.

- The assumptions about the nature of social phenomena influence the research process too. According to some writers, the social world should be viewed as being external to social actors and something over which they have no control. It is simply there, acting upon and influencing their behaviour, beliefs, and values. We might view the culture of an organization as a set of values and behavioural expectations that exert a powerful influence over those who work in the organization and into which new recruits have to be socialized. But we could also view it as something that is in a constant process of reformulation and reassessment, as members of the organization continually modify it through their practices and through small innovations in how things are done. Considerations of this kind are referred to as **ontological** ones. They invite us to consider the nature of social phenomena—are they relatively inert and beyond our influence or are they very much a product of social interaction? As for epistemological issues discussed in the previous point, the stance that the researcher takes on them has implications for the way in which social research is conducted.

Ontological issues are a major focus of Chapter 2.

- The *values* of the research community have significant implications for research. This can take a number of forms. *Ethical issues* have been a point of discussion, and indeed often of considerable dissension, over the years, but in recent times they have soared in prominence. It is now almost impossible to do certain kinds of research without risking the condemnation of the research community and possible censure from the organizations in which researchers are employed. Nowadays, there is an elaborate framework of bodies that scrutinize research proposals for their ethical integrity, so that transgression of ethical principles becomes ever less likely. Certain kinds of research require special provision with regard to ethics, such as research involving children or vulnerable adults. Thus, ethical values and the institutional arrangements that

have arisen in response to the clamour for ethical caution have implications for what and who can be researched and for how research can be conducted—to the point where certain research methods and practices are no longer employed. Another way in which the values of the research community can impinge on the researcher is that in certain fields, such as in social policy, there is a strong view that those being researched should be involved in the research process. For example, when social researchers conduct research on service users, it is often suggested that the users of those services should be involved in the formulation of research questions and of instruments such as questionnaires. While such views are not universally held (Becker et al. 2010), they form a consideration that researchers in some fields feel compelled to consider when contemplating certain kinds of investigation.

Ethical issues are addressed in Chapter 6 and touched on in several other chapters.

- Related to the previous issue is the question of what research is for. So far, I have tended to stress the academic nature and role of social research—namely, that it is to add to the stock of knowledge about the social world. However, many social scientists feel that research should have a practical purpose and that it should make a difference to the world around us. Such an emphasis means that, for some researchers, the social sciences should emphasize *implications for practice*. For researchers in social science disciplines such as social policy, an emphasis on investigations having demonstrable implications for practice is more widely held than in other disciplines. Also, there are research approaches that are largely designed to examine issues that will have implications for people's everyday lives, such as **evaluation research** and **action research**, which will be touched upon in Chapters 3 and 17 respectively. However, even in such fields as social policy, a commitment to an emphasis on practice is not universally held. In a survey of UK social policy researchers in 2005, Becker, Bryman, and Sempik (2006) found that 53 per cent of all those questioned felt that it was *equally* important for research to have potential value for policy and practice and to lead to the accumulation of knowledge, a further 34 per cent felt it was more important for research to have potential value for policy and practice, and 13 per cent felt it was more important for social policy research to lead to the accumulation of knowledge.
- Social research operates within a wider *political context*. For example, much social research is funded by government bodies, and these tend to reflect the orientation of the government of the day. This will mean that certain research issues are somewhat more likely to receive financial support than others. Further, for research supported by the Economic and Social Research Council (ESRC), the major funding body for UK social science research, prospective applicants are supposed to demonstrate how potential users of the research will be involved or engaged if the research receives financial support. The notion of a 'user' is capable of being interpreted in a number of different ways, but it is likely to be more straightforward for an applicant to demonstrate the involvement of users when research has a more applied focus. In other words, the stipulation that users must be involved could be taken to give a slight advantage to research with a focus on practice.

The political context of research is examined in Chapter 6.

- The *training and personal values* of the researcher form a component of the context of social research methods in that they may influence the research area, the research questions, and the methods employed to investigate these. Our experiences and our interests frequently have some influence on the issues we research. As academic social researchers, the issues that interest us have to connect to the wider disciplines of the social sciences. An example referred to in Chapter 2 is O'Reilly's (2000) study of British expatriates living on Spain's Costa Del Sol. The issue was of interest to her because she and her partner were planning to live there. This clearly constitutes a personal interest, but it is not exclusively so, because she used the topic as a lens for raising issues about transnational migration, an issue that has been of great interest to social scientists in recent years. I also mention in Chapter 2 my own interest in the ways in which social science research is reported in the mass media. This grew out of a hurtful experience reported in Haslam and Bryman (1994), which led me to develop an interest in the issue, to read a great deal of the literature on the reporting of both science and social science in the media, and to develop it into a research project. Also, social researchers, as a result of their training and sometimes from personal preferences, frequently develop attachments to, or at least preferences for, certain research methods and approaches. One of the reasons why I try to cover a wide range of research methods is that I am convinced that it is important for researchers to be familiar with a diversity of methods

and how to implement them. The development of methodological preferences carries the risk of researchers becoming blinkered about what they know, but such preferences often do emerge and have implications for the conduct of research.

It is impossible to arrive at an exhaustive list of factors that are relevant to this section, but the discussion has been designed to provide a flavour of the ways in which social research and the choice of research methods are not hermetically sealed off from wider influences.

Elements of the process of social research

In this section and the rest of this chapter, I will introduce the main elements of most research projects. It is common for writers of textbooks on social research methods to compile flow charts of the research process, and I am not immune to this temptation, as you will see from, for example, Figures 2.1, 8.1, and 17.1! At this point, I am not going to try to sequence the various stages of the research process, as the sequencing varies somewhat according to different research strategies and approaches. All I want to do here is to introduce some of the main elements—in other words, elements that are common to all or most varieties of social research. Some of them have already been touched on in the previous section and all will be addressed in more detail in later chapters.

Literature review

The existing literature is an important element in all research. When we have alighted upon a topic or issue that interests us, we must read further to determine a number of things. We need to know:

- what is already known about the topic;
- what concepts and theories have been applied to the topic;
- what research methods have been applied to the topic;
- what controversies exist about the topic and how it is studied;
- what clashes of evidence (if any) exist;
- who the key contributors to research on the topic are.

Many topics have a rich tradition of research, so it is unlikely that many people, such as students doing an undergraduate or postgraduate Master's dissertation, will be able to conduct an exhaustive review of the literature in such areas. What is crucial is that you read the key books and articles and the main figures who have written in the field. As I suggest in Chapter 5, it is crucial that you are aware of what is already known, so that you cannot be accused of not doing your homework and therefore of naively going over old ground. Also, being able to link your own research questions, findings, and discussion to the existing literature is an important way of demonstrating the credibility and contribution of your research. However, a literature review is not simply a summary of the literature. The written literature review is expected to be critical. This does not necessarily mean that you are expected to be highly negative about the authors you read, but it does mean that you are supposed to assess the significance of their work and how each item fits into the narrative about the literature that you construct when writing a literature review.

Reviewing the literature is the main focus of Chapter 5 and is also an ingredient of other chapters, such as Chapter 28.

Concepts and theories

Concepts are the way that we make sense of the social world. They are labels that we give to aspects of the social world that seem to have common features that strike us as significant. The social sciences have a strong tradition of concepts, many of which have become part of the language of everyday life. Concepts such as bureaucracy, power, social control, status, charisma, labour process, cultural capital (see Research in focus 1.1 for an example using this concept), McDonaldization, alienation, and so on are very much part of the theoretical edifice that generations of social scientists have constructed. Concepts are a key ingredient of theories. Indeed, it is almost impossible to imagine a theory that did not have at least one concept embedded in it.

The role of concepts is discussed further in Chapter 7.

Concepts serve several purposes in social research. They are important to how we organize and signal to intended audiences our research interests. They help us to think about and be more disciplined about what we want to investigate and at the same time help with the organization of our research findings. In the section on 'The context of social research methods' it was noted briefly that the relationship between theory and research is often portrayed as involving a choice between theories driving the research process in all its phases and theories as a product of the research process. This is invariably depicted as the contrast between respectively **deductive** and **inductive** approaches to the relationship between theory and research.

The contrast between inductive and deductive approaches to theory and research will be expanded upon in Chapter 2.

This contrast has implications for concepts. Concepts may be viewed as something we start out with and that represent key areas around which data are collected. In other words, we might collect data in order to shed light on a concept or more likely several concepts and how they are connected. This is the approach taken in the investigation reported in Research in focus 1.1. The alternative view is that concepts are outcomes of research. According to this second view, concepts help us to reflect upon and organize the data that we collect. Of course, these are not mutually exclusive positions. In research, we often start out with some key concepts that help us to orient to our subject matter but, as a result of collecting and interpreting data, we possibly revise those concepts, or new ones emerge through our reflections.

One of the reasons why familiarity with the existing literature is so important is that it alerts us to some of the main concepts that past researchers have employed and how useful or limited those concepts have been in helping to unravel the main issues. Research in focus 1.1 provides an example of this tendency in that the concept of cultural capital is employed for its possible insights into the process of students being accepted or rejected when applying for entry to Oxford University. Even when we are reading the literature solely as consumers of research—for example, when writing an essay—knowing what the key concepts are, who is responsible for them, and what controversies there are (if any) surrounding them can be crucial.

Research questions

Research questions have been mentioned in passing on a couple of occasions, and they are implicit in the discussion thus far. Research questions are important in research,

Key concept 1.1
What are research questions?

A research question is a question that provides an explicit statement of what it is the researcher wants to find out about. A research purpose can be presented as a statement (for example, 'I want to find out whether (or why) . . . '), but a question forces the researcher to be more explicit about what is to be investigated. A research question must have a question mark at the end of it or else it is not a question. Research in focus 1.1 provides an example of a study with several research questions. A hypothesis is in a sense a form of research question, but it is not stated as a question and provides an anticipation of what will be found out.

A helpful list of types of research question has been provided by Denscombe (2010), who in an earlier book proposed the following six types:

1. Predicting an outcome (does *y* happen under circumstances *a* and *b*?).
2. Explaining causes and consequences of a phenomenon (is *y* affected by *x* or is *y* a consequence of *x*?).
3. Evaluating a phenomenon (does *y* exhibit the benefits that it is claimed to have?).
4. Describing a phenomenon (what is *y* like or what forms does *y* assume?).
5. Developing good practice (how can we improve *y*?).
6. Empowerment (how can we enhance the lives of those we research?).

White (2009) was uneasy about Denscombe's last category, arguing that an emphasis on political motives of this kind can impede the conduct of high-quality research. This difference of opinion can be attributed to differences in viewpoint about the purposes of research highlighted in the section on 'The context of social research methods'. Rather than the sixth type of research question above, White proposes an alternative:

7. Comparison (do *a* and *b* differ in respect of *x*?).

There are many ways that research questions can be categorized, and it is also difficult to arrive at an exhaustive list, but these seven types provide a rough indication of the possibilities as well as drawing attention to a controversy about the wider goals of research.

Research in focus 1.1
Research questions in a study of cultural capital

The focus of the article by Zimdars, Sullivan, and Heath (2009) is the recruitment of students to Oxford University. Recruitment to UK universities and to the elite universities of Oxford and Cambridge has been the focus of political controversy in recent years, because the failure to recruit sufficient numbers of state-school students is seen as elitist and as restricting social mobility. Admissions officers in Oxford and Cambridge universities in particular are often portrayed as displaying class prejudices that constrain the life chances of young people from less privileged backgrounds. The researchers' aim was 'to assess whether cultural capital is linked to success in gaining admission for those who apply' (Zimdars et al. 2009: 653). They then go on to outline their research questions:

> Specifically, we address the following questions:
>
> 1. How do Oxford applicants vary in their cultural participation and cultural knowledge, according to parents' education, social class, gender and ethnicity?
> 2. Does cultural capital predict acceptance to Oxford?
> 3. If so, does its effect remain once we control for examination performance?
> 4. Is cultural capital more important for admission to the arts and humanities faculties than to the sciences?
> 5. To what extent does cultural capital mediate the effect of social class, parents' education, private schooling, ethnicity and gender?
>
> (Zimdars et al. 2009: 653)

At one level, this research seeks to address issues of relevance to social and educational policy. As noted in the section on 'The context of social research methods', social research sometimes explores issues that are mainly to do with policy and practice. But the researchers are also keen to draw on theory and one key concept in particular—Bourdieu's concept of cultural capital—to help understand the processes underlying the low level of acceptance of state-school applicants at Oxford. Cultural capital refers to an individual's ability to distinguish him- or herself through cultural experiences and competencies. It is argued that such cultural expertise allows the middle class to reproduce itself both culturally and socially and serves to reduce the social and economic opportunities of working-class children.

Zimdars et al. draw primarily on a questionnaire survey of Oxford applicants who applied for entry in 2002. Of particular interest is that the researchers found cultural knowledge to be a more important factor in success at gaining entry than mere cultural participation through visiting museums, galleries, etc. As the authors put it: 'What matters is a relationship of familiarity with culture, rather than just participation in culture' (Zimdars et al. 2009: 661). As such, these findings are only partially supportive of Bourdieu's ideas at least so far as they relate to the issue of gaining admission to Oxford.

because they force you to consider that most basic of issues—what is it about your area of interest that you want to know? Most people beginning research start with a general idea of what it is they are interested in. Research questions force you to consider the issue of what it is you want to find out about much more precisely and rigorously. Developing research questions is a matter of narrowing down and focusing more directly on what it is that you want to know about.

Research questions are, therefore, important. Having no research questions or poorly formulated research questions will lead to poor research. If you do not specify clear research questions, there is a great risk that your research will be unfocused and that you will be unsure about what your research is about and what you are collecting data for. It does not matter how well you design a questionnaire or how skilled an interviewer you are; you must be clear about your research questions. Equally, it does not matter whether your research is for a project with a research grant of £300,000, a doctoral thesis, or a small mini-project. Research questions are crucial because they will:

- guide your literature search;
- guide your decisions about the kind of research design to employ;

- guide your decisions about what data to collect and from whom;
- guide your analysis of your data;
- guide your writing-up of your data;
- stop you from going off in unnecessary directions; and
- provide your readers with a clearer sense of what your research is about.

It has been suggested that research questions will help to guide your literature search for your literature review. However, it is also possible, if not likely, that reading the literature may prompt you to revise your research questions and may even suggest some new ones. Therefore, at an early stage of a research study, research questions and the literature relating to them are likely to be intertwined. A plausible sequence at the beginning of a research project is that initial contact with the literature relating to an area of interest suggests one or two research questions and that further reading guided by the initial research questions gives rise to a revision of them or possibly some new ones.

In Chapter 4, there will be more discussion of research questions and how they can be developed.

Student experience

Generating and changing research questions

Hannah Creane elaborated on her answers regarding her research questions in an email. She writes:

> the three initial research questions I had formulated when I began the study were: what makes a child a child?; what makes an adult an adult?; and to what extent can the child be seen as a 'mini' adult? However, while writing this up I realized that those questions were no longer really the guiding questions for my research. The study has evolved and become more of an empirical reflection of the generational changes within childhood rather than looking specifically at what childhood actually is. It seems to me that the two appropriate questions in relation to the study as a whole now are: What makes a child a child as opposed to an adult?; and to what extent has this changed across the generations?

To read more, go to the Online Resource Centre: www.oxfordtextbooks.co.uk/orc/brymansrm5e/

Sampling cases

Social research is not always carried out on people. For example, we may want to examine mass-media content and employ a technique such as **content analysis**.

Content analysis is covered in Chapter 13.

With something like media content, the data come from newspaper articles or television programmes rather than from people. Because of this, it is common for writers on social research methods to use the term 'case' to cover the wide variety of objects on which or from which data will be collected. Much if not most of the time, 'cases' will be people. In social research we are rarely in a position in which we can interview, observe, or send questionnaires to all individuals who are appropriate to our research and equally we are unlikely to be able to analyse the content of all articles in all newspapers relating to an area of media content that interests us. Time and cost issues always constrain the number of cases we can include in our research, so we almost always have to sample.

As we will see in later chapters, there are a number of different principles behind sampling. Many people associate sampling with surveys and the quest for **representative samples**. This approach to sampling invariably lies behind sampling for opinion polls of the kind that we often encounter in newspapers. Such sampling is usually based on principles to do with searching for a sample that can represent (and therefore act as a microcosm of) a wider **population**. If newspapers could not make claims about the representativeness of the samples used for the opinion polls they commission, the findings they report about the prospects for political parties would be less significant.

In Chapter 8, the principles that lie behind the quest for the representative sample will be explained.

These principles do not apply solely to questionnaire **survey research** of the kind described in Research in focus 1.1 but may also apply to other kinds of investigation—for example, when sampling newspaper articles for a content analysis of media content. By no means all forms of social science research prioritize representative samples. In

Part Three we will encounter sampling principles that are based not on the idea of representativeness but on the notion that samples should be selected on the basis of their appropriateness to the purposes of the investigation. Also, in **case study** research, there may be just one or two units of analysis. With such research, the goal is to understand the selected case or cases in depth. Sampling issues are relevant to such research as well. Quite aside from the fact that the case or cases have to be selected according to criteria relevant to the research, those individuals who are members of the case study context have to be sampled according to criteria too. However, the chief point to register is that sampling is an inevitable feature of most social research and therefore is an important stage of any investigation.

Data collection

To many people, data collection represents the key point of any research project, and it is not surprising therefore that this book probably gives more words and pages to this stage in the research process than any other. Some of the methods of data collection covered, such as interviewing and questionnaires, are probably more familiar to many readers than some of the others. Some methods entail a rather structured approach to data collection—that is, the researcher establishes in advance the broad shape of what he or she needs to find out about and designs research instruments to implement what needs to be known. The questionnaire is an example of such an instrument; the researcher establishes what he or she needs to know to answer the research questions that drive the project and designs questions in the questionnaire that will allow data to be collected to answer those research questions. Similarly, something like a **structured interview**—the kind of interview used in survey investigations—includes a host of questions designed for the same purpose. It is unfortunate that we use the same word—question—for both research questions and the kinds of questions that are posed in questionnaires and interviews. They are very different: a research question is a question designed to indicate what the purpose of an investigation is; a questionnaire question is one of many questions that are posed in a questionnaire that will help to shed light on and answer one or more research questions.

It is also possible to discern in this book methods of data collection that are unstructured. In Part Three, research methods will be encountered that emphasize a more open-ended view of the research process, so that there is less restriction on the kinds of things that can be found out about. Research methods such as **participant observation** and **semi-structured interviewing** are used so that the researcher can keep an open mind about the shape of what he or she needs to know about, so that concepts and theories can emerge out of the data. This is the inductive approach to theorizing and conceptualization referred to above. Such research is usually still geared to answering research questions, but these are often expressed in a less explicit form than the research questions encountered in more structured research of the kind encountered in Research in focus 1.1. This can be seen by comparing the specificity of these research questions with those of a study of retired senior managers by Jones, Leontowitsch, and Higgs (2010):

> Our aim was to explore the experiences of retirement, changes in lifestyle and social roles and the meanings associated with retirement amongst early retirees from higher management. Research questions included: to what extent do our respondents construct a new balance of activities? Do respondents construct new discourses of everyday life? Does the move by respondents into leisure retirement create new tensions in other parts of their lives?
>
> (Jones et al. 2010: 105)

These research questions derived in part from the concept of the 'quasi-subject' in modern societies, whereby people 'become authors of their own biographies—authors who have to continually construct identities and biographical narratives in order to give meaning to lives that are lived out in the face of uncertainty' (Jones et al. 2010: 104). In order to explore the research questions, semi-structured interviews with twenty relevant retirees were undertaken. The interviews were designed 'to encourage a conversation and to allow participants to give their own account of retirement' (Jones et al. 2010: 108). This is a noticeably less structured approach to data collection, reflecting the open-ended nature of the research questions.

The collection of data, then, can entail different sorts of approach in terms of how structured or open-ended the implementation of the methods is. An issue that arises in all research is that of *quality*. How do you do good research and how do you recognise it when you read it? The assessment of research quality relates to all phases of the research process, but the quality of data-collection procedures is bound to be a key concern. The assessment of quality has become a prominent issue among social researchers and also for policy-makers with an interest in academic research. It has become a much more significant topic since the publication of the first edition of this book in 2001. There are several reasons for the greater prominence of research quality assessment, some of which will be mentioned in later chapters. However, the key point to appreciate for now is that, with the increased importance of research quality assessment, debates have arisen about issues such as whether there can be quality criteria that apply to all forms of research. As we will see, especially in Chapter 17, there has been a clear position among some

methodologists that a 'horses for courses' approach is required whereby the application of quality criteria needs to take into account the kind of investigation to which they are being applied.

Data analysis

Data analysis is a stage that incorporates several elements. At the most obvious level, it might be taken to mean the application of statistical techniques to data that have been collected.

Quantitative data analysis and the software for implementing it are discussed in Chapters 15 and 16.

However, quite aside from the fact that by no means all data are amenable to statistical analysis and that, even when some data might be appropriate to such analysis, alternative approaches are sometimes taken, there are other things going on when data are being analysed. For a start, the raw data have to be *managed*. This means that the researcher has to check the data to establish whether there are any obvious flaws. For example, if we take the kind of research conducted by Jones et al. (2010) on early retirees, the interviews are usually audio-recorded and then subsequently transcribed. The researcher needs to be alert to possible hearing mistakes that might affect the meaning of people's replies. The preparation of the data for **transcription** enables the researcher to introduce the transcripts into a computer software program.

The use of qualitative data analysis software is discussed in Chapter 25.

In the case of the research by Jones et al., once the transcripts had been incorporated within the software, the authors say they conducted a **thematic analysis**. This means that they examined the data to extract core themes that could be distinguished both between and within transcripts. One of the main elements of the identification of themes was through **coding** each transcript. With the analysis of qualitative data, coding is a process whereby the data are broken down into their component parts and those parts are then given labels. The analyst then searches for recurrences of these sequences of coded **text** within and across cases and also for links between different **codes**. Thus, there is a lot going on in this process: the data are being managed, in that the transcripts are being made more accessible than if the researcher just kept listening and relistening to the recordings; the researcher is making sense of the data through coding the transcripts; and the data are being interpreted—that is, the researcher is seeking to link the process of making sense of the data with the research questions that provided the starting point, as well as with the literature relating to retirement and also with the theoretical ideas the authors use to illuminate the issue.

Data analysis is fundamentally about *data reduction*—that is, it is concerned with reducing the large body of information that the researcher has gathered so that he or she can make sense of it. Unless the amount of data collected is reduced—for example, in the case of quantitative data by producing tables or averages and in the case of qualitative data by grouping textual material into categories like themes—it is more or less impossible to interpret the material.

A further issue to bear in mind with data analysis is that it can refer to the analysis of either primary or secondary data. With primary data analysis, the researchers who were responsible for collecting the data conduct the analysis, as was the case with both the Zimdars et al. (2009) and Jones et al. (2010) studies. Secondary data analysis occurs when someone else analyses such data. Nowadays, researchers who work in universities are encouraged to deposit their data in archives, which then allow others to analyse the data that are deposited. Given the time and cost of most social research, this is a sensible thing to do, as it increases the likely payoff of an investigation, and it may be that a researcher conducting secondary analysis can explore the research questions in which he or she is interested without having to go through the time-consuming and lengthy process of having to collect primary data.

Secondary analysis is discussed in Chapters 14 and 24.

Writing up

The finest piece of research would be useless if it were not disseminated to others. We do research so that it can be written up, thereby allowing others to read what we have done and concluded. It might be argued that writing up should not be part of the subject matter for a book on social research methods. However, since dissemination is so important to researchers, it is appropriate for it to be included.

Chapter 28 is devoted to writing up.

There are slightly different ways in which social research gets written up, and these vary according to the different styles of doing research. For example, more structured kinds of research like that presented in Research in focus 1.1 are sometimes written up differently from more open-ended research of the sort represented by the Jones et al.

Table 1.1

Stages in the research process in relation to two studies

Stage	Description of stage	Example (Zimdars et al. 2009)*	Example (Jones et al. 2010)
Literature review	A critical examination of existing research relating to the phenomena of interest and of relevant theoretical ideas.	Literature concerning social stratification as it relates to educational access and concerning the notion of cultural capital.	Literature concerning retirement and the notion of the 'quasi-subject' in second modernity.
Concepts and theories	The ideas that drive the research process and that shed light on the interpretation of the resulting findings. These findings contribute to the ideas.	Academic attainment; cultural capital; social background.	Early retirement; quasi-subject; discourse; lifestyle.
Research question(s)	A question or questions providing an explicit statement of what it is the researcher wants to know about.	'1. How do Oxford applicants vary in their cultural participation and cultural knowledge, according to parents' education, social class, gender and ethnicity? 2. Does cultural capital predict acceptance to Oxford? 3. If so, does its effect remain once we control for examination performance? 4. Is cultural capital more important for admission to the arts and humanities faculties than to the sciences? 5. To what extent does cultural capital mediate the effect of social class, parents' education, private schooling, ethnicity and gender?' (Zimdars et al. 2009: 653).	'To what extent do our respondents construct a new balance of activities? Do respondents construct new discourses of everyday life? Does the move by respondents into leisure retirement create new tensions in other parts of their lives?' (Jones et al. 2010: 105).
Sampling cases	The selection of cases (in these studies, people) that are relevant to the research questions.	'A representative sample of 1,700 applicants with British qualifications who applied to Oxford during the 2002 admissions cycle' (Zimdars et al. 2009: 653).	Sample of twenty early retirees obtained initially through databases of organizations working with retired people.
Data collection	Gathering data from the sample so that the research questions can be answered.	Questionnaire survey. Data obtained on degree attainment of each applicant. Also, interviews with admissions tutors and observation of admissions meetings.	Semi-structured interviews.
Data analysis	The management, analysis, and interpretation of the data.	Statistical analysis of the questionnaire data. Thematic analysis of interview transcripts.	Thematic analysis of interview transcripts.
Writing up	Dissemination of the research and its findings.	Research written up as a doctoral thesis and as articles, including Zimdars et al. (2009). Main sections in Zimdars et al. (2009): • Introduction • Operationalization • Research questions • Data and methods • Discussion • Appendix	Research written up as an article in Jones et al. (2010). Main sections: • Introduction • Background • Methods • Findings • Discussion • Conclusion

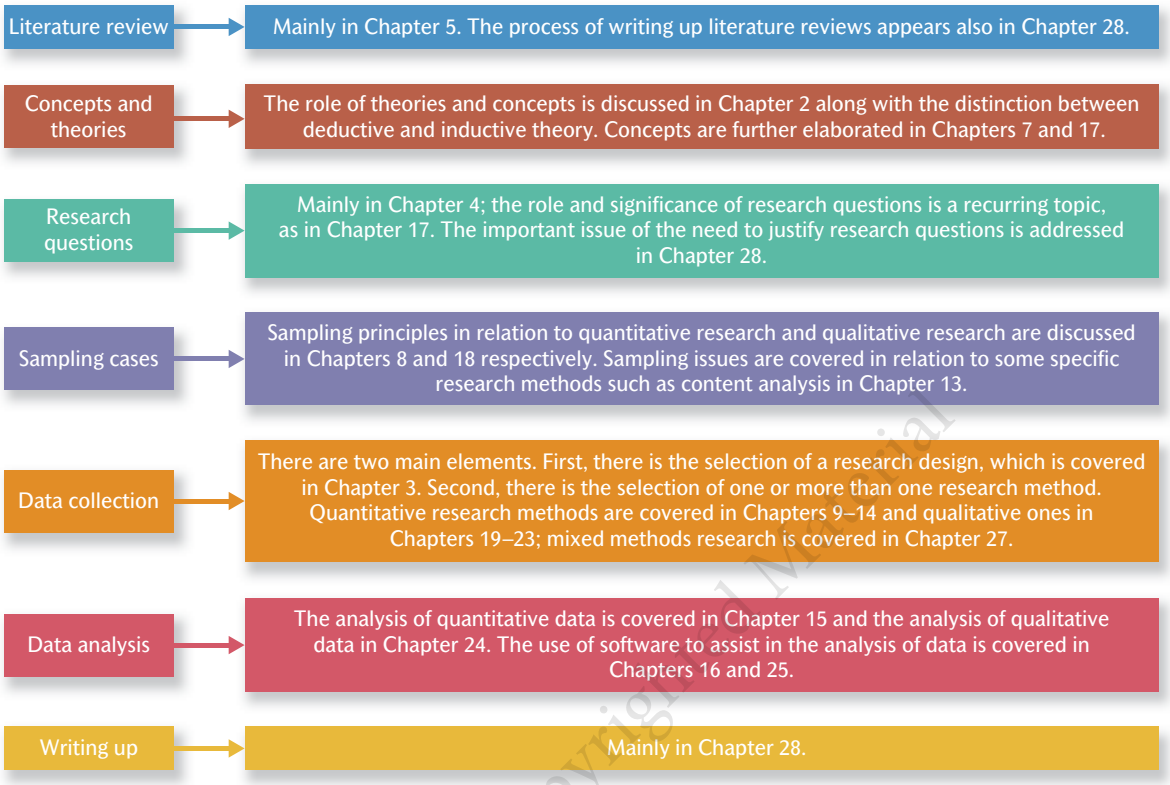
* Zimdars (2007) consulted for further information.

(2010) study. However, there are some core ingredients that most dissertations, theses, and research articles will include. These are:

- *Introduction*. Here the research area and its significance are outlined. The research questions may also be introduced here.
- *Literature review*. What is already known about the research area is sketched out and examined critically.
- *Research methods*. Here the research methods employed (sampling, methods of data collection, methods of data analysis) are presented and justified.
- *Results*. The findings are presented.

Figure 1.1

The seven elements of the research process and where to find them in this book



- *Discussion*. The findings are discussed in relation to their implications for the literature and for the research questions previously introduced.
- *Conclusion*. The significance of the research is reinforced for the reader.

These elements are not an exhaustive list, because writing conventions differ in various ways, but they are recurring elements of the final written outputs. Table 1.1 summarizes the seven elements of the research process examined in this section and Figure 1.1 shows where in this book to look for information about each stage. The latter will be especially useful for readers conducting investigations of their own, as it provides a guide to the book from the point of view of the principal steps in conducting research.

The messiness of social research

Social research is often a lot less smooth than the accounts of the research process you read in books like this. The purpose of this book is to provide an overview of the research process as well as advice on how it should be done. In fact, research is full of false starts, blind alleys, mistakes, and enforced changes to research plans. However, in a book like this it is impossible to cover all such contingencies, largely because many of them are one-off events and almost impossible to anticipate. We know that research can get messy from the confessional accounts of the research process that have been written (e.g. the contributors to P. Hammond 1964; Bell and Newby 1977; Bryman 1988b; Townsend and Burgess 2009a; Streiner and Sidani 2010). If social research is messy, why do we invariably not get a sense of that when we read reports of research in books and academic journal articles? Of course, research often does go relatively smoothly and, in spite of minor hiccoughs, proceeds roughly according to plan. However, it is also the case that reports of research often present rather sanitized accounts of how the research was produced, without a sense of the sometimes difficult problems the researcher(s) had to overcome. This is not to say that social researchers deceive us,

but rather that the accounts of the findings and how they were arrived at tend to follow an implicit template that emphasizes some aspects of the research process but not others. They tend to emphasize how the specific findings presented in the report were arrived at and to use standard methodological terminology of the kind presented in this book to express the underlying process. Research reports typically display the various elements discussed in the previous section—the relevant literature is reviewed, the key concepts and theories are discussed, the research questions are presented, the sampling procedures and methods of data collection are explained and justified, the findings are presented and discussed, and some conclusions are drawn. The ups and downs of research tend not to feature within this template. This tendency is not unique to *social* research: in Chapter 22 a study of how scientists present and discuss their work will be examined, and this shows that here too certain core aspects of the production of 'findings' tend to be omitted from the written account (Gilbert and Mulkay 1984).

It is also the case that, regardless of the various ways in which research can be knocked off its path, this book can deal only with generalities. It cannot cover every eventuality, so that it is quite possible that when conducting an investigation you will find that these generalities do not fit perfectly with the circumstances in which you find yourself. It is important to be aware of that possibility and not to interpret any slight departures you have to make from the advice provided in this book as a problem with your skills and understanding. It could be argued that, in light of the different ways in which social researchers can be stymied in their research plans, a book on research methods, outlining how research is and should be conducted, is of little value. Needless to say, I would not subscribe to such a view. Many years ago, I was involved in several studies of construction projects. One of the recurring themes in the findings was the different ways that such projects could be knocked off their course: unpredictable weather, sudden shortages of key supplies, illness, accidents, previously reliable subcontractors letting the project manager down, clients changing their minds or being unavailable at key points, sudden changes in health and safety regulation, poor-quality supplies, poor-quality work, early excavation revealing unanticipated problems—any of these could produce significant interruptions to even the best-planned construction project. But never was it suggested that the principles of construction and of construction management should be abandoned. Without such principles, project managers would be at an even greater loss to know how to proceed. Much the same is true of research projects. There are plenty of things that can go wrong. As Townsend and Burgess (2009b) write in the introduction to their collection of 'research stories you won't read in textbooks', two of the recurring themes from the accounts they collected are the need for flexibility and the need for perseverance. However, at the same time it is crucial to have an appreciation of the methodological principles and the many debates and controversies that surround them, and these are outlined in the next twenty-seven chapters. These principles provide a road map for the journey ahead.

Key points

- Social research and social research methods are embedded in wider contextual factors. They are not practised in a vacuum.
- Social research practice comprises elements that are common to all or at least most forms of social research. These include: a literature review; concepts and theories; research questions; sampling of cases; data collection; data analysis; and a writing-up of the research finding.
- Attention to these steps is what distinguishes academic social research from other kinds of social research.
- Although we can attempt to formulate general principles for conducting social research, we have to recognize that things do not always go entirely to plan.

Questions for review

What is meant by 'social research'?

- What is distinctive about academic social research?

Why do social research?

- If you were about to embark on a research project now or in the near future, what would be the focus of it and why?

The context of social research methods

- What are the main factors that impinge on social research and the implementation of social research methods identified in the chapter? Can you think of any that have not been touched on?

Elements of the process of social research

- Why is a literature review important when conducting research?
- What role do concepts and theories play in the process of doing social research?
- Why are researchers encouraged to specify their research questions? What kinds of research questions are there?
- Why do researchers need to sample? Why is it important for them to outline the principles that underpin their sampling choices?
- Outline one or two factors that might affect a researcher's choice of data-collection instrument.
- What are the main differences between the kinds of data analysed by Zimdars et al. (2009) and Jones et al. (2010)?
- How might you structure the report of the findings of a project that you conducted?

The messiness of social research

- If research does not always go according to plan, why should we bother with methodological principles at all?

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Visit the Online Resource Centre to enrich your understanding of social research strategies. Follow up links to other resources, test yourself using multiple choice questions, and gain further guidance and inspiration from the Student Researcher's Toolkit.

'Mode 3' and 'Quadruple Helix': Toward a 21st century fractal innovation ecosystem

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‘Mode 3’ and ‘Quadruple Helix’: toward a 21st century fractal innovation ecosystem

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Abstract: ‘Mode 3’ allows and emphasises the co-existence and co-evolution of different knowledge and innovation paradigms: *the competitiveness and superiority of a knowledge system is highly determined by its adaptive capacity to combine and integrate different knowledge and innovation modes via co-evolution, co-specialisation and co-opetition knowledge stock and flow dynamics*. The ‘Quadruple Helix’ emphasises the importance of also integrating the perspective of the media-based and culture-based public. What results is an emerging fractal knowledge and innovation ecosystem, well-configured for the knowledge economy and society.

Keywords: mode 3 innovation ecosystem; quadruple helix; innovation networks; knowledge clusters; knowledge fractals; glocal; academic firm; knowledge swings; conceptual branding; knowledge weavers.

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1 Introduction to knowledge and definition of terms

> "New frontiers of the mind are before us, and if they are pioneered with the same vision, boldness, and drive with which we have waged this war we can create a fuller and more fruitful employment and a fuller and more fruitful life."
>
> –Franklin D. Roosevelt
>
> November 17, 1944.

1.1 The up-and-coming architecture of a Mode 3 Innovation Ecosystem

The emerging glo*C*alising, globalising and localising (Carayannis and von Zedwitz, 2005; Carayannis and Alexander, 2006), frontier of converging systems, networks and sectors of innovation that is driven by increasingly complex, non-linear and dynamic processes of knowledge creation, diffusion and use, confronts us with the need to re-conceptualise, if not to re-invent, the ways and means that knowledge production, utilisation and renewal takes place in the context of the knowledge economy and society (gloCal knowledge economy and society).

Perspectives from and about different parts of the world and diverse human, socio-economic, technological and cultural contexts are inter-woven to produce an emerging new worldview on how specialised knowledge, that is embedded in a particular socio-technical context, can serve as the unit of reference for stocks and flows of a hybrid, *public/private, tacit/codified, tangible/virtual good* that represents the building block of the knowledge economy, society and polity.

We postulate that one approach to such a re-conceptualisation is what we call the 'Mode 3' system consisting of 'Innovation Networks' and 'Knowledge Clusters' (see definitions below) for knowledge creation, diffusion and use (Carayannis and Campbell, 2006a). This is *a multi-layered, multi-modal, multi-nodal and multi-lateral system,* encompassing mutually complementary and reinforcing innovation networks and knowledge clusters consisting of human and intellectual capital, shaped by social capital and underpinned by financial capital.

The "Mode 3 Innovation Ecosystem" is in short the nexus or hub of the emerging 21st century Innovation Ecosystem (Milbergs, 2005),[1] where *people,*[2] *culture* (Killman, 1985)[3] *and technology* (von Braun, 1997)[4,5] (Carayannis and Gonzalez, 2003; – forming the essential "Mode 3 Innovation Ecosystem" building block or 'knowledge nugget' (Carayannis, 2004)) meet and interact to catalyse creativity, trigger

invention and accelerate innovation across scientific and technological disciplines, public and private sectors (government, university, industry and non-governmental knowledge production, utilisation and renewal entities) and in a top-down, policy-driven as well as bottom-up, entrepreneurship-empowered fashion. One of the basic ideas of the paper is: *co-existence*, *co-evolution* and *co-specialisation* of different knowledge paradigms and different knowledge modes of knowledge production and knowledge use as well as their co-specialisation as a result. We can postulate a dominance of knowledge heterogeneity at the systems (national, trans-national) level. Only at the sub-system (sub-national) level we should expect homogeneity. This understanding we can paraphrase with the term Mode 3.

Embedding concepts of knowledge creation, diffusion and use in the context of general systems theory could prove mutually beneficial and enriching for systems theory as well as knowledge-related fields of study, as this could:

- reveal for systems theory a new and important field of application
- at the same time, provide a better conceptual framework for understanding knowledge-based and knowledge-driven events and processes in the economy, and hence reveal opportunities for optimising public sector policies and private sector practices.

Thus, the two major purposes of this paper could be paraphrased as:

- Adding to the theories and concepts of knowledge further discursive inputs, such as suggesting a linkage of systems theory and the understanding of knowledge, emphasising multi-level systems of knowledge and innovation, summarised also under the term of '*Mode 3*' *Systems Approach to knowledge creation, diffusion and use* that we discuss below.
- This diversified and conceptually pluralised understanding should support practical and application-oriented decision-making with regard to knowledge, knowledge optimisation and the leveraging of knowledge for other purposes, such as economic performance: knowledge-based decision-making has ramifications for knowledge management of firms (global multinational corporations) and universities *as well as* for public policy (knowledge policy, innovation policy).

1.2 Definition of terms

To fully leverage the potential of systems (and systems theory) one should also demonstrate, how a system design can be brought in line with other available concepts, such as innovation networks and knowledge clusters. With regard to clusters, at least three types of clusters can be listed:

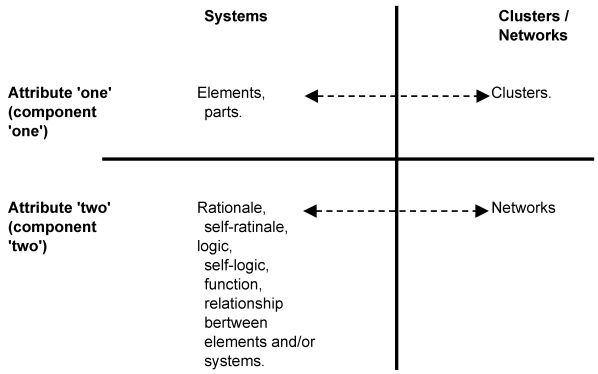
- *Geographic (spatial) clusters*. In that understanding, a cluster represents a certain geographic, spatial configuration, either tied to a location or a larger region. Geographic, spatial proximity, for example for the exchange of tacit knowledge, is considered as crucial. While 'local' clearly represents a sub-national entity, a 'region' could be either sub-national or trans-national.

- *Sectoral clusters*. This cluster approach is carried by the understanding that different industrial or business sectors develop specific profiles with regard to knowledge production, diffusion and use. One could even add that sectoral clusters even support the advancement of particular 'knowledge cultures'. In innovation research, the term 'innovation culture' already is being acknowledged (Kuhlmann, 2001, p.958).
- *Knowledge clusters*. Here, a cluster represents a specific configuration of knowledge, and possibly also of knowledge types. However, in geographic (spatial) and sectoral terms, a knowledge cluster is not predetermined. In fact, a knowledge cluster can cross-cut different geographic locations and sectors, thus operating globally and locally (across a whole multi-level spectrum). Crucial for a knowledge is when it expresses an innovative capability, for example producing knowledge that excels (knowledge-based) economic performance. A knowledge cluster, furthermore, may even include more than one geographic and/or sectoral cluster.

Networks emphasise *interaction, connectivity and mutual complementarity and reinforcement*. Networks, for example, can be regarded as the internal configuration that ties together and determines a cluster. Networks also can express the relationship between different clusters. *Innovation networks and knowledge clusters thus resemble a matrix,* indicating the interactive complexity of knowledge and innovation. Should the (proposed) conceptual flexibility of systems (and systems theory) be fully leveraged, it appears important to demonstrate how systems relate conceptually to knowledge clusters and innovation networks, as they are key in understanding the nature and dynamics of knowledge stocks and flows. What we suggest is to link the two basic components (attributes) of systems ('elements/parts' and 'rationale/self-rationale'; Campbell, 2001, p.426) with clusters and networks (Carayannis and Campbell, 2006a, pp.9, 10). What results is a formation of two pairs of theoretical equivalents (see Figure 1):

- *elements and clusters*: the elements (parts) of a system can be regarded as an equivalent to clusters (knowledge clusters)
- *rationale and networks*: the rationale (self-rationale) of a system can be understood as an equivalent to networks (innovation networks).

Figure 1 Theoretical equivalents between conceptual attributes of systems and clusters/networks



Source: Authors' own conceptualisation

The rationale of a system holds together the system elements and expresses the relationship between different systems. It could be argued that, at least partially, this rationale manifests itself in ('moves through') networks. At the same time, elements of a system might also manifest themselves as clusters. Perhaps, networks could be affiliated with the functions of a system, and clusters with the structures of systems. This would help indicating to us, should we be interested in searching for structures and functions of knowledge and innovation systems, what exactly to look for. This, obviously, does not imply to claim that structures and functions of knowledge (innovation) systems only fall into the conceptual boxes of 'clusters' and 'networks'. However, clusters and networks should be regarded as crucial subsets for the elements and rationales of systems.

This equation formula (between elements/clusters and rationales/networks) might need further conceptual and theoretical development. But it lays open a convincing route for better understanding knowledge and innovation, through tying together two strong conceptual traditions (systems theory with clusters and knowledge). A further ramification of networks, as we will demonstrate later on, could also imply to understand (at least the large-scale) knowledge strategies as complex network configurations.

As a new input for discussion, we wish to introduce the concept of *the* 'Mode 3' *knowledge creation, diffusion and use system,* and we define below the essential elements or building blocks of 'Mode 3'. The notion 'Mode 3' was coined by Carayannis (late fall of 2003), and was as a concept jointly developed by Carayannis and Campbell (2006a).

In the following, we list some of the key definitions, which refer to 'Mode 3' and associated concepts (see also Carayannis and Campbell, 2006c).

- *The 'Mode 3' Systems Approach for knowledge creation, diffusion and use*:

  *'Mode 3' is a multi-lateral, multi-nodal, multi-modal, and multi-level systems approach to the conceptualisation, design, and management of real and virtual, '*knowledge-*stock' and 'knowledge-flow', modalities that catalyse, accelerate, and support the creation, diffusion, sharing, absorption, and use of co-specialised knowledge assets. 'Mode 3' is based on a system-theoretic perspective of socio-economic, political, technological, and cultural trends and conditions that shape the co-evolution of knowledge with the "knowledge-based and knowledge-driven, gloCal economy and society".*[6]

- *Innovation networks*:

  Innovation Networks[7] *are real and virtual infra-structures and infra-technologies that serve to nurture creativity, trigger invention and catalyse innovation in a public and/or private domain context (for instance, Government-University-Industry Public-Private Research and Technology Development Co-opetitive Partnerships (Carayannis and Alexander, 2004; Carayannis and Alexander, 1999a)).*[8,9]

- *Knowledge clusters*:

  Knowledge Clusters are agglomerations of co-specialised, mutually complementary and reinforcing knowledge assets in the form of 'knowledge stocks' and 'knowledge flows' that exhibit self-organising, learning-driven, dynamically adaptive competences and trends in the context of an open systems perspective.

- *21st century innovation ecosystem*:

  A 21st Century Innovation Ecosystem is a multi-level, multi-modal, multi-nodal and multi-agent system of systems. The constituent systems consist of innovation meta-networks (networks of innovation networks and knowledge clusters) and knowledge meta-clusters (clusters of innovation networks and knowledge clusters) as building blocks and organised in a self-referential or chaotic [10] fractal[11] (Gleick, 1987) knowledge and innovation architecture (Carayannis, 2001), which in turn constitute agglomerations of human, social, intellectual and financial capital stocks and flows as well as cultural and technological artifacts and modalities, continually co-evolving, co-specialising, and co-opeting. These innovation networks and knowledge clusters also form, re-form and dissolve within diverse institutional, political, technological and socio-economic domains including Government, University, Industry, Non-governmental Organisations and involving Information and Communication Technologies, Biotechnologies, Advanced Materials, Nanotechnologies and Next Generation Energy Technologies.

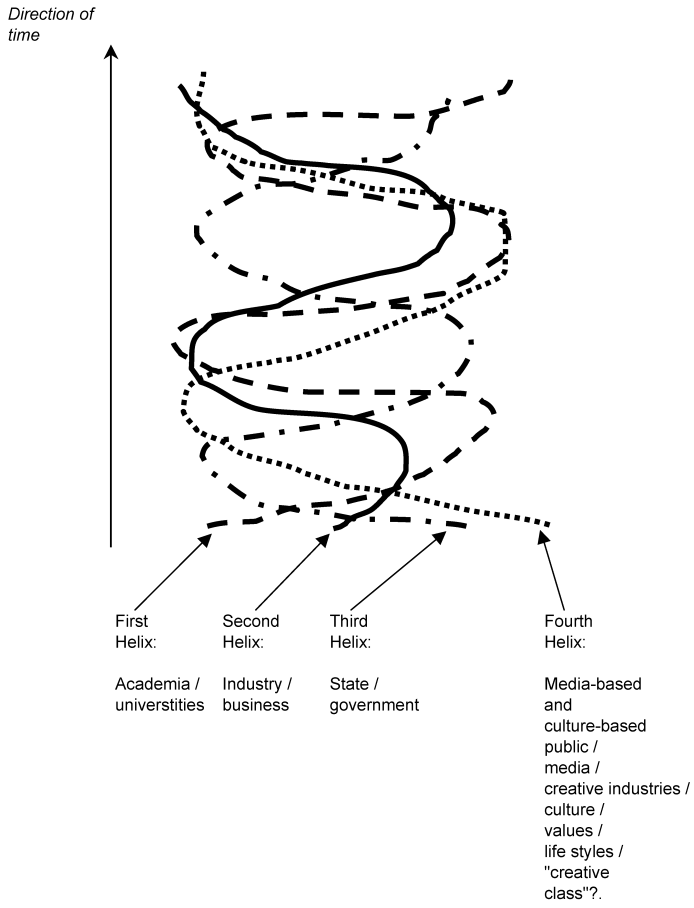
1.3 Mode 3, Quadruple Helix, Schumpeter's creative destruction, and the co-evolution of different knowledge modes

In the following chapters, we present in greater detail different aspects of advanced knowledge and innovation. Crucial for the suggested 'Mode 3' approach is the idea that an advanced knowledge system may integrate different knowledge modes. Some knowledge (innovation) modes certainly will phase out and stop existing. However, what is important for the broader picture is that in fact a co-evolution, co-development and co-specialisation of different knowledge modes emerge. This pluralism of knowledge modes should be regarded as essential for advanced knowledge-based societies and economies. This may point to similar features of advanced knowledge and advanced democracy. We could state that competitiveness and sustainability of the glo*C*al knowledge economy and society increasingly depend on the elasticity and flexibility of promoting a co-evolution and by this also a cross-integration of different knowledge (innovation) modes. This heterogeneity of knowledge modes should create hybrid synergies and additionalities.

The 'Triple Helix' model of knowledge, developed by Etzkowitz and Leydesdorff (2000, pp.111, 112), stresses three 'helices' that intertwine and by this generate a national innovation system: academia/universities, industry, and state/government. Etzkowitz and Leydesdorff are inclined of speaking of "university-industry-government relations" and networks, also placing a particular emphasis on "tri-lateral networks and hybrid organisations", where those helices overlap. In extension of the Triple Helix model we suggest a 'Quadruple Helix' model (see Figure 2). Quadruple Helix, in this context, means to add to the above stated helices a 'fourth helix' that we identify as the "media-based and culture-based public". This fourth helix associates with 'media', 'creative industries', 'culture', 'values', 'life styles', 'art', and perhaps also the notion of the 'creative class' (a term, coined by Florida, 2004). Plausibility for the explanatory potential of such a fourth helix are that culture and values, on the one hand, and the way how 'public reality' is being constructed and communicated by the media, on the other hand, influence every national innovation system. The proper 'innovation culture' is key for promoting an advanced knowledge-based economy. Public discourses, transported

through and interpreted by the media, are crucial for a society to assign top-priorities to innovation and knowledge (research, technology, education).

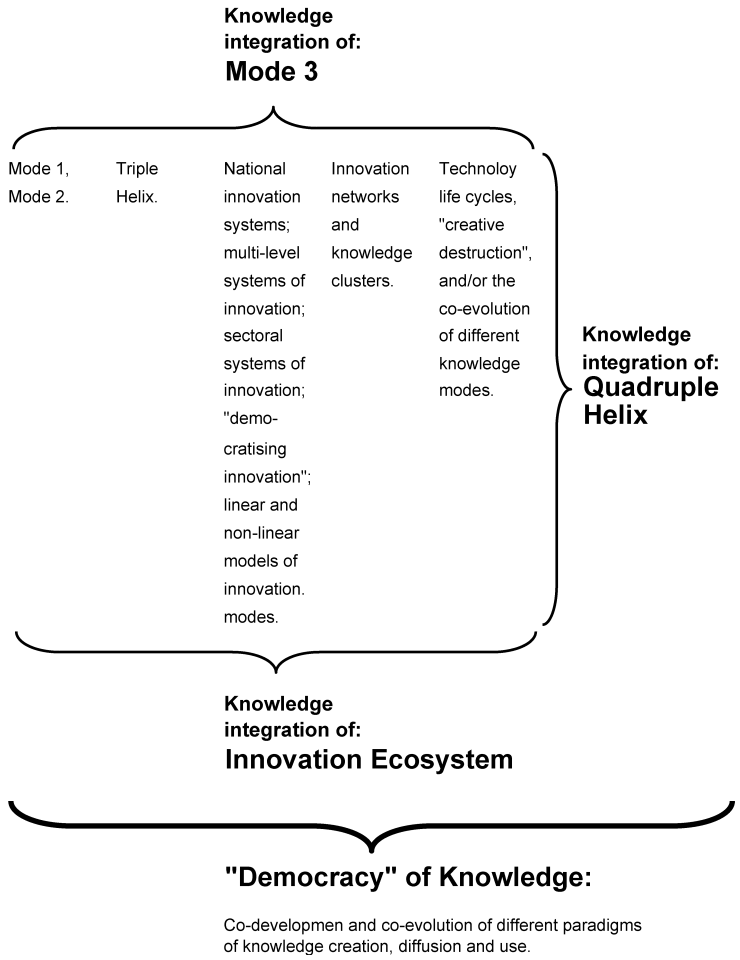
Figure 2 The conceptualisation of the 'Quadruple Helix'



Source: Authors' own conceptualisation based on Etzkowitz and Leydesdorff (2000, p.112)

Figure 3 displays visually from which conceptual perspectives the co-evolution and cross-integration of different knowledge modes could be approached. 'Mode 3' emphasises the additionality and surplus effect of a co-evolution of a pluralism of knowledge and innovation modes. 'Quadruple Helix' refers to structures and processes of the glo*C*al knowledge economy and society. Furthermore, the 'Innovation Ecosystem' stresses the importance of a pluralism of a diversity of agents, actors and organisations: universities, small and medium-sized enterprises and major corporations, arranged along the matrix of fluid and heterogeneous innovation networks and knowledge clusters. This all may result in a 'democracy of knowledge', driven by a pluralism of knowledge and innovation and by a pluralism of paradigms for knowledge modes.

Figure 3 Knowledge creation, diffusion and use in a glocal knowledge economy and society

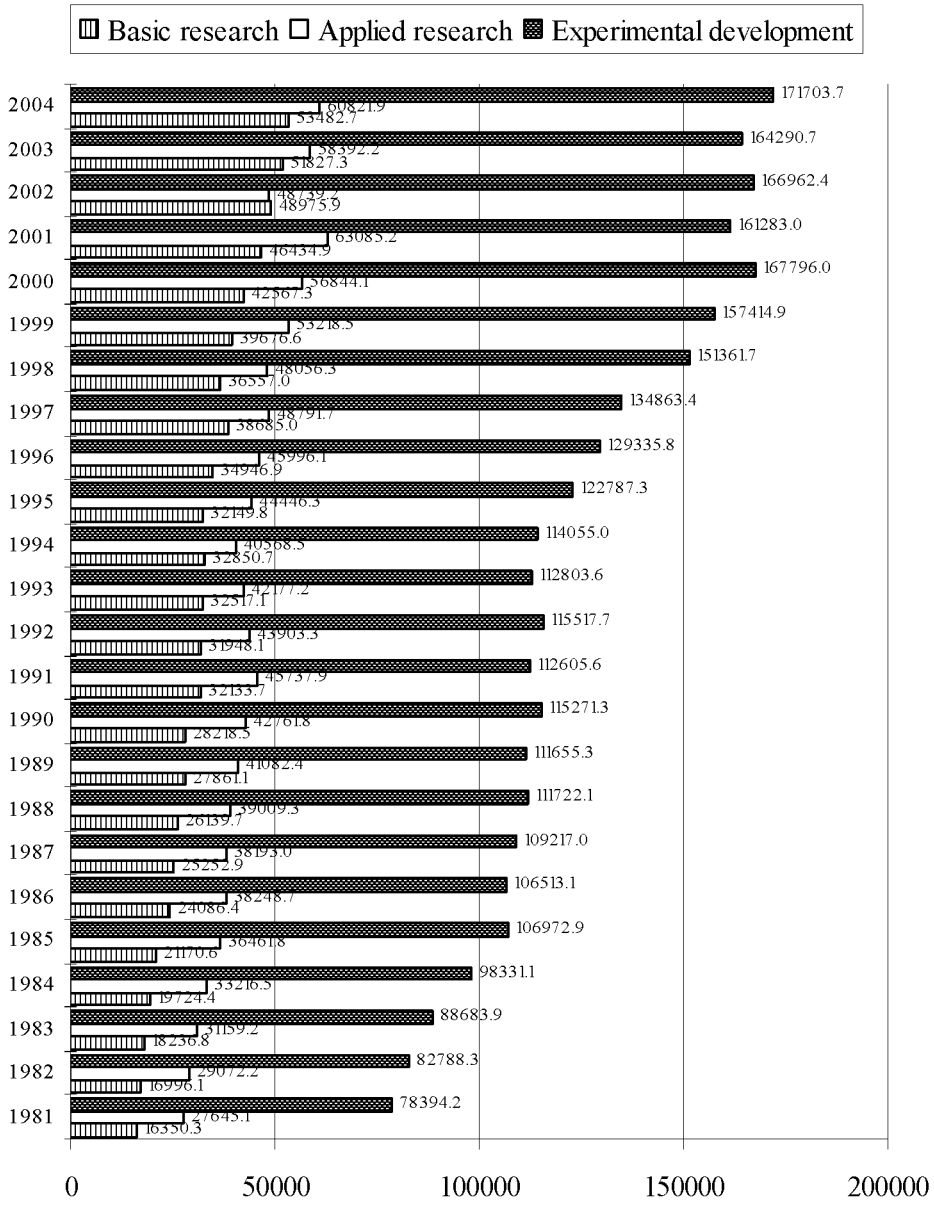


Source: Authors' own conceptualisation

In the 'Frascati Manual', the OECD (1994, p.29) distinguishes between the following activity categories of research (R&D, research and experimental development): basic research; applied research; and experimental development. Basic research represents a primary competence of university research, whereas business R&D focuses heavily on experimental development. Assessed empirically for the USA, one of the globally leading national innovation systems, with regard to the financial volume of R&D resources the experimental development ranks first, applied research second and basic research third (see Figure 4; OECD, 2006).[12] Interesting, however, is the dynamic momentum, when observed for a longer period of time. Basic research, in the USA, grew faster than applied research. In 1981, 13.4% of the US R&D was devoted to basic research. By 2004, basic research increased its percentage share to 18.7%. During the same time period the percentage shares of applied research and experimental development declined (Figure 5). This links up to the question, whether we should expect an R&D 'U-curving' for the US innovation system, implying that basic research further will increase its percentage shares of the overall R&D expenditure. This would go hand-in-hand with an importance

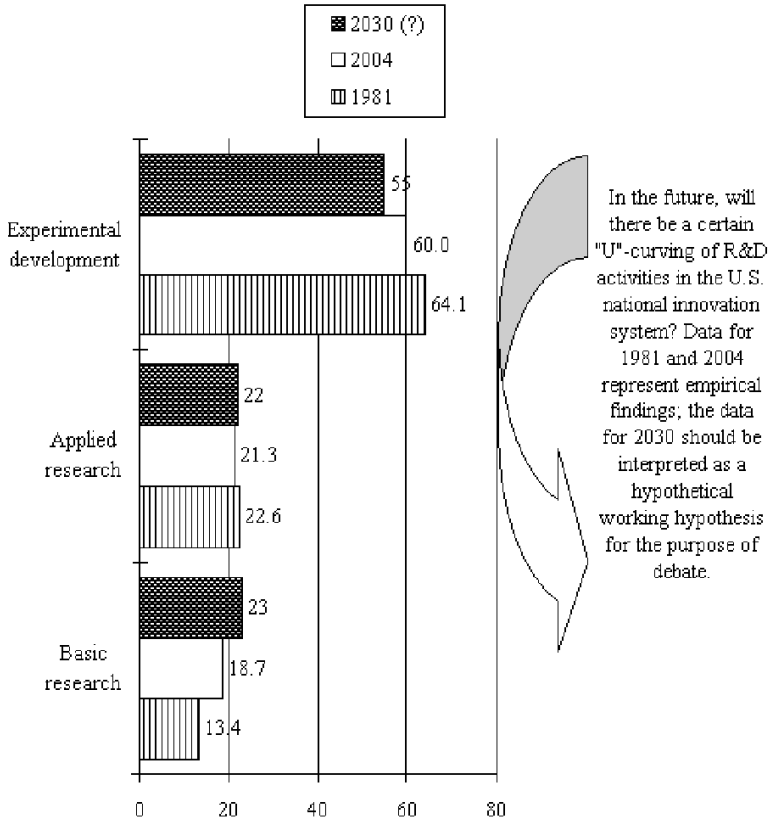
gain of basic research. Furthermore, would such a potential future scenario for the USA also spill over to other national innovation systems?

Figure 4 National R&D performance of the USA according to the 'R&D activities' of basic research, applied research and experimental development (million constant $ 2000 prices and PPPs, 1981–2004)



Source: 'Research and Development Statistics' (OECD, 2006; online data base)

Figure 5 National R&D performance of the USA according to the 'R&D activities' of basic research, applied research and experimental development (Percentage of annual R&D activities; 1981, 2004, and a possible projection for 2030)

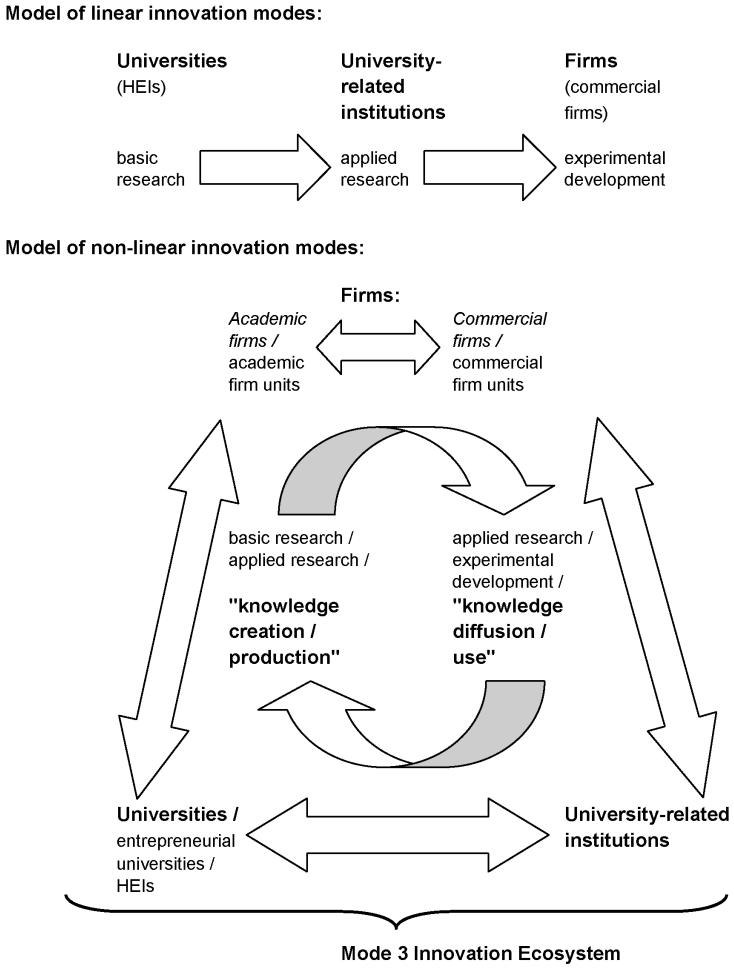


Source: Authors' own conceptualisation; hypothetic projection, based on "Research and Development Statistics" (OECD, 2006; online data base)

In a simple understanding, the "linear model of innovation" claims: first, there is basic university research. Later this basic research converts into applied research of intermediary organisations (university-related institutions).[13] Finally, firms pick up, and transform applied research to experimental development, which is then being introduced as commercial market applications. This linear understanding often is referred to Bush (1945), even though Bush himself, in his famous report, neither mentions the term "linear model of innovation" nor even the word 'innovation'. "Non-linear models of innovation", on the contrary, underscore a more parallel coupling of basic research, applied research and experimental development. Thus universities or Higher Education Institutions (HEIs) in general, university-related institutions and firms join together in variable networks and platforms for creating innovation networks and knowledge clusters. Even though there continues to be a division of labour and a functional specialisation of organisations with regard to the type of R&D activity, universities, university-related institutions and firms can perform, at the same time, basic and applied research and experimental development. Surveys about sectoral innovation

in the pharmaceutical sector (McKelvey et al., 2004) and the chemical sector (Cesaroni et al., 2004) reveal how each of these industries may be characterised by complex network configurations and arrangements of a diversity of academic and firm actors. The Mode 3 Innovations Ecosystem thus represents a model for a simultaneous coupling of "non-linear innovation modes" (see Figure 6).

Figure 6 Linear and non-linear innovation modes linking together universities with commercial and academic firms (firm units)



Source: Authors' own conceptualisation

The concept of the 'entrepreneurial university' captures the need of linking more closely together university research with the R&D market activities of firms (see, for example, Etzkowitz, 2003). As important, as the entrepreneurial university, is for us the concept of the 'academic firm',[14] which represents the complementary business organisation and strategy *vis-à-vis* the entrepreneurial university. The interplay of academic firms and entrepreneurial universities should be regarded as crucial for advanced knowledge-based economies and societies. The following characteristics represent the academic firm

(Campbell and Güttel, 2005, p.171): "support of the interfaces between the economy and the universities"; "support of the paralleling of basic research, applied research and experimental development"; "incentives for employees to codify knowledge"; "support of collaborative research and of research networks"; and "a limited 'scientification' of business R&D". Despite continuing important functional differences between universities and firms, also some limited hybrid overlapping may occur between entrepreneurial universities and academic firms, expressed in the circumstance that entrepreneurial universities and academic firms can engage more easily in university/business research networks. In an innovation-driven economy the business R&D is being supported and excelled when it can refer to inputs from networking of universities and firms. The academic firm also engages in "basic business research". Of course, we always must keep in mind that academic firms and universities are not identical, because academic firms represent commercial units, interested in creating commercial revenues and profits. Alternatively, the academic firm could be seen in two ways:

- as a concept for the whole firm
- or as a concept only for a subdivision, subunit or branch of the firm.

In many contexts, this second option appears to be more realistic, particularly when we analyse multinational companies or corporations (MNCs) that operate in global context. *For the future, this may have the following implication: How can or should firms balance, within their 'organisational boundary', the principle of the academic and of the traditional 'commercial' firm?*

The 'technology life cycles' explain why there is always a dynamic momentum in the gloCal knowledge economy and society (Tassey, 2001). The 'saturation tendency' within every technology life cycle demands the creation and launch of new technology life cycles, leading to the market introduction of next generation technology-based products and services. In reality, always different technology life cycles with a varying degree of market maturity will operate in parallel. To a certain extent, technology life cycles are also responsible for the cyclicality (growth phases) of a modern market economy. The perhaps shortest possible way of describing the economic thinking of Joseph A. Schumpeter is to put up the following equation: entrepreneurship, leveraging the opportunities of new technology life cycles, creates economic growth. Addressing the cyclicality of capitalist economic life, Schumpeter (1942) used the notion of the 'Creative Destruction'. 'Mode 3' may open up a route for overcoming or transforming the destructiveness of the 'creative destruction' (Carayannis et al., 2007).

2 The conceptual understanding of knowledge and innovation

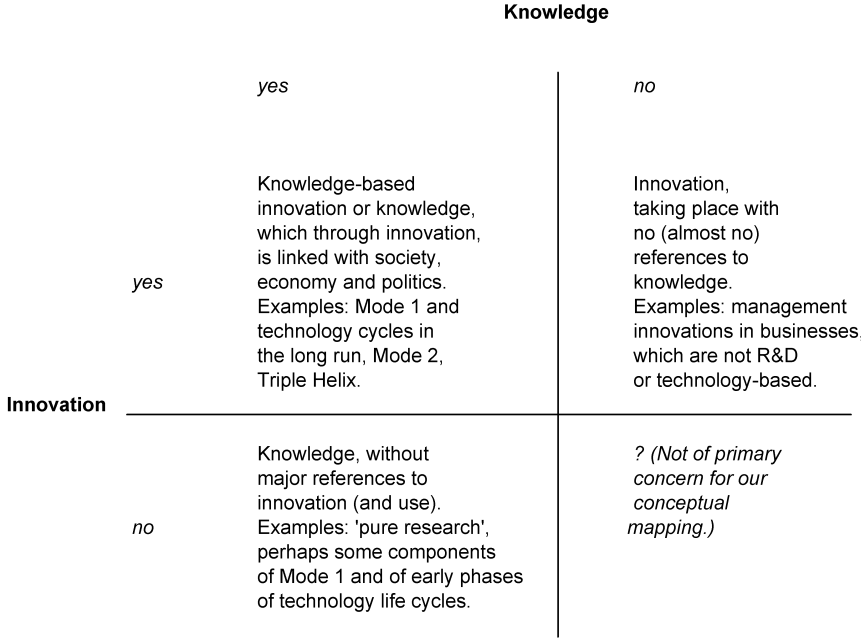
Knowledge does matter: but the question is when, how, and why? Moreover, with the advancement of economies and societies, *knowledge matters even more* and in ways that are not always predictable or even controllable (for example see the concepts of *strategic knowledge serendipity* and *strategic knowledge arbitrage* in Carayannis et al. (2003)). The successful performance of the developed *and* the developing economies, societies and democracies increasingly depends on knowledge. One branch of knowledge develops along Research and experimental Development (R&D), Science and Technology (S&T) and innovation.[15]

2.1 The relationship between knowledge and innovation

What is the relationship between knowledge and innovation? From our viewpoint it makes sense, not to treat knowledge and innovation as interchangeable concepts. Ramifications of this are (see Figure 7):

- There are aspects, areas of knowledge, which can be analysed, without considering innovation (for example: 'pure basic research' in a linear understanding of innovation).
- Consequently, also there are areas or aspects of innovation, which are not (necessarily) tied to knowledge. For example, see different contributions to Shavinina (2003).
- However, there are also areas, where knowledge and innovation co-exist. These we would like to call *knowledge-based innovation*, where knowledge and innovation express a mutual interaction.

Figure 7 A four-fold typology about possible cross-references and interactions between 'knowledge' and 'innovation'



Source: Authors' own conceptualisation

In the case of knowledge-referring innovation, we then can speak of innovation that deals with knowledge. Our impression is that in many contexts, when the focus falls on innovation, almost automatically this type of 'knowledge-referring' or 'knowledge-based' innovation is implied. Even though we will focus on this knowledge-based innovation, it still is important to acknowledge also possibilities of a knowledge without innovation, *and* of innovation, independently of knowledge. To further illustrate our point, the notion of the 'national innovation system' or

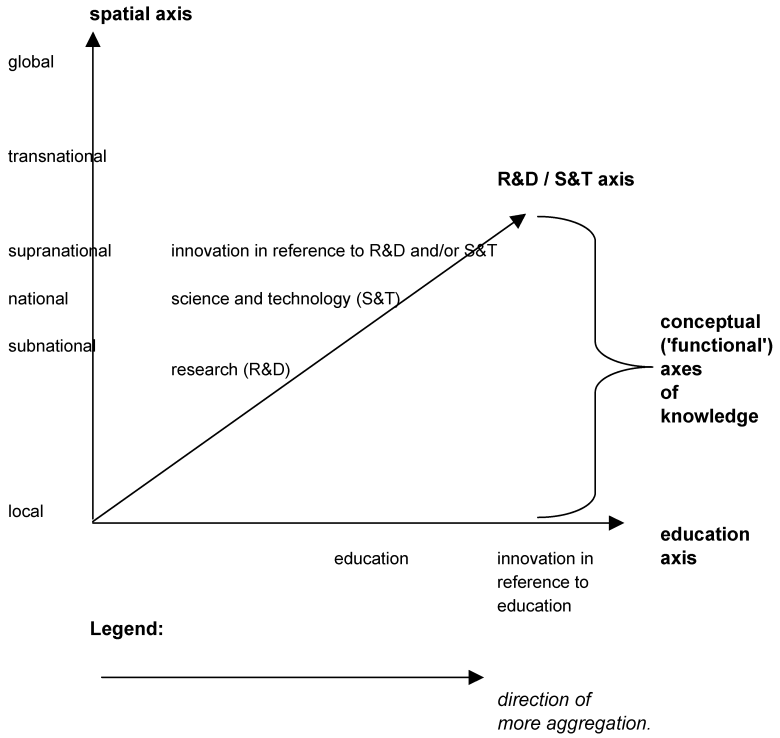
'national system of innovation' (NSI) conventionally expresses linkages to knowledge (see Lundvall, 1992; Nelson, 1993).

2.2 The 'Mode 3' systemic multi-level approach to knowledge and innovation

In research about the European Union (EU), references to a 'multi-level architecture' are quite common (see, for example, Hooghe and Marks, 2001). Originating from this research about the EU, this 'multi-level' approach is being applied in a diversity of fields, since it supports the understanding of complex processes in a globalising world. Inspired by this, we suggest using the concept of *multi-level systems of knowledge* (see Figure 8; see, furthermore, Carayannis and Campbell, 2006a). One obvious axis, therefore, is the spatial (geographic, spatial-political) axis that expresses different levels of spatial aggregations. The national level, coinciding with the nation state (the currently dominant manifestation of arranging and organising political and societal affairs), represents one type of spatial aggregation. Sub-national aggregations fall below the nation state level, and point toward local political entities. Trans-national aggregations, for example, can refer to the supranational integration process of the EU. This raises the interesting question, whether we should be prepared to expect that in the 21st century we will witness a proliferation of supranational (trans-national) integration processes also in other world regions, possibly implying a new stage in the evolution of politics, where (small and medium-sized) nation state structures become absorbed by supranational (trans-national) clusters (Campbell, 1994). The highest level of trans-national aggregation, we currently know, is globalisation. Interestingly, the aggregation level of the term 'region(s)' has never been convincingly standardised. In the context and political language of the EU, regions are understood sub-nationally. American scholars, on the other hand, often refer to regions in a state-transcending understanding (i.e., a region consists of more than one nation state). The new term glo*C*al (global/local; Carayannis and von Zedtwitz, 2005) underscores the potentials and benefits of a mutual and parallel interconnectedness between different levels.

Despite the importance of this spatial axis, we wish not to exhaust the concept of multi-level systems of knowledge with spatial-geographic metaphors. We suggest adding on non-spatial axes of aggregation. These we may call conceptual (functional) axes of knowledge. In that context, two axes certainly are pivotal: education and research (R&D, research and experimental development). For research, the level of aggregation can develop accordingly: R&D; S&T;[16] and R&D-referring innovation, involving a whole broad spectrum of considerations and aspects. Obviously, every 'axis direction' of further aggregation – as demonstrated here for R&D – depends on a specific conceptual understanding. Should, for example, a different conceptual approach for defining S&T be favoured, then the sequence of aggregation might change. (Concerning the education axis, for the moment, we want to leave it to the judgment of other scholars, what here meaningful terms at different levels of aggregation may be.) In Figure 8 we present a three-dimensional visualisation of a multi-level system of knowledge, combining one spatial with two non-spatial (conceptual) axes of knowledge (R&D and education).

Figure 8 A 'three-dimensional' modelling of knowledge in a multi-level system understanding: axis of spatial aggregation, axis of R&D aggregation, axis of education aggregation



Source: Authors' own conceptualisation

How many non-spatial (conceptual) axes of knowledge can there be? We focused on the R&D and education axes. By this, however, we do not want to imply that there may not be more than two conceptual axes. Here, at least in principle, a multitude or diversity of conceptual model-building approaches is possible and also appropriate. Perhaps, we even could integrate 'innovation' as an additional conceptual axis, following the aggregation line from local, to national and trans-national innovation systems. We then would have to contemplate what the relationship is between such an 'extra innovation axis' with the 'innovation' of the research and education axes. 'Regional' innovation could cross-reference local and trans-national innovation systems, implying even glo*C*al innovation systems and processes that simultaneously link through different aggregation levels.

We already discussed the conceptual boundary problems between knowledge and innovation. One approach, how to balance ambiguities in this context, is to acknowledge that a partial conceptual overlap exists between a *knowledge-centered* and *innovation-centered* understanding. Depending on the focus of the preferred analytical view, the same 'element(s)' can be conceptualised as being part of a knowledge or of an innovation system. Concerning knowledge, we pointed to some of the characteristics of multi-level systems of knowledge, underscoring the understanding of aggregation of spatial and non-spatial (conceptual) axes. Introducing multi-level systems of knowledge also justifies speaking of multi-level systems of innovation, developing the

original concept of the national innovation system (Lundvall, 1992; Nelson, 1993) further. For example, the spatial axis of aggregation of knowledge (Figure 8) also applies to innovation. Of course, also Lundvall (1992, pp.1, 3) explicitly stresses that national innovation systems are permanently challenged (and extended) by regional as well as global innovation systems. But, paraphrasing Kuhlmann (2001, pp.960–961), as long as nation state-based political systems exist, it makes sense to acknowledge national innovation systems. In a spatial (or geographic) understanding, the term multi-level systems of innovation already is being used (Kaiser and Prange, 2004, pp.395, 405–406; Kuhlmann, 2001, pp.970–971, 973). However, only more recently has it been suggested to extend this multi-level aggregation approach of innovation also to the non-spatial axes of innovation (Campbell, 2006a; Carayannis and Campbell, 2006a). Therefore, multi-level systems of knowledge as well as multi-level systems of innovation are based on spatial and non-spatial axes. A further advantage of this multi-level systems architecture is that it results in a more accurate and closer-to-reality description of processes of globalisation and glo*C*alisation. For example, internationalisation of R&D cross-cuts these different multi-level layers, links together organisational units of business, academic and political actors at national, trans-national and sub-national levels (von Zedtwitz and Heimann, 2006). One interpretation of R&D internationalisation emphasises how different sub-national regions and clusters cooperate on a global scale, creating even larger trans-national knowledge clusters.

The concept of the "Sectoral Systems of Innovation" (SSI) cross-cuts the logic of the multi-level systems of innovation or knowledge. A sector often is being understood in terms of the industrial sectors. Sectors can perform locally/regionally, nationally and trans-nationally. Reviews of SSIs often place a particular consideration on: knowledge and technologies; actors and networks; furthermore institutions. Malerba recommends that analyses of SSI should include

> "the factors affecting innovation, the relationship between innovation and industry dynamics, the changing boundaries and the transformation of sectors, and the determinants of the innovation performance of firms and countries in different sectors." (Malerba, 2004, p.i)

2.3 Linear vs. (and/or) non-linear innovation models (modes)

Is the *linear model of innovation* still valid? In an ideal typical understanding the linear model states: first there is basic research, carried out in a university context. Later on, this basic research is converted into applied research, and moves from the university to the university-related sectors. Finally, applied research is translated into experimental development, carried out by business (the economy). What results is a *first-then relationship,* with the universities and/or basic research being responsible for generating the new waves of knowledge creation, which are, later on, taken over by business, and where business carries the final responsibility for the commercialisation and marketing of R&D. National (multi-level) innovation systems, operating primarily on the premises of this linear innovation model, obviously would be disadvantaged: the time horizons for a whole R&D cycle, to reach the markets, could be quite extensive (with negative consequences for an economy, operating in the context of rapidly intensifying global competition). Furthermore, the linear innovation model exhibits serious weaknesses in communicating user preferences from the market end back to the production of basic research. In addition, how should the tacit knowledge of the users and markets be

re-connected back to basic research? In the past, after 1945, the USA was regarded as a prototype for the linear innovation model system, with a strong university base, from where basic research gradually would diffuse to the sectors of a strong private economy, without the intervention of major public innovation policy programs (see Bush, 1945, Chapter "The Importance of Basic Research"). As long as the USA represented the world-leading national economy, this understanding was sufficient. But with the intensification of global competition, also the demand for shortening the time horizons from basic research to the market implementation of R&D increased (OECD, 1998, pp.179–181, 185–186). In the 1980s, Japan in particular heavily pressured the USA. In the 2000s, global competition within the triad of the USA, Japan and the EU escalated, with China and India emerging as new competitors in the global context. In a nutshell, further-going economic competition and intrinsic knowledge demands challenged the linear innovation model.

As a consequence, we can observe a significant proliferation of *non-linear innovation models*. There are several approaches to non-linear innovation models. The 'chain-linked model', developed by Kline and Rosenberg (1986) (cited according to Miyata (2003, p.716) see furthermore Carayannis and Alexander, 2006)), emphasises the importance of feedback between the different R&D stages. Particularly, the coupling of marketing, sales and distribution with research claims to be important. 'Mode 2' (Gibbons et al., 1994, pp.3–8, 167) underscores the linkage of production and use of knowledge, by referring to the following five principles: "knowledge produced in the context of application"; 'transdisciplinarity'; "heterogeneity and organisational diversity"; "social accountability and reflexivity"; and 'quality control' (furthermore, see Nowotny et al., 2001, 2003; Umpleby, 2002).[17] Metaphorically speaking, the *first-then* sequence of relationships of different stages within the linear model, is replaced by a *paralleling* of different R&D activities (Campbell, 2000, pp.139–141). Paralleling means:

- linking together in real time different stages of R&D, for example basic research and experimental development
- linking different sectors, such as universities and firms.

The 'Triple Helix' model of Etzkowitz and Leydesdorff (2000, pp.109, 111) stresses the interaction between academia, state and industry, focusing consequently on "university-industry-government relations" and "tri-lateral networks and hybrid organisations". Carayannis and Laget (2004, p.17, 19) emphasise the importance of cross-national and cross-sectoral research collaboration, by testing these propositions for transatlantic public-private R&D partnerships. Anbari and Umpleby (2006, pp.27–29) claim that one rationale, for establishing research networks, lies in the interest of bringing together knowledge producers, but also practitioners, with 'complementary skills'. Etzkowitz (2003) speaks also of the 'entrepreneurial university'. An effective coupling of university research and business R&D demands, furthermore, the complementary establishment of the entrepreneurial university and the 'academic firm' (Campbell and Güttel, 2005, pp.170–172). Extended ramifications of these discourses also refer to the challenge of designing proper governance regimes for the funding and evaluation of university research (Geuna and Martin, 2003; see, furthermore, Shapira and Kuhlmann, 2003; Campbell, 1999, 2003). Furthermore, this imposes consequences on structures and performance of universities (Pfeffer, 2006). Interesting is also the concept of 'democratising innovation'. With this concept, Eric von Hippel proposes a 'user-centric

innovation' model, in which 'lead users' represent 'innovating users', who again contribute crucially to the performance of innovation systems. 'Lead users' can be individuals or firms. Users often innovate, because they cannot find on the market, what they want or need (von Hippel, 2005; also, von Hippel, 1995). Non-proprietor knowledge, such as the "open source" movement in the software industry (Steinmueller, 2004, p.240), may be seen as successful examples for glo*C*ally self-organising 'user communities'.

Put in summary, one could set up the following hypothesis for discussion: while Mode 1 and perhaps also the concept of 'Technology Life Cycles' (Cardullo, 1999)[18] appear to be closer associated with the linear innovation model, the Mode 2 and Triple Helix knowledge modes have more in common with a non-linear understanding of knowledge and innovation. At the same time we should add that national (multi-level) innovation systems are challenged by the circumstance that several technology life cycles, at different stages of market maturity (closeness to commercial market introduction), perform in parallel. This parallel *as well as* sequentially time-lagged unfolding of technology life cycles also expresses characteristics of Mode 2 and of non-linear innovation, because organisations (firms and universities) often must develop strategies of simultaneously cross-linking different technology life cycles. Universities and firms (commercial and academic firms) must balance the non-triviality of a fluid pluralism of technology life cycles.

2.4 Extending the 'Triple Helix' to a 'Quadruple Helix' model of knowledge and innovation

In their own words, Etzkowitz and Leydesdorff say that the

> "Triple Helix overlay provides a model at the level of social structure for the explanation of Mode 2 as an historically emerging structure for the production of scientific knowledge, and its relation to Mode 1." (Etzkowitz and Leydesdorff, 2000, p.118)

Triple Helix is very powerful in describing and explaining the helices dynamics of "university-industry-government relations" that drives knowledge and innovation in the glo*C*al knowledge economy and society. We suggest that advanced knowledge-based economy and advanced democracy have increasingly similar features, in the sense of combining and integrating different knowledge modes and different political modes.[19] Modern political science claims that democracy and politics develop along the premises of a 'media-based democracy'. Plasser (2004, pp.22, 23) offers the following description for media-based democracy: media reality overlaps with political and social reality; perception of politics primarily through the media; and the laws of the media system determining political actions and strategies. Politics may convert from a 'parliamentary representative' to a 'media presenting' democracy, where 'decision' politics moves to a 'presentation' politics. Ramifications of the 'multi-media information society' clearly impact 'political communication' (see also Plasser and Plasser, 2002).

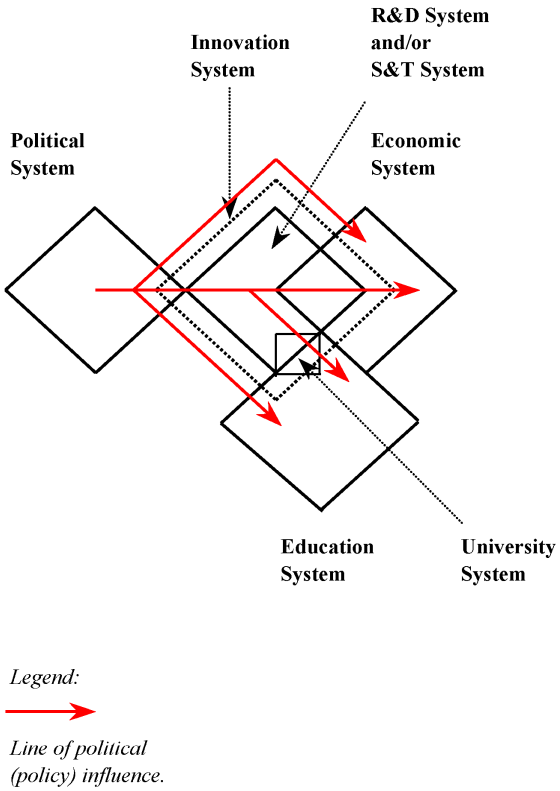
The 'fourth helix' of the Quadruple Helix refers to this "media-based and culture-based public" (see again Figure 7). Knowledge and innovation policies and strategies must acknowledge the important role of the 'public' for a successful achieving of goals and objectives. On the one hand, public reality is being constructed and communicated by the media and media system. On the other hand, the public is also

influenced by culture and values. Knowledge and innovation policy should be inclined to reflect the dynamics of 'media-based democracy', for drafting policy strategies. Particularly when we assume that traditional economic policy gradually (partially) converts into innovation policy, leveraging knowledge for economic performance and thus linking the political system with the economy, then innovation policy should communicate its objectives and rationales, via the media, to the public, to seek legitimation and justification (see Figure 9; furthermore, see Carayannis and Campbell, 2006a, p.18; 2006b, p.335). Also the PR (public relation) strategies of companies, engaged in R&D, must reflect on the fact of a 'reality construction' by the media. Culture and values also express a key role. Cultural artefacts, such as movies, can create an impact on the opinion of the public and their willingness, to support public R&D investment. Some of the technical and engineering curricula at universities are not gender-symmetric, because a majority of the students are male. Trying to make women more interested in enrolling in technical and engineering studies would imply also changing the 'social images' of technology in society. The sustainable backing and reinforcing of knowledge and innovation in the glo*C*al knowledge economy and society requires a substantive supporting of the development and evolution of 'innovation cultures' (Kuhlmann, 2001, p.954). *Therefore, the successful engineering of knowledge and innovation policies and/or strategies leverages the self-logic of the media system and leverages or alters culture and values*. Etzkowitz and Leydesdorff, in their stated quote, emphasise their intention that the Triple Helix model should help displaying patterns of 'social structure'. This in fact provides a rationale why a fourth helix of "media-based and culture-based public" could serve as a useful analytical tool, providing additional insights.

2.5 Co-existence and co-evolution of different knowledge and innovation paradigms

Discussing the evolution of scientific theories, Kuhn (1962) introduced the concept of *paradigms*. Paradigms can be understood as basic fundamentals, upon which a theory rests. In that sense paradigms are axiomatic premises, which guide a theory, however, cannot be explained by the theory itself: but, paradigms add to the explanatory power of theories that are interested in explaining the (outside) world. Paradigms represent something like beliefs. According to Kuhn, there operates an evolution of scientific theories, following a specific pattern: there are periods of 'normal science', interrupted by intervals of 'revolutionary science', again converting over into 'normal science', again challenged by 'revolutionary science', and so on (Carayannis, 1993, 1994, 2000, 2001; see also Umpleby, 2005, pp.287, 288). According to Kuhn, every scientific theory, with its associated paradigm(s), has only a limited capacity for explaining the world. Confronted with phenomena, which cannot be explained, a gradual modification of the same theory might be sufficient. However, at one point a revolutionary transformation is necessary, demanding that a whole set of theories/paradigms will be replaced by new theories/paradigms. For a while, the new theories/paradigms are adequately advanced. However, in the long run, these cycles of periods of normal science and intervals of revolutionary science represent the dominant pattern.

Figure 9 Different societal systems: lines of political (policy) influence (see online version for colours)



Source: Carayannis and Campbell (2006a, p.18, Figures 1–7)

Kuhn emphasises this shift of one set of theories and paradigms to a new set, meaning that new theories and paradigms represent not so much an evolutionary off-spring, but actually replace the earlier theories and paradigms. While this certainly often is true, particularly in the natural sciences, we want to stress that there also can be a *co-existence and co-evolution of paradigms* (and theories), implying that paradigms and theories can mutually learn from each other. Particularly in the social sciences this notion of co-existence and co-evolution of paradigms might be sometimes more appropriate than the replacement of paradigms. For the social sciences, and politics in more general, we can point toward the pattern of a permanent mutual contest between ideas. Umpleby (1997, p.635), for instance, emphasises the following aspect of the social sciences very accurately: "Theories of social systems, when acted upon, change social systems". Not only (social) scientific theories refer to paradigms, also other social contexts or factors can be understood as being based on paradigms: we can speak of ideological paradigms, or of policy paradigms (Hall, 1993). Another example would be the long-term competition and fluctuation between the welfare-state and the free-market paradigms (with regard to the metrics of left-right placement of political parties in Europe, see Volkens and Klingemann, 2002, p.158).

These different modes of innovation and knowledge creation, diffusion and use, which we discussed earlier, certainly qualify to be understood also as linking them to

knowledge paradigms. Because knowledge and innovation systems clearly relate to the context of a (multi-level) society, the (epistemic) knowledge paradigms can be regarded as belonging to the "family of social sciences". Interestingly, Mode 2 addresses "social accountability and reflexivity" as one of its key characteristics (Gibbons et al., 1994, pp.7, 167, 168). In addition to the possibility that a specific knowledge paradigm is replaced by a new knowledge paradigm, the relationship between different knowledge and innovation modes may often be described as an ongoing and continuous interaction of a dynamic co-existence and (over time) a co-evolution of different knowledge paradigms. This reinforces the understanding that, in the advanced knowledge-based societies and economies, linear and non-linear innovation models can operate in parallel.

2.6 The 'co-opetitive' networking of knowledge creation, diffusion and use

Knowledge systems are highly complex, dynamic and adaptive. To begin with, there exists a conceptual (hybrid) overlapping between multi-level knowledge and multi-level innovation systems. Multi-level systems process simultaneously at the global, trans-national, national, and sub-national levels, creating glo*C*al (global and local) challenges. Advanced knowledge systems should demonstrate the flexibility of integrating different knowledge modes; on the one hand, combining linear and non-linear innovation modes; on the other hand, conceptually integrating the modes of Mode 1, Mode 2 and Triple Helix (for an overview of Mode 1, Mode 2, Triple Helix, and Technology Life Cycles, see Campbell, 2006a, pp.71–75). This displays the practical usefulness of an understanding of a co-existence and co-evolution of different knowledge paradigms, and what the qualities of an 'innovation ecosystem' could or even should be. The elastic integration of different modes of knowledge creation, diffusion and use should generate synergistic surplus effects of additionality. Hence for advanced knowledge systems, networks and networking are important (Carayannis and Alexander, 1999b; Carayannis and Campbell, 2006b, pp.334–339; for a general discussion of networks and complexity, see also Rycroft and Kash (1999)).

How do networks relate to *cooperation and competition?* 'Co-opetition', as a concept (Brandenburger and Nalebuff, 1997), underscores that there can always exist a complex balance of cooperation and/or competition. Market concepts emphasise a competitive dynamics process between

- forces of supply and demand, and the need of integrating
- market-based as well as resource-based views of business activity.

To be exact, networks do not replace market dynamics, thus they do not represent an alternative to the market-economy-principle of competition. Instead, networks apply a 'co-opetitive' rationale, meaning: internally, networks are based primarily on cooperation, but may also allow a 'within' competition. The relationship between different networks can be guided by a motivation for cooperation. However, in practical terms, *competition in knowledge and innovation often will be carried out between different and flexibly configured networks*. *While a network cooperates internally, it may compete externally.* In short, 'co-opetition' should be regarded as a driver for networks, implying that the specific content of cooperation and competition is always decided in a case-specific context.

3 Conclusion

> "*Until philosophers are kings, or the kings and princes of this world have the spirit and power of philosophy*, … cities will never have rest from their evils – no, nor the human race as I believe … "[emphasis added]
>
> [Plato, The Republic, Vol. 5, p.492]
>
> "The empires of the future are the empires of the mind"
>
> Winston Churchill, 1945

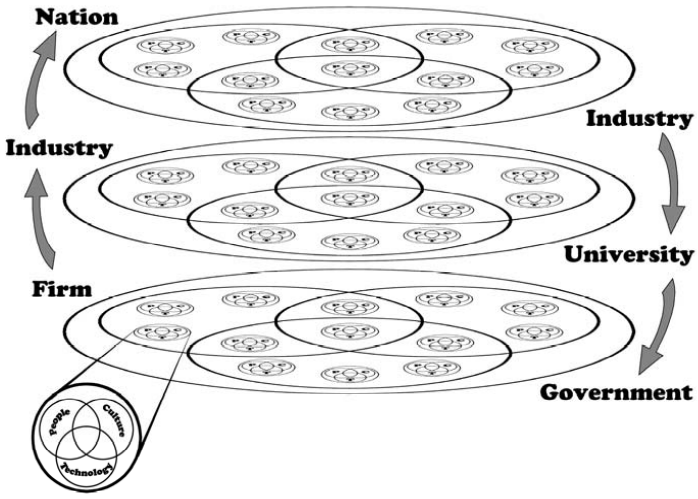
The 'Mode 3' systems approach for knowledge creation, diffusion and use emphasises the following key elements (Carayannis and Campbell, 2006c):

- *GloCal multi-level knowledge and innovation systems*. Because of its comprehensive flexibility and explanatory power, systems theory is regarded as suitable for framing knowledge and innovation in the context of multi-level knowledge and innovation systems (Carayannis and von Zedtwitz, 2005; Carayannis and Campbell, 2006c; Carayannis and Sipp, 2006). GloCal expresses the simultaneous processing of knowledge and innovation at different levels (for example, global, national and sub-national; see, furthermore, Gerybadze and Reger, 1999; von Zedtwitz and Gassmann, 2002), and also refers to stocks and flows of knowledge with local meaning and global reach. Knowledge and innovation systems (and concepts) express a substantial degree of hybrid overlapping, meaning that often the same empirical information or case could be discussed under the premises of knowledge or innovation.
- *Elements/clusters and rationales/networks*. In a theoretical understanding, we pointed to the possibility of linking the 'elements of a system' with clusters and the 'rationale of a system' with networks. Clusters and networks are common and useful terms for the analysis of knowledge.
- *Knowledge clusters, innovation networks and 'co-opetition'*. More specifically, we emphasise the terms of 'knowledge clusters' and 'innovation networks' (Carayannis and Sipp, 2006). Clusters, from an ultimate perspective, by taking demands of a knowledge-based society and economy seriously for a competitive and effective business performance, should be represented as knowledge configurations. Knowledge clusters, therefore, represent a further evolutionary development of geographical (spatial) and sectoral clusters. Innovation networks, internally driving and operating knowledge clusters or cross-cutting and cross-connecting different knowledge clusters, enhance the dynamics of knowledge and innovation systems. Networks always express a pattern of 'co-opetition', reflecting a specific balance of cooperation and competition. Intra-network and inter-network relations are based on a mix of cooperation and competition, i.e., co-opetition (Brandenburger and Nalebuff, 1997). When we speak of competition, it often will be a contest between different network configurations.
- *Knowledge fractals*. 'Knowledge fractals' emphasise the continuum-like bottom-up and top-down progress of complexity. Each subcomponent (sub-element) of a knowledge cluster and innovation network can be displayed as a micro-level sub-configuration of knowledge clusters and innovation networks (see Figure 10).

At the same time, one can also move upward. Every knowledge cluster and innovation network can also be understood as a subcomponent (sub-element) of a larger macro-level knowledge cluster or innovation network in other words, innovation meta-networks and knowledge meta-clusters (see again Figure 10).[20]

- *The adaptive integration and co-evolution of different knowledge and innovation modes, the 'Quadruple Helix'*. 'Mode 3' allows and emphasises the co-existence and co-evolution of different knowledge and innovation paradigms. In fact, a key hypothesis is: *The competitiveness and superiority of a knowledge system is highly determined by its adaptive capacity to combine and integrate different knowledge and innovation modes via co-evolution, co-specialisation and co-opetition knowledge stock and flow dynamics* (for example, Mode 1, Mode 2, Triple Helix, linear and non-linear innovation). The specific context (circumstances, demands, configurations, cases) determines which knowledge and innovation mode (*multi-modal*), at which level (*multi-level*), involving what parties or agents (*multi-lateral*) and with what knowledge nodes or knowledge clusters (*multi-nodal*) will be appropriate. What results is an emerging fractal knowledge and innovation ecosystem ("Mode 3 Innovation Ecosystem"), well-configured for the knowledge economy and society challenges and opportunities of the 21st century by being endowed with mutually complementary and reinforcing as well as dynamically co-evolving, co-specialising and co-opeting, diverse and heterogeneous configurations of knowledge creation, diffusion and use. The intrinsic litmus test of the capacity of such an ecosystem to survive and prosper in the context of continually glo*C*alising and intensifying competition represents the ultimate competitiveness benchmark with regards to the robustness and quality of the ecosystem's knowledge and innovation architecture and topology as it manifests itself in the form of a knowledge value-adding chain. The concept of the 'Quadruple Helix' even broadens our understanding, because it adds the "media-based and culture-based public" to the picture.

Figure 10 The 21st century fractal innovation ecosystem



Source: Derived from authors' unpublished notes and lectures at GWU

The societal embeddedness of knowledge represents a theme that already Mode 2 and Triple Helix explicitly acknowledge. As a last thought for this paper we want to underscore *the potentially beneficial cross-references between democracy and knowledge* for a better understanding of knowledge. In an attempt to define democracy, democracy could be shortcut as an interplay of two principles (Campbell, 2005):

- *Democracy can be seen as a method or procedure,* based on the application of the rule of the majority.[21] This acknowledges the 'relativity of truth' and of 'pluralism' in a society, implying that decisions are carried out, not because they are 'true' (or truer), but because they are backed and legitimised by a majority. Since, over time, these majority preferences normally shift, this creates political swings, driving the government/opposition cycles, which crucially add to the viability of a democratic system.
- *Democracy can also be understood as a substance* (*'substantially'*), where substance, for example, is being understood as an evolutionary manifestation of fundamental rights (O'Donnell, 2004, pp.26, 27, 47, 54, 55).

Obviously, the method/procedure and the substance approach overlap. Without fundamental rights, the majority rule could neutralise or even abolish itself. On the other hand, the practical 'real political' implementation of rights also demands a political method, an institutionally set-up procedure. For the purpose of bridging democracy with knowledge and innovation, we want to highlight the following aspects (see Figure 11 for a suggested first-attempt graphical visualisation; see also Godoe (2007, p.358), Carayannis and Ziemnowicz (2007)):

- *Knowledge-based and innovation-based democracy*. The future of democracy depends on evolving, enhancing and ideally perfecting the concepts of a knowledge-based and innovation-based democratic polity as the manifestation and operationalisation of what one might consider the, paraphrased, "21st century platonic ideal state":

  > "It has been basic United States policy that Government should foster the opening of new frontiers. It opened the seas to clipper ships and furnished land for pioneers. Although these frontiers have more or less disappeared, the frontier of science remains. It is in keeping with the American tradition – one which has made the United States great – that new frontiers shall be made accessible for development by all American citizens." (Bush, 1945, p.10)

  Knowledge, innovation and democracy interrelate. Advances in democracy and advances in knowledge and innovation express mutual dependencies (Campbell and Schaller, 2002).[22] The 'quality of democracy' depends on a knowledge base. We see how the Glocal Knowledge Economy and Society and the quality of democracy intertwine. Concepts, such as 'democratising innovation' (von Hippel, 2005), underscore such aspects. Also the media-based and culture-based public of the 'Quadruple Helix' emphasises the overlapping tendencies of democracy and knowledge (Saward, 2006).[23]

- *Pluralism of knowledge modes*. Democracy's strength lies exactly in its capacity for allowing and balancing different parties, politicians, ideologies, values and policies, and this ability was discussed by Lindblom (1959) as *disjointed incrementalism* (Linblom and Cohen, 1979)[24]: " … as the partisan mutual adjustment process:

Just as entrepreneurs and consumers can conduct their buying and selling without anyone attempting to calculate the overall level of prices or outputs for the economy as a whole, Lindblom argued, so in politics. Under many conditions, in fact, adjustments among competing partisans will yield more sensible policies than are likely to be achieved by centralised decision makers relying on analysis (Lindblom, 1959, 1965). This is partly because interaction economises on precisely the factors on which humans are short, such as time and understanding, while analysis requires their profligate consumption. To put this differently, the lynchpin of Lindblom's thinking was that analysis could be – and should be – no more than an adjunct to interaction in political life" (http://www.rpi.edu/~woodhe/docs/redner.724.htm). Similarly, democracy enables the integrating, co-existence and co-evolution of different knowledge and innovation modes. We can speak of a pluralism of knowledge modes, and can regard this as a competitiveness feature of the whole system. Different knowledge modes can be linked to different knowledge decisions and knowledge policies, reflecting the communication skills of specific knowledge producers and knowledge users to convince other audiences of decision makers.

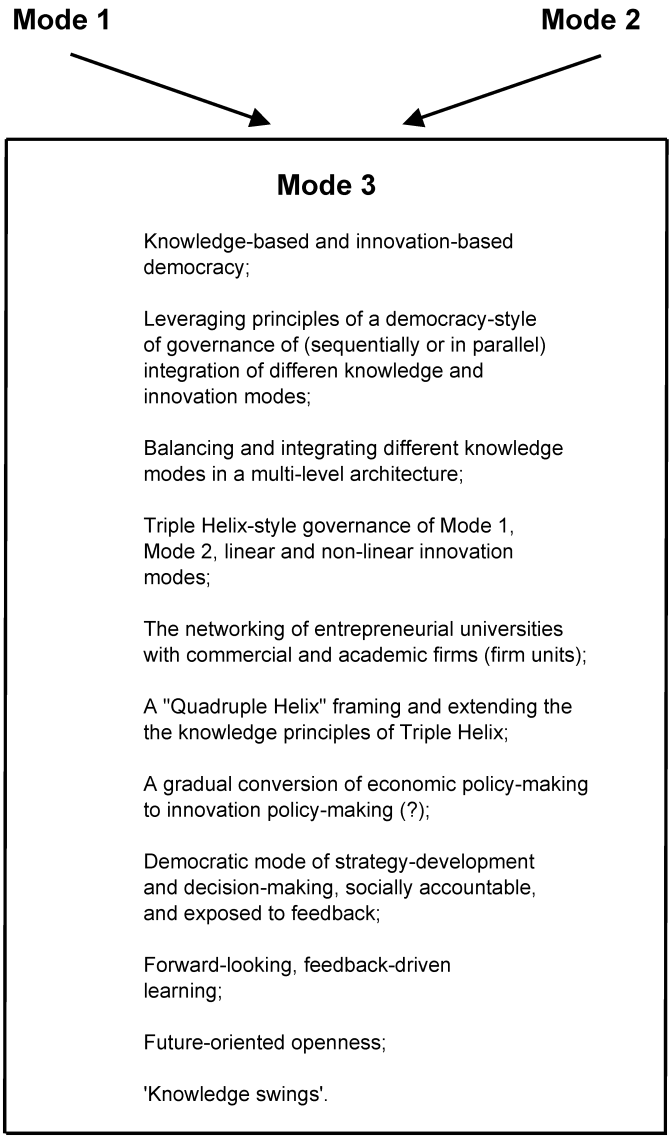
- *'Knowledge swings'*. Through political cycles or political *swings* (Campbell, 1992, 2007) a democracy ties together different features:
  - decides, who currently governs
  - gives the opposition a chance, to come to power in the future
  - and acknowledges pluralism. Democracy represents a system which always creates and is being driven by an important momentum of dynamics.

  For example, the statistical probability for governing parties to lose an up-coming election is higher than to win an election (Müller and Strøm, 2000, p.589). Similarly, one could paraphrase the momentum of political swings by referring to 'knowledge swings': in certain periods and concrete contexts, a specific set of knowledge modes expresses a '*dominant design*'[25] position; however, also the pool of non-hegemonic knowledge modes is necessary, for allowing alternative approaches in the long run, adding crucially to the variability of the whole system. 'Knowledge swings' can have at least two ramifications:
  - What are dominant and non-dominant knowledge modes in a specific context?
  - there is a pluralism of knowledge modes, which exist in parallel, and thus also co-develop and co-evolve.

  Diversity is necessary to draw a cyclically-patterned dominance of knowledge modes.
- *Forward-looking, feedback-driven learning*. Democracy should be regarded as a future-oriented governance system, fostering and relying upon social, economic and technological learning. The "Mode 3 Innovation Ecosystem" is at its foundation an open, adaptive, learning-driven knowledge and innovation ecosystem reflecting the philosophy of *Strategic or Active Incrementalism* (Carayannis, 1993, 1994, 1999, 2000, 2001) and the strategic management of technological learning (Carayannis, 1999; see, furthermore, de Geus, 1988). In addition, one can postulate that the government/opposition cycle in politics represents a feedback-driven

learning and mutual adaptation process. In this context, a democratic system can be perceived of as a pendulum with a shifting pivot point reflecting the evolving, adapting dominant worldviews of the polity as they are being shaped by the mutually interacting and influencing citizens and the dominant designs of the underlying cultures and technological paradigms (Carayannis, 2001, pp.26, 27).

Figure 11 Knowledge, innovation and democracy. Glocal governance styles of the Glocal Knowledge Economy and Society?



Source: Authors' own conceptualisation based on Godoe (2007, p.358)

In conclusion, we have attempted to provide an emerging conceptual framework to serve as the 'intellectual sandbox' and 'creative whiteboard space' of the mind's eyes of

'knowledge weavers' (*Wissensweber*)[26] across disciplines and sectors as they strive to tackle the 21st century challenges and opportunities for socio-economic prosperity and cultural renaissance based on knowledge and innovation:

> "As a result of the glocalised nature and dynamics of state-of-the-art, specialised knowledge … one needs to cope with and leverage two mutually-reinforcing and complementary trends: (a) The symbiosis and co-evolution of top-down national and multi-national science, technology and innovation public policies … and bottom-up technology development and knowledge acquisition private initiatives; and (b) The levelling of the competitive field across regions of the world via technology diffusion and adoption accompanied and complemented by the formation and exacerbation of multi-dimensional, multi-lateral, multi-modal and multi-nodal divides (cultural, technological, socio-economic, …) …In closing, being able to practice these two functions – being able to be a superior manager and policy-maker in the 21st century – relies on a team's, firm's, or society's capacity to be superior learners … in terms of both learning new facts as well as adopting new rules for learning-how-to-learn and establishing superior strategies for learning to learn-how-to-learn. Those superior learners will, by necessity, be both courageous and humble as these virtues lie at the heart of successful learning." (Carayannis and Alexander, 2006)

Already the early Lundvall (1992, pp.1, 9) underscored the importance of learning for every national innovation system.

Mode 3, in combination with the broadened perspective of the Quadruple Helix, emphasises an Innovation Ecosystem that encourages the co-evolution of different knowledge and innovation modes as well as balances non-linear innovation modes in the context of multi-level innovation systems. Hybrid innovation networks and knowledge clusters tie together universities, commercial firms and academic firms. Mode 3 may indicate an evolutionary and learning-based escape route for Schumpeter's 'creative destruction' (Carayannis and Ziemnowicz, 2007). The 'knowledge state' (Campbell, 2006b) has the potential to network 'high-quality' democracy with the gloCal knowledge economy and society.

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Notes

[1]Furthermore, see Milbergs (2005).

[2]See discussion on democracy in the conclusion of this paper.

[3]"*Culture* is the invisible force behind the tangibles and observables in any organisation, a social energy that moves people to act. Culture is to the organisation what personality is to the individual – a hidden, yet unifying theme that provides meaning, direction, and mobilisation." (Killman, 1985).

[4]*Technology* is defined as that "which allows one to engage in a certain activity … with consistent quality of output", the "*art of science and the science of art*" (Carayannis, 2001) or "*the science of crafts*" (von Braun, 1997).

[5]We consider the following quote useful for elucidating the meaning and role of a '*knowledge nugget*' as a building block of the "Mode 3 Innovation Ecosystem": "People, culture, and technology serve as the institutional, market, and socio-economic 'glue' that binds, catalyses, and accelerates interactions and manifestations between creativity and innovation as shown in Figure 3, along with public-private partnerships, international R&D consortia, technical/business/legal standards such as intellectual property rights as well as human nature and the 'creative demon'. The relationship is highly non-linear, complex and dynamic, evolving over time and driven by both external and internal stimuli and factors such as firm strategy, structure, and performance as well as top-down policies and bottom-up initiatives that act as enablers, catalysts, and accelerators for creativity and innovation that leads to competitiveness" (Carayannis and Gonzalez, 2003, p.593).

[6]Carayannis and Zedwitz (2005).

[7]Networking is important for understanding the dynamics of advanced and knowledge-based societies. Networking links together different modes of knowledge production and knowledge use, and also connects (sub-nationally, nationally, trans-nationally) different sectors or systems of society. Systems theory, as presented here, is flexible enough for integrating and reconciling systems and networks, thus creating conceptual synergies.

[8]Carayannis and Alexander (2004).

[9]Carayannis and Alexander (1999a).

[10]Carayannis (2001, pp.169, 170) discusses chaos theory and fractals in connection to technological learning and knowledge and innovation system architectures:

> "Chaos theory is a close relative of catastrophe theory, but has shown more potential in both explaining and predicting unstable non-linearities, thanks to the concept of self-similarity or fractals [*patterns within patterns*] and the chaotic behavior of attractors (Mandelbrot) as well as the significance assigned to the role that initial conditions play as determinants of the future evolution of a non-linear system (Gleick, 1987). There is a strong affinity with strategic incrementalism, viewed as a third-order (triple-layered), feedback-driven system that can exhibit instability in any given state as a result of the operational, tactical, and strategic technological learning … that takes place within the organisation in question."

[11]"A *fractal* is a *geometric* object which is rough or irregular on all scales of length, and so which appears to be 'broken up' in a radical way. Some of the best examples can be divided into parts, each of which is similar to the original object. Fractals are said to possess infinite detail, and some of them have a *self-similar* structure that occurs at different levels of magnification. In many cases, a fractal can be generated by a repeating pattern, in a typically *recursive* or *iterative* process. The term *fractal* was coined in *1975* by *Benoît Mandelbrot*, from the Latin *fractus* or 'broken'. Before Mandelbrot coined his term, the common name for such structures (the *Koch snowflake*, for example) was *monster curve*. Fractals of many kinds were originally studied as *mathematical* objects. *Fractal geometry* is the branch of mathematics which studies the properties and behaviour of fractals. It describes many situations which cannot be explained easily by classical geometry, and has often been applied in *science*, *technology*, and *computer-generated art*. The conceptual roots of fractals can be traced to attempts to measure the size of objects for which traditional definitions based on *Euclidean geometry* or *calculus* fail." (http://en.wikipedia.org/wiki/Fractal).

[12]The data in Figure 4 express the R&D performance of the USA, for the period 1981–2004, in million 2000 dollars in constant prices and PPP (purchasing power parities).

[13]In the German language, 'university-related' would qualify as 'außeruniversitär' (Campbell, 2003, p.99).

[14]The 'academic firm', as a notion and concept, was first developed by Campbell and Güttel (2005).

[15]Another branch of knowledge can be based on education and its diversified manifestations.

[16]In that context also the mutual overlapping between R&D, S&T and Information and Communication Technology (ICT) should be stressed.

[17]Should we add a further comment to the concepts of Mode 1 and Mode 2, it would be interesting to consider, how Mode 1 and Mode 2 relate to the notions of 'Science One' and 'Science Two', which were developed by Umpleby (2002).

[18]Concerning a further-going discussion of the Technology Life Cycles, see: Cardullo (1999), and Tassey (2001).

[19]A political mode could be seen as a particular political approach (clustering political parties, politicians, ideologies, values, and policies) to society, democracy, and the economy. Conservative politics, liberal politics or social democratic politics could be captured by the notion of a 'political mode'.

[20]Perhaps, only when the whole world is being defined as *one global knowledge cluster and innovation network*, then, for the moment, we cannot aggregate and escalate further to a mega-cluster or mega-network.

[21]For example, Schumpeter (1942, Chapters XX–III) emphasised this method-based criterion for democracy.

[22]For attempts, trying to analyse the quality of a democracy, see for example Campbell and Schaller (2002).

[23]On ‘democratic innovation’, see, furthermore, Saward (2006).

[24]The *disjointed incrementalism approach* to decision making (also known as *partisan mutual adjustment*) was developed by Lindblom (1959, 1965) and Linblom and Cohen (1979) and found several fields of application and use:

> “The Incrementalist approach was one response to the challenge of the 1960s. This is the theory of Charles Lindblom, which he described as ‘partisan mutual adjustment’ or disjointed incrementalism. Developed as an alternative to RCP, this theory claims that public policy is actually accomplished through decentralised bargaining in a free market and a democratic political economy.” (http://www3.sympatico.ca/david.macleod/PTHRY.HTM)

[25]“Studies have shown that the early period of a new area of technology is often characterised by technological ferment but that the pace of change slows after the emergence of a dominant design” (http://www.findpapers.com/p/papers/mi_m4035/is_1_45/ai_63018122/print).

[26]The term constitutes the brainchild or conceptual branding of the authors as part of this journey of discovery and ideation.

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Collaborative Governance in Theory and Practice

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ABSTRACT

Over the past few decades, a new form of governance has emerged to replace adversarial and managerial modes of policy making and implementation. Collaborative governance, as it has come to be known, brings public and private stakeholders together in collective forums with public agencies to engage in consensus-oriented decision making. In this article, we conduct a meta-analytical study of the existing literature on collaborative governance with the goal of elaborating a contingency model of collaborative governance. After reviewing 137 cases of collaborative governance across a range of policy sectors, we identify critical variables that will influence whether or not this mode of governance will produce successful collaboration. These variables include the prior history of conflict or cooperation, the incentives for stakeholders to participate, power and resources imbalances, leadership, and institutional design. We also identify a series of factors that are crucial within the collaborative process itself. These factors include face-to-face dialogue, trust building, and the development of commitment and shared understanding. We found that a virtuous cycle of collaboration tends to develop when collaborative forums focus on "small wins" that deepen trust, commitment, and shared understanding. The article concludes with a discussion of the implications of our contingency model for practitioners and for future research on collaborative governance.

Over the last two decades, a new strategy of governing called "collaborative governance" has developed. This mode of governance brings multiple stakeholders together in common forums with public agencies to engage in consensus-oriented decision making. In this article, we conduct a meta-analytical study of the existing literature on collaborative governance with the goal of elaborating a general model of collaborative governance. The ultimate goal is to develop a contingency approach to collaboration that can highlight conditions under which collaborative governance will be more or less effective as an

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approach to policy making and public management.[1] In conducting this meta-analytic study, we adopted a strategy we call "successive approximation": we used a sample of the literature to develop a common language for analyzing collaborative governance and then successively "tested" this language against additional cases, refining and elaborating our model of collaborative governance as we evaluated additional cases.

Although collaborative governance may now have a fashionable management caché, the untidy character of the literature on collaboration reflects the way it has bubbled up from many local experiments, often in reaction to previous governance failures. Collaborative governance has emerged as a response to the failures of downstream implementation and to the high cost and politicization of regulation. It has developed as an alternative to the adversarialism of interest group pluralism and to the accountability failures of managerialism (especially as the authority of experts is challenged). More positively, one might argue that trends toward collaboration also arise from the growth of knowledge and institutional capacity. As knowledge becomes increasingly specialized and distributed and as institutional infrastructures become more complex and interdependent, the demand for collaboration increases. The common metric for all these factors may be, as Gray (1989) has pointed out, the increasing "turbulence" faced by policy makers and managers.

Although Susskind and Cruikshank (1987), Gray (1989), and Fung and Wright (2001, 2003) have suggested more general theoretical accounts of collaborative governance, much of the literature is focused on the *species* rather than the *genus*. The bulk of the collaborative governance literature is composed of single-case case studies focused on sector-specific governance issues like site-based management of schools, community policing, watershed councils, regulatory negotiation, collaborative planning, community health partnerships, and natural resource comanagement (the species).[2] Moreover, a number of the most influential theoretical accounts of this phenomenon are focused on specific types of collaborative governance. Healey (1996, 2003) and Innes and Booher (1999a, 1999b), for example, provide foundational accounts of collaborative planning, as Freeman (1997) does for regulation and administrative law and Wondolleck and Yaffee (2000) do for natural resources management. Our goal is to build on the findings of this rich literature, but also to derive theoretical and empirical claims about the genus of collaborative governance—about the common mode of governing.

DEFINING COLLABORATIVE GOVERNANCE

We define collaborative governance as follows:

> A governing arrangement where one or more public agencies directly engage non-state stakeholders in a collective decision-making process that is formal, consensus-oriented, and deliberative and that aims to make or implement public policy or manage public programs or assets.

This definition stresses six important criteria: (1) the forum is initiated by public agencies or institutions, (2) participants in the forum include nonstate actors, (3) participants engage directly in decision making and are not merely "consulted" by public agencies, (4) the

1 Thomas (1995) develops a contingency perspective on public participation, though it aims more broadly and is developed from the perspective of public managers.

2 A smaller group of studies evaluates specific types of collaborative governance at a more aggregated level (for example, see Beierle [2000], Langbein [2002], and Leach, Pelkey, and Sabatier [2002]).

forum is formally organized and meets collectively, (5) the forum aims to make decisions by consensus (even if consensus is not achieved in practice), and (6) the focus of collaboration is on public policy or public management. This is a more restrictive definition than is sometimes found in the literature. However, the wide-ranging use of the term has, as Imperial notes, been a barrier to theory building (Imperial 2005, 286). Since our goal is to compare apples with apples (to the extent possible), we have defined the term restrictively so as to increase the comparability of our cases.

One critical component of the term collaborative governance is "governance." Much research has been devoted to establishing a workable definition of governance that is bounded and falsifiable, yet comprehensive. For instance, Lynn, Heinrich, and Hill (2001, 7) construe governance broadly as "regimes of laws, rules, judicial decisions, and administrative practices that constrain, prescribe, and enable the provision of publicly supported goods and services." This definition provides room for traditional governmental structures as well as emerging forms of public/private decision-making bodies. Stoker, on the other hand, argues:

> As a baseline definition it can be taken that governance refers to the rules and forms that guide collective decision-making. That the focus is on decision-making in the collective implies that governance is not about one individual making a decision but rather about groups of individuals or organisations or systems of organisations making decisions (2004, 3).

He also suggests that among the various interpretations of the term, there is "baseline agreement that governance refers to the development of governing styles in which boundaries between and within public and private sectors have become blurred" (Stoker 1998, 17). We opt for a combined approach to conceptualize governance. We agree with Lynn, Heinrich, and Hill that governance applies to laws and rules that pertain to the provision of public goods. However, we adopt Stoker's claim that governance is also about collective decision making—and specifically about collective decision making that includes both public and private actors. Collaborative governance is therefore a type of governance in which public and private actors work collectively in distinctive ways, using particular processes, to establish laws and rules for the provision of public goods.

Although there are many forms of collaboration involving strictly nonstate actors, our definition stipulates a specific role for public agencies. By using the term "public agency," our intention is to include public institutions such as bureaucracies, courts, legislatures, and other governmental bodies at the local, state, or federal level. But the typical public institution among our cases is, in fact, an executive branch agency, and therefore, the term "public agency" is apt. Such public agencies may initiate collaborative forums either to fulfill their own purposes or to comply with a mandate, including court orders, legislation, or rules governing the allocation of federal funds. For example, the Workforce Investment Act of 1998 stipulates that all states and localities receiving federal workforce development funds must convene a workforce investment board that comprised public and private actors in order to develop and oversee policies at the state and local level concerning job training, under- and unemployment. According to our definition, these workforce investments boards are mandated to engage in collaborative governance.

Although public agencies are typically the initiators or instigators of collaborative governance, our definition requires participation by nonstate stakeholders. Some scholars describe interagency coordination as collaborative governance. Although there is nothing inherently wrong with using the term in this way, much of the literature on collaborative

governance uses this term to signal a different kind of relationship between public agencies and nonstate stakeholders. Smith (1998, 61), for example, argues that collaboratives involve "representation by key interest groups." Connick and Innes (2003, 180) define collaborative governance as including "representatives of all relevant interests." Reilly (1998, 115) describes collaborative efforts as a type of problem solving that involves the "shared pursuit of government agencies and concerned citizens."

We use the term "stakeholder" to refer both to the participation of citizens as individuals and to the participation of organized groups. For convenience, we will also hereafter use the term "stakeholder" to refer to both public agencies and nonstate stakeholders, though we believe that public agencies have a distinctive leadership role in collaborative governance. Our definition of collaborative governance also sets standards for the type of participation of nonstate stakeholders. We believe that collaborative governance is never merely consultative.[3] Collaboration implies two-way communication and influence between agencies and stakeholders and also opportunities for stakeholders to talk with each other. Agencies and stakeholders must meet together in a deliberative and multilateral process. In other words, as described above, the process must be *collective*. Consultative techniques, such as stakeholder surveys or focus groups, although possibly very useful management tools, are not *collaborative* in the sense implied here because they do not permit two-way flows of communication or multilateral deliberation.

Collaboration also implies that nonstate stakeholders will have real responsibility for policy outcomes. Therefore, we impose the condition that stakeholders must be *directly engaged* in decision making. This criterion is implicit in much of the collaborative governance literature. Freeman (1997, 22), for example, argues that stakeholders participate "in all stages of the decisionmaking process." The watershed partnerships studied by Leach, Pelkey, and Sabatier (2002, 648) make policy and implementation decisions on a range of ongoing water management issues regarding streams, rivers, and watersheds. Ultimate authority may lie with the public agency (as with regulatory negotiation), but stakeholders must directly participate in the decision-making process. Thus, advisory committees may be a form of collaborative governance if their advice is closely linked to decision-making outcomes. In practice (and by design), however, advisory committees are often far removed from actual decision making.

We impose the criteria of *formal* collaboration to distinguish collaborative governance from more casual and conventional forms of agency-interest group interaction. For example, the term collaborative governance might be thought to describe the informal relationships that agencies and interest groups have always cultivated. Surely, interest groups and public agencies have always engaged in two-way flows of influence. The difference between our definition of collaborative governance and conventional interest group influence is that the former implies an explicit and public strategy of organizing this influence. Walter and Petr (2000, 495), for example, describe collaborative governance as a formal activity that "involves joint activities, joint structures and shared resources," and Padilla and Daigle (1998, 74) prescribe the development of a "structured arrangement." This formal arrangement implies organization and structure.

Decisions in collaborative forums are consensus oriented (Connick and Innes 2003; Seidenfeld 2000). Although public agencies may have the ultimate authority to make

3 See Beierle and Long (1999) for an example of collaboration as consultation.

a decision, the goal of collaboration is typically to achieve some degree of consensus among stakeholders. We use the term consensus oriented because collaborative forums often do not succeed in reaching consensus. However, the premise of meeting together in a deliberative, multilateral, and formal forum is to strive toward consensus or, at least, to strive to discover areas of agreement.

Finally, collaborative governance focuses on public policies and issues. The focus on *public* issues distinguishes collaborative governance from other forms of consensus decision making, such as alternative dispute resolution or transformative mediation. Although agencies may pursue dispute resolution or mediation to reduce social or political conflict, these techniques are often used to deal with strictly private conflicts. Moreover, public dispute resolution or mediation may be designed merely to resolve private disputes. While acknowledging the ambiguity of the boundary between public and private, we restrict the use of the term "collaborative governance" to the governance of *public* affairs.

Our definition of collaborative governance is meant to distinguish collaborative governance from two alternative patterns of policy making: adversarialism and managerialism (Busenberg 1999; Futrell 2003; Williams and Matheny 1995). By contrast with decisions made adversarially, collaborative governance is not a "winner-take-all" form of interest intermediation. In collaborative governance, stakeholders will often have an adversarial relationship to one another, but the goal is to transform adversarial relationships into more cooperative ones. In adversarial politics, groups may engage in positive-sum bargaining and develop cooperative alliances. However, this cooperation is ad hoc, and adversarial politics does not explicitly seek to transform conflict into cooperation.

In managerialism, public agencies make decisions unilaterally or through closed decision processes, typically relying on agency experts to make decisions (Futrell 2003; Williams and Matheny 1995). Although managerial agencies may take account of stakeholder perspectives in their decision making and may even go so far as to consult directly with stakeholders, collaborative governance requires that stakeholders be directly included in the decision-making process.

A number of synonyms for collaborative governance may cause confusion. For example, "corporatism" is certainly a form of collaborative governance as we define it. Classic definitions of corporatism (like Schmitter's) emphasize tripartite bargaining between peak associations of labor and capital and the state. Typically, these peak associations have a representational monopoly in their sector (they are "encompassing"). If we start with this narrower definition of corporatism, collaborative governance is the broader term. Collaborative governance often implies the inclusion of a broader range of stakeholders than corporatism, and the stakeholders often lack a representational monopoly over their sector. The term "associational governance" is sometimes used to refer to the more generic mode of governing with associations, but collaborative governance may not even include formal associations. The Porte Alegre project, for example, is a form of collaborative governance that includes individual citizens in budgetary decision making (Fung and Wright 2001).

Sometimes the term "policy network" is used to describe more pluralistic forms of state-society cooperation. A policy network may include both public agencies and stakeholder groups. Moreover, policy networks typically imply cooperative modes of deliberation or decision making among actors within the network. Thus, the terms policy network and collaborative governance can refer to similar phenomena. However, collaborative governance refers to an explicit and formal strategy of incorporating stakeholders into

multilateral and consensus-oriented decision-making processes. By contrast, the cooperation inherent in policy networks may be informal and remain largely implicit (e.g., unacknowledged, unstated, nondesigned). Moreover, it may operate through informal patterns of brokerage and shuttle diplomacy rather than through formal multilateral processes.

Collaborative governance and public-private partnership can also sometimes refer to the same phenomenon. Public-private partnerships typically require collaboration to function, but their goal is often to achieve coordination rather than to achieve decision-making consensus per se. A public-private partnership may simply represent an agreement between public and private actors to deliver certain services or perform certain tasks. Collective decision making is therefore secondary to the definition of public-private partnership. By contrast, the institutionalization of a collective decision-making process is central to the definition of collaborative governance.

Finally, a range of terms are often used interchangeably with collaborative governance. Such terms include participatory management, interactive policy making, stakeholder governance, and collaborative management. We prefer the term governance to management because it is broader and encompasses various aspects of the governing process, including planning, policy making, and management. The term collaborative is also more indicative of the deliberative and consensus-oriented approach that we contrast with adversarialism or managerialism than terms like participatory or interactive.

A MODEL OF COLLABORATIVE GOVERNANCE

Armed with a working definition of collaborative governance, we collected a wide range of case studies from the literature. We did this in the typical fashion: we systematically reviewed journals across a wide range of disciplines, including specialist journals in public health, education, social welfare, international relations, etc. We also conducted key word electronic searches using a wide variety of search terms, including those described above and many more (e.g., "comanagement," "public participation," "alternative dispute resolution"). Of course, we also followed up on the literature cited in the cases we discovered. Ultimately, our model is built on an analysis of 137 cases. Although international in scope, our search was restricted to literature in English, and thus, American cases are overrepresented. Even a cursory examination of our cases also suggests that natural resource management cases are overrepresented. This is not due to any sampling bias on our part but rather reflects the importance of collaborative strategies for managing contentious local resource disputes.

Most of the studies we reviewed were case studies of an attempt to implement collaborative governance in a particular sector. As you might imagine, the universe of cases we collected was quite diverse and the cases differed in quality, methodology, and intent. Although our definition was restrictive so as to facilitate comparison of apples with apples, representing this diversity was also one of our goals. We perceived experiments with collaborative governance bubbling up in many different policy sectors, with little sense that they were engaged in a similar governance strategy. Surely, we felt, these diverse experiments could learn from each other. Yet this diversity proved a challenge. Our original intention to treat these cases as a large-N data set subject to quasi-experimental statistical evaluation was not successful. Since it is useful for both scholars

and practitioners to understand how we arrived at our conclusions, we briefly report on the problems we encountered in conducting our meta-analysis.

Early attempts at systematic coding were frustrating, and we soon developed an understanding of our dilemma. Although scholars studying collaborative governance had already made some important theoretical statements, the language used to describe what was happening was far from standardized. We found ourselves groping to find a common language of description and evaluation even as we were trying to "code" studies. Add to this challenge a severe problem of "missing data"—a reflection of the highly varied motivations of the researchers—and we concluded that a quasi-experimental approach was ill advised. Ultimately, we moved toward a meta-analytic strategy that we call successive approximation. We selected a subset of our cases and used them to develop a common "model" of collaborative governance.[4] We then randomly selected additional subsets of case studies. The second subset was used to "test" the model developed in the first round and then to further "refine" the model. A third sample of cases was used to test the second-round model, and so on. The appendix provides a list of the studies evaluated in each of four successive rounds of evaluation.

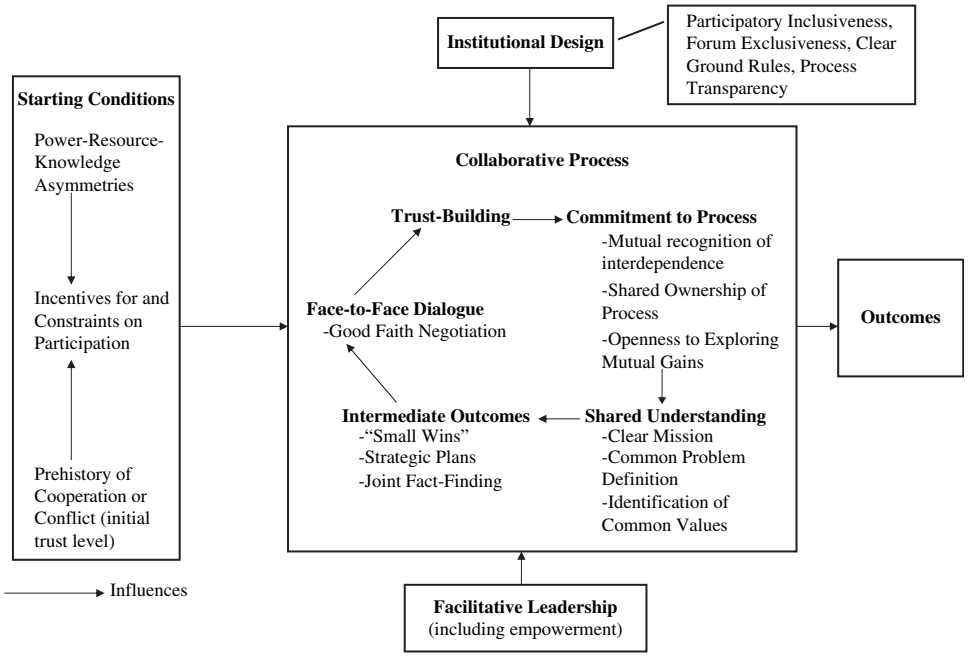
Successive approximation has the advantage of both refining the conceptual model while providing some of the evaluative "discipline" of a quasi-experimental study. However, we are under no illusion that this process yielded "the one" model of collaborative governance. There was a large element of art involved in both specifying and evaluating our model. As we proceeded, we were overwhelmed by the complexity of the collaborative process. Variables and causal relationships proliferated beyond what we felt would ultimately be useful for policy makers and practitioners. Therefore, our model represents a conscious attempt to simplify as much as possible the representation of key variables and their relationships. This goal of simplification led us to stress *common* and *frequent* findings across cases. This approach strengthens the generality of our findings but discounts less universal or frequently mentioned findings from the literature. Toward the end of our analysis, we were ourselves in disagreement about how to represent key relations. We used the final round of case analysis to settle these differences.

One other important clarification needs to be made before we introduce our findings. Our survey of the cases quickly disabused us of the notion that we could use our analysis to answer the question: "Is collaborative governance more effective than adversarial or managerial governance?" Very few of the studies we reviewed actually evaluated governance outcomes. This is not to say that the comparison between collaborative, adversarial, and managerial governance is not relevant to these studies. Experiments with collaborative governance were typically driven by earlier failures with adversarial or managerial approaches. But systematic comparisons were rarely explicitly made. What most studies did try to do was understand the conditions under which stakeholders acted collaboratively. Did they engage in good faith negotiation? Did they pursue mutual gains? Did they achieve consensus? Were they satisfied with the process? In other words, most studies in the collaborative governance literature evaluate "process outcomes" rather than policy or management outcomes.

Figure 1 provides a visual representation of our central findings. The model has four broad variables—starting conditions, institutional design, leadership, and collaborative

4 To avoid recreating the wheel, our first subset was not randomly selected but included many of the most prominent theoretical statements about collaborative governance.

Figure 1
A Model of Collaborative Governance



process. Each of these broad variables can be disaggregated into more fine-grained variables. Collaborative process variables are treated as the core of our model, with starting conditions, institutional design, and leadership variables represented as either critical contributions to or context for the collaborative process. Starting conditions set the basic level of trust, conflict, and social capital that become resources or liabilities during collaboration. Institutional design sets the basic ground rules under which collaboration takes place. And, leadership provides essential mediation and facilitation for the collaborative process. The collaborative process itself is highly iterative and nonlinear, and thus, we represent it (with considerable simplification) as a cycle.

The remainder of the article describes each of these variables in more detail and draws out their implications for a contingency model of collaborative governance.

STARTING CONDITIONS

The literature is clear that conditions present at the outset of collaboration can either facilitate or discourage cooperation among stakeholders and between agencies and stakeholders. Imagine two very different starting points. In one, the stakeholders have a history of bitter division over some emotionally charged local issue and have come to regard each other as unscrupulous enemies. In the other, the stakeholders have a shared vision for what they would like to achieve through collaboration and a history of past cooperation and mutual respect. In both cases, collaboration may be difficult, but the first case must overcome problems of distrust, disrespect, and outright antagonism. We narrowed the critical starting conditions down to three broad variables: imbalances between the resources or

power of different stakeholders, the incentives that stakeholders have to collaborate, and the past history of conflict or cooperation among stakeholders.

Power/Resource Imbalances

Power imbalances between stakeholders are a commonly noted problem in collaborative governance (Gray 1989; Short and Winter 1999; Susskind and Cruikshank 1987; Tett, Crowther, and O'Hara 2003; Warner 2006). If some stakeholders do not have the capacity, organization, status, or resources to participate, or to participate on an equal footing with other stakeholders, the collaborative governance process will be prone to manipulation by stronger actors. For example, Bradford (1998) demonstrates that attempts by the Government of Ontario to make job training and occupational health and safety policy through collaborative means were thwarted by the privileged status of firms who, through "informal channels," were able to gain access to senior officials. Ultimately, such imbalances produce distrust or weak commitment (Gray 1989, 119; Warner 2006). American environmental groups are notably skeptical about collaborative governance because they feel that it is advantageous to industry groups (McCloskey 2000). Echeverria (2001), for example, criticizes the Platte River Collaborative Watershed Planning Process because he argues that the negotiating table is uneven and weighted toward development interests. He argues that development interests and environmental advocates have widely different capacities. Because their constituency is so large and diffuse, conservation advocates are routinely at a disadvantage in contests with representatives of relatively more cohesive and more easily organized economic interests. Without strong countermeasures to represent less powerful voices and without "neutral" agency leadership, Schuckman (2001) argues that collaborative processes are skewed against environment groups.

The problem of power imbalances is particularly problematic where important stakeholders do not have the organizational infrastructure to be represented in collaborative governance processes. English (2000), for example, argues that the more diffuse the affected stakeholders, and the more long term the problem horizon, the more difficult it will be to represent stakeholders in collaborative processes. In many cases, the problem is that organized stakeholder groups do not exist to represent individual stakeholders collectively (Buanes et al. 2004; Rogers et al. 1993). Another common problem is that some stakeholders may not have the skill and expertise to engage in discussions about highly technical problems (Gunton and Day 2003; Lasker and Weiss 2003; Merkhofer, Conway, and Anderson 1997; Murdock, Wiessner, and Sexton 2005; Warner 2006). A third common problem is that some stakeholders do not have the time, energy, or liberty to engage in time-intensive collaborative processes (Yaffee and Wondolleck 2003). None of these problems are necessarily insurmountable. Proponents of collaboration have pointed to a range of strategies that can be used to empower weaker or underrepresented groups (Fawcett et al. 1995; Lasker and Weiss 2003; Merkhofer, Conway, and Anderson 1997; Mitchell 2005; Schuckman 2001).[5] In terms of a contingency theory of collaborative governance, we draw the following conclusion:

> (1) If there are significant power/resource imbalances between stakeholders, such that important stakeholders cannot participate in a meaningful way, then effective

5 Scholars of regulation worry, however, that empowerment might lead to agency co-optation of stakeholders (Seidenfeld 2000).

collaborative governance requires a commitment to a positive strategy of empowerment and representation of weaker or disadvantaged stakeholders.

Incentives to Participate

Given the largely voluntary nature of participation, it is critical to understand the incentives that stakeholders have to engage in collaborative governance and the factors that shape those incentives (Andranovich 1995; Chrislip and Larson 1994; Gray 1989; Nelson and Weschler 1998; Susskind and Cruikshank 1987). This includes analysis of the incentives for public agencies to sponsor collaborative governance. For example, Ebrahim (2004) compares the different incentives Indian forest and irrigation agencies face and shows how positive financial incentives were critical to collaborative success in the irrigation case.

Scholars of collaborative governance have recognized that power and resource imbalances will affect the incentives of groups to participate in collaborative processes (Gunton and Day 2003; Imperial 2005). Gray (1989) argues that power differences among players influence their willingness to come to the table. Environmentalists prefer the traditional congressional hearing process, she points out, because they believe they have the upper hand in that forum. Therefore, she argues that timing considerations will be important: parties that believe that their power is on the rise will be unlikely to want to bind themselves to collaboration.

Incentives to participate depend in part upon stakeholder expectations about whether the collaborative processes will yield meaningful results, particularly against the balance of time and energy that collaboration requires (Bradford 1998; Geoghegan and Renard 2002; Rogers et al. 1993; Schneider et al. 2003; Warner 2006). Incentives increase as stakeholders see a direct relationship between their participation and concrete, tangible, effectual policy outcomes (Brown 2002). But they decline if stakeholders perceive their own input to be merely advisory or largely ceremonial (Futrell 2003).

Although collaborative approaches may be mandated by courts or legislatures, stakeholder participation is typically voluntary. Consequently, the incentives that stakeholders have to enter into collaboration will loom large as a factor in explaining whether collaborative governance can be successful. Incentives to participate are low when stakeholders can achieve their goals unilaterally or through alternative means.

Stakeholders who view themselves as having strong allies in the courts or in legislatures, for example, will often prefer these alternative venues. Venue shopping can easily undercut collaborative processes. Even if such stakeholders tentatively decide to engage in the collaborative process, they may take their claims to an alternative venue if they become disgruntled with the process or its outcomes (Khademian and Weber 1997). Conversely, the incentive for stakeholders to participate is likely to increase when the collaborative process is the exclusive forum for decision making. In the Nevada turtle case, described by Reilly (2001, 133), successful collaboration ensued after the court refused to invalidate the emergency listing of the tortoise as an endangered species. This ruling prevented the courts from being used as an alternative venue.

Incentives to participate in collaborative governance will also increase if stakeholders perceive achievement of their goals to be dependent on cooperation from other stakeholders (Logsdon 1991). For example, the prevalence of collaborative governance in local resource management disputes is probably related to the joint dependence of local groups on a common resource (Heikkila and Gerlak 2005). The implications of this interdependence can sometimes be counterintuitive. Thus, highly antagonistic stakeholders

who are also highly dependent upon each other may move toward a successful collaborative process (Imperial 2005; Yaffee and Wondolleck 2003). Reilly (2001), for example, describes the "balance of terror" that kept rival stakeholders at the bargaining table for fear of losing out if they were not involved. Alternatively, stakeholders with a deep foundation of trust and shared values may fail at collaboration because stakeholders find it easier to achieve their goals unilaterally. Perceptions of interdependence, of course, often depend upon political context. Thus, incentives to participate are often shaped by the "shadow of the state," such as threats of regulation or court (Bentrup 2001; Brown 2002; Short and Winter 1999). In the area of endangered species protection, for example, it is common for collaboration to be seen by all stakeholders as preferable to lengthy and costly court battles.

Alternative venues will be particularly attractive to stakeholders when they believe they can achieve their goals unilaterally. We thus propose two additions to our contingency model:

> (2) If alternative venues exist where stakeholders can pursue their goals unilaterally, then collaborative governance will only work if stakeholders perceive themselves to be highly interdependent.
>
> (3) If interdependence is conditional upon the collaborative forum being an exclusive venue, then sponsors must be willing to do the advance work of getting alternative forums (courts, legislators, and executives) to respect and honor the outcomes of collaborative processes.

Prehistory of Antagonism and Cooperation

The literature indicates that the prehistory of antagonism or cooperation between stakeholders will hinder or facilitate collaboration (Andranovich 1995; Gray 1989; cf. Margerum 2002). However, we note that when stakeholders are highly interdependent, a high level of conflict may actually create a powerful incentive for collaborative governance. In a number of cases, policy deadlocks can actually create a strong impetus for collaborative governance (Futrell 2003). Such situations often occur in resource management contexts where the deadlock itself imposes a serious cost on both sides of the dispute. Weber describes the origins of a local collaborative as follows: "Exhausted and frustrated from constant battling over the disposition of natural resources and land management approaches, Brown and Swenson [leaders of the two rival groups] decided to sit down and see if there was an alternative, more amicable method for reconciling their differences" (Weber 2003, 59). Therefore, it is clear that high conflict per se is not necessarily a barrier to collaboration. In many of the successful collaborations described in the literature, stakeholders have come to see that they cannot achieve their goals without engaging in a collaborative process with other stakeholders whose interests are often diametrically opposed.

Collaborative governance, however, often builds on a history of rancor that has institutionalized a social psychology of antagonism. As mediators are keenly aware, "us versus them" dynamics are poisonous to successful collaboration. A prehistory of conflict is likely to express itself in low levels of trust, which in turn will produce low levels of commitment, strategies of manipulation, and dishonest communications. In other words, a prehistory of conflict creates a vicious circle of suspicion, distrust, and stereotyping. On the other hand, a history of successful past cooperation can create social capital and high levels of trust that produce a virtuous cycle of collaboration. We, therefore, suggest the following contingency:

> (4) If there is a prehistory of antagonism among stakeholders, then collaborative governance is unlikely to succeed unless (a) there is a high degree of interdependence among the

stakeholders or (b) positive steps are taken to remediate the low levels of trust and social capital among the stakeholders.

We note, however, that strong trust and interdependence among subsets of stakeholders may actually discourage collaborative strategies among a wider set of actors. In a network survey of the Bay Area environmental movement, Ansell (2003) found that cliques of environmental groups were less likely to favor collaborative strategies.

FACILITATIVE LEADERSHIP

Leadership is widely seen as a critical ingredient in bringing parties to the table and for steering them through the rough patches of the collaborative process (Burger et al. 2001; Chrislip and Larson 1994; Frame, Gunton, and Day 2004; Gilliam et al. 2002; Gunton and Day 2003; Heikkila and Gerlak 2005; Huxham and Vangen 2000; Imperial 2005; Lasker and Weiss 2003; Margerum 2002; Murdock, Wiessner, and Sexton 2005; Reilly 1998, 2001; Roussos and Fawcett 2000; Saarikoski 2000; Smith 1998; Vangen and Huxham 2003a). Although "unassisted" negotiations are sometimes possible, the literature overwhelmingly finds that facilitative leadership is important for bringing stakeholders together and getting them to engage each other in a collaborative spirit (Chrislip and Larson 1994; Ozawa 1993; Pine, Warsh, and Maluccio 1998; Reilly 2001; Susskind and Cruikshank 1987). In describing three forms of "assisted negotiation," Susskind and Cruikshank (1987) suggest increasingly more interventionist mediation techniques to the extent that stakeholders are unable to directly collaborate. Facilitation is the least intrusive on the management prerogatives of stakeholders; a facilitator's role is to ensure the integrity of the consensus-building process itself. Mediation increases the role of the third party intervention in the substantive details of the negotiation when stakeholders are ineffective in exploring possible win-win gains. Finally, if stakeholders cannot reach a consensus with the help of mediation, the third party may craft a solution (nonbinding arbitration). Vangen and Huxham (2003a) argue that to move collaboration forward, leaders must often intervene in a more directive way to shape the agenda.

Leadership is crucial for setting and maintaining clear ground rules, building trust, facilitating dialogue, and exploring mutual gains. Vangen and Huxham (2003a) argue that leadership is important for embracing, empowering, and involving stakeholders and then mobilizing them to move collaboration forward. Chrislip and Larson (1994, 125) describe the collaborative leader as a steward of the process (*transforming*, *servant*, or *facilitative* leadership) whose leadership style is "...characterized by its focus on promoting and safeguarding the process (rather than on individual leaders taking decisive action)." Scholars assert that collaborative governance requires specific types of leadership. Ryan (2001, 241), for example, identifies three components of "effective" collaborative leadership: adequate management of the collaborative process, maintaining "technical credibility," and ensuring that the collaborative is empowered to "make credible and convincing decisions that are acceptable to all." Lasker and Weiss (2001, 31) argue that collaborative leaders must have the skills to (1) promote broad and active participation, (2) ensure broad-based influence and control, (3) facilitate productive group dynamics, and (4) extend the scope of the process. Successful collaborations may also use multiple leaders, formally and informally, rather than relying on one leader (Bradford 1998; Lasker and Weiss 2003). Huxham and Vangen (2000) emphasize that effective collaborative leadership is likely to be time, resource, and skill intensive.

Leadership is also important for empowering and representing weaker stakeholders. Ozawa (1993), for example, describes what he calls "transformative" techniques in which mediation procedures helps to bring about a "balance of power" among stakeholders. This style of facilitative leadership also helps stakeholders to explore possibilities for mutual gain. Lasker and Weiss (2003, 31–3) argue that facilitative leaders must "give meaningful voice to participants" and encourage participants to listen to each other. Leaders should stimulate creativity by "synthesiz[ing] the knowledge of diverse participants so the group can create new ideas and understanding."

Where incentives to participate are weak, power and resources are asymmetrically distributed, and prior antagonisms are high, leadership becomes all the more important. The requisite leadership qualities may depend on the precise context. The more that stakeholders fundamentally distrust each other, the more leadership must assume the role of honest broker. However, when incentives to participate are weak or when power is asymmetrical, the leader must often intervene to help keep stakeholders at the table or empower weaker actors. These different functions of leadership can create tensions. Intervention to empower weaker actors, for example, may upset the perception that the leader is an honest broker (Warner 2006). Moreover, there are sometimes tensions between the role of neutrality and the role of persuasion. When conflict is high, the role of honest broker is often given to an outside mediator who appears to have no vested interest in the outcome either way. Yet an outside mediator may also have little influence with the various stakeholders. We derive the following conclusions from this logic:

> (5) Where conflict is high and trust is low, but power distribution is relatively equal and stakeholders have an incentive to participate, then collaborative governance can successfully proceed by relying on the services of an honest broker that the respective stakeholders accept and trust. This honest broker might be a professional mediator.

Such an honest broker will also be able to develop trust during the collaborative process by remaining above the fray and by maintaining the procedural integrity and transparency of the collaborative process. However,

> (6) Where power distribution is more asymmetric or incentives to participate are weak or asymmetric, then collaborative governance is more likely to succeed if there is a strong "organic" leader who commands the respect and trust of the various stakeholders at the outset of the process. "Organic" leaders are leaders who emerge from within the community of stakeholders. The availability of such leaders is likely to be highly contingent upon local circumstances.

An implication of this contingency is that the possibility for effective collaboration may be seriously constrained by a lack of leadership.

INSTITUTIONAL DESIGN

Institutional design refers here to the basic protocols and ground rules for collaboration, which are critical for the procedural legitimacy of the collaborative process. Access to the collaborative process itself is perhaps the most fundamental design issue. Who should be included? It is no surprise to find that the literature on collaborative governance emphasizes that the process must be open and inclusive (Andranovich 1995; Burger et al. 2001; Chrislip and Larson 1994; Gray 1989; Gunton and Day 2003; Lasker and Weiss 2003;

Margerum 2002; Martin, Tett, and Kay 1999; Murdock, Wiessner, and Sexton 2005; Plummer and Fitzgibbon 2004; Power et al. 2000; Reilly 1998, 2001) because only groups that feel they have had a legitimate opportunity to participate are likely to develop a "commitment to the process." As Chrislip and Larson (1994) write, "The first condition of successful collaboration is that it must be broadly inclusive of all stakeholders who are affected by or care about the issue." This includes potentially "troublesome" stakeholders. As Gray (1989, 68) observes, disputes over the legitimacy of including specific stakeholders are certain to arise, but ". . .successful collaboration depends on including a broad enough spectrum of stakeholders to mirror the problem." In the coal collaboration she studied, the attempt to exclude certain stakeholders ultimately threatened the legitimacy of the process (Gray 1989, 155).

Broad participation is not simply tolerated but must be actively *sought*. Reilly (2001), for example, found that successful collaboratives pay considerable attention to getting stakeholders to participate and that exclusion of critical stakeholders is a key reason for failure. In his study of the electric industry, Koch (2005, 601) found that collaborative governance required the inclusion of "small firms and public power organizations" that had traditionally been excluded from conventional models of governance. Broad-based inclusion is not simply a reflection of the open and cooperative spirit of collaborative governance. It is at the heart of a legitimation process based on (1) the opportunity for stakeholders to deliberate with others about policy outcomes and (2) the claim that the policy outcome represents a broad-based consensus. Weak or noninclusive representation, therefore, threatens to undermine the legitimacy of collaborative outcomes (Beierle and Konisky 2001; Geoghegan and Renard 2002; Smith 1998).[6] Proactive strategies of mobilizing less well-represented stakeholders are thus often seen as important (Weech-Maldonado and Merrill 2000).

Yet as we saw earlier, stakeholders may not have an incentive to participate, particularly if they see alternative venues for realizing their agenda. The literature suggests that inclusiveness is therefore closely linked to the *exclusiveness* of the collaborative forum (Schuckman 2001; Tett, Crowther, and O'Hara 2003). When the collaborative forum is "the only game in town," it is easier to motivate stakeholders to participate; conversely, when they are excluded, they may be impelled to seek out alternative venues. For example, Kraft and Johnson (1999, 136) found that environmental groups created an "alternative forum" after being excluded from the Fox River Coalition in Wisconsin. Of course, the existence of alternative forums can also be posed as a negative precondition for effective collaboration. As Reilly (2001, 71) puts it, "When alternative avenues exist for resolution, it is theorized that a collaborative method of resolution is not optimal." Fung and Wright (2001, 24) note that "participants will be much more likely to engage in earnest deliberation when alternatives to it—such as strategic domination or exit from the process altogether—are made less attractive by roughly balanced power."

The literature also suggests that clear ground rules and process transparency are important design features (Busenberg 1999; Geoghegan and Renard 2002; Glasbergen and Driessen 2005; Gunton and Day 2003; Imperial 2005; Murdock, Wiessner, and Sexton 2005; Rogers et al. 1993). Both can be understood in terms of procedural legitimacy

6 Franklin (2001) describes the process of exclusion used during strategic planning for 15 federal agencies.

and trust building. Leaders are asking stakeholders to engage in good faith negotiation and to explore possibilities for compromise and mutual gains. But stakeholders often enter into the collaborative process in a skeptical frame of mind. They are sensitive to issues of equity, concerned about the power of other stakeholders, and alive to the possibility of being manipulated. The legitimacy of the process depends, in part, upon stakeholders' perceptions that they have gotten a "fair hearing." Clear and consistently applied ground rules reassure stakeholders that the process is fair, equitable, and open (Murdock, Wiessner, and Sexton 2005). Process transparency means that stakeholders can feel confident that the public negotiation is "real" and that the collaborative process is not a cover for backroom private deals. Clear definition of roles can also be important (Alexander, Comfort, and Weiner 1998). For example, in his study of an Ontario collaboration, Bradford (1998, 565) argues that it was not clear if the role of state officials was to provide "direction to the social partners, clarif[y] expectations about acceptable outcomes [or lead] the planning process." Formalization of governance structures is therefore sometimes seen as an important design feature (Fung and Wright 2001, 2003; Imperial 2005; Weech-Maldonado and Merrill 2000).

The literature seems to be in less agreement about the importance of consensus rules. We have already defined collaborative governance as "consensus oriented," though pointed out that consensus is not always achieved. The issue here is whether all collaborative decisions should formally require consensus. In the collaboratives studied by Margerum (2002), consensus was seen as promoting representation of individual viewpoints and encouraging more cooperation. However, consensus rules are often criticized for leading to "least common denominator" outcomes (Coglianese and Allen 2003; Gunton and Day 2003). They can also lead to decision stalemates (Coglianese and Allen 2003), though it is possible for collaborative processes to begin with consensus procedures and then to revert to other procedures in the case of stalemate (Till and Meyer 2001).

A final institutional design issue is the use of deadlines. Although some authors point to the importance of deadlines (Glasbergen and Driessen 2005), particularly because collaborative meetings can be endless, Freeman (1997) observes that deadlines may arbitrarily limit the scope of discussion. The problem, she writes, is that deadlines may undercut the ongoing nature of the collaboration, inadvertently reducing incentives for long-term cooperation. Susskind and Cruikshank (1987) and Gunton and Day (2003) suggest that timetables, when used, must be "realistic."

THE COLLABORATIVE PROCESS

Process models of collaborative governance sometimes describe collaboration as developing in stages. For example, Susskind and Cruikshank (1987, 95) describe the consensus-building process as having a prenegotiation phase, a negotiation phase, and an implementation phase; Gray (1989) defines a three-step collaborative process: (1) problem setting, (2) direction setting, and (3) implementation; and Edelenbos (2005, 118) identifies a three-step process that includes preparation, policy development, and decision making, with each step having several stages. A stage model of collaboration is important for calling attention to the changing strategies of collaboration as context changes. Yet in our reading of the literature, we were struck at the way in which the collaborative process is cyclical

rather than linear. Collaboration often seemed to depend on achieving a virtuous cycle between communication, trust, commitment, understanding, and outcomes (Huxham 2003; Imperial 2005). This cyclical—or if you prefer, *iterative*—process is important across all the stages of collaboration.

We found the collaborative process difficult to represent and we suspect this is precisely because of the nonlinear character of interaction. Our representation of the collaboration process as a cycle is clearly itself a great simplification. Yet it calls attention to the way in which feedbacks from early collaboration can positively or negatively influence further collaboration. It is even difficult to know where to start a description of the collaborative process. However, since communication is at the heart of collaboration, we begin with face-to-face dialogue.

Face-to-Face Dialogue

All collaborative governance builds on face-to-face dialogue between stakeholders. As a consensus-oriented process, the "thick communication" allowed by direct dialogue is necessary for stakeholders to identify opportunities for mutual gain. However, face-to-face dialogue is more than merely the medium of negotiation. It is at the core of the process of breaking down stereotypes and other barriers to communication that prevent exploration of mutual gains in the first place (Bentrup 2001). It is at the heart of a process of building trust, mutual respect, shared understanding, and commitment to the process (Gilliam et al. 2002; Lasker and Weiss 2003; Plummer and Fitzgibbon 2004; Schneider et al. 2003; Tompkins and Adger 2004; Warner 2006).

We argue that face-to-face dialogue is a *necessary* but not *sufficient* condition for collaboration. For example, it is possible for face-to-face dialogue to reinforce stereotypes or status differences or to increase antagonism and mutual disrespect. Yet it is difficult to imagine effective collaboration without face-to-face dialogue. The literature on collaboration abounds with examples of the way stereotypes have been broken down through face-to-face communication.

Trust Building

The lack of trust among stakeholders is a common starting point for collaborative governance (Weech-Maldonado and Merrill 2000). The literature strongly suggests that the collaborative process is not merely about negotiation but also about building trust among stakeholders (Alexander, Comfort, and Weiner 1998; Beierle and Konisky 2001; Brinkerhoff 1999; Glasbergen and Driessen 2005; Imperial 2005; Murdock, Wiessner, and Sexton 2005; Short and Winter 1999; Tett, Crowther, and O'Hara 2003; Vangen and Huxham 2003b). In fact, when there has been a prehistory of antagonism among stakeholders, we found that trust building often becomes the most prominent aspect of the early collaborative process and can be quite difficult to cultivate (Murdock, Wiessner, and Sexton 2005). This is not to say that trust building is a separate phase from dialogue and negotiation about substantive matters. But good collaborative leaders recognize that they must build trust among erstwhile opponents before stakeholders will risk manipulation. What becomes evident in the case studies is that trust building is

a time-consuming process that requires a long-term commitment to achieving collaborative outcomes. Therefore,

> (7) If the prehistory is highly antagonistic, then policy makers or stakeholders should budget time for effective remedial trust building. If they cannot justify the necessary time and cost, then they should not embark on a collaborative strategy.

Commitment to the Process

Although the terminology used varies rather widely in the literature, case studies suggest that stakeholders' level of commitment to collaboration is a critical variable in explaining success or failure (Alexander, Comfort, and Weiner 1998; Gunton and Day 2003; Margerum 2001; Tett, Crowther, and O'Hara 2003). In a survey of American and Australian collaborative groups, Margerum (2002) found that "member commitment" was the most important factor facilitating collaboration. The weak commitment of public agencies to collaboration, particularly at the headquarters level, is often seen as a particular problem (Yaffee and Wondolleck 2003).

Commitment is closely related, of course, to the original motivation to participate in collaborative governance. But stakeholders may wish to participate in order to make sure their perspective is not neglected or to secure legitimacy for their position or to fulfill a legal obligation, etc. By contrast, commitment to the process means developing a belief that good faith bargaining for mutual gains is the best way to achieve desirable policy outcomes (Burger et al. 2001). Such a belief is not altruistic. A developer may believe that the best way to get his houses built is to engage in a good faith bargaining effort with environmentalists. Yet commitment to collaboration can still require a very significant psychological shift, particularly among those who regard their positions in absolute terms (Putnam 2004; Putnam, Burgess, and Royer 2003). As a first step, such a shift requires what is sometimes called "mutual recognition" (Saarikoski 2000) or "joint appreciation" (Gray 1989; Plummer and Fitzgibbon 2004).

Commitment also poses a tricky dilemma. Commitment to the collaborative process requires an up-front willingness to abide by the results of deliberation, even if they should go in the direction that a stakeholder does not fully support. Of course, the consensus-oriented basis of collaborative governance greatly reduces the risks for stakeholders. Yet the dynamics of bargaining can lead in unexpected directions, and stakeholders can experience pressure to conform to positions they do not fully embrace (Saarikoski 2000). It is easy to see why trust is such an important element of collaboration. Commitment depends on trust that other stakeholders will respect your perspectives and interests. It is also easy to see how clear, fair, and transparent procedures are critical for commitment. Before committing to a process that could go in unpredictable directions, stakeholders must feel confident that the procedure of deliberation and negotiation has integrity. A sense of commitment and ownership can be enhanced as involvement increases (Gilliam et al. 2002).

An additional dimension of commitment is sometimes called "ownership of the process." In the typical adversarial or managerial process, nonstate stakeholders are outside observers of the decision making. They may seek to lobby, pressure, or influence public agency decision makers, but it is the agency that is ultimately held responsible for policy outcomes. Collaborative governance shifts "ownership" of decision making from the agency to the stakeholders acting collectively. Again, this implies a tricky dilemma.

Stakeholders are no longer simply critics of the process. They now "own" the decision-making process collectively with other stakeholders who may hold opposing views (El Ansari 2003; Geoghegan and Renard 2002; Weech-Maldonado and Merrill 2000).

Ownership implies shared responsibility for the process. This responsibility requires stakeholders to see their relationship with other stakeholders in a new light, one in which they share responsibility with their opponents. Trust is critical because why would you share responsibility with people you don't trust? If you adopt a "responsible" perspective toward the process, what is to guarantee that your opponent will not take advantage of your willingness to act in good faith? Shared ownership may be hindered by power imbalances or different perceptions about who should take the initiative. During interviews with stakeholders involved in sea urchin harvesting, for example, Warner (1997) found that fishery personnel and divers had different perceptions of their degree of ownership over the collaborative process. Divers viewed themselves as assisting the fishery staff, whereas the fishery staff expected divers to lead the decision-making process in some areas.

Mandated forms of collaboration may be critical where incentives to participate are weak, but mandated cooperation can also disguise the lack of real commitment on the part of stakeholders. Therefore,

> (8) Even when collaborative governance is mandated, achieving "buy in" is still an essential aspect of the collaborative process.

High interdependence among the stakeholders is likely to enhance commitment to collaboration, but it may also enhance incentives to act manipulatively and co-optively. These temptations are probably checked where collaboration is not a one-off deal but depends on ongoing cooperation. The literature on collective action, of course, suggests that this horizon of the future can be an important condition for reciprocity. Therefore,

> (9) Collaborative governance strategies are particularly suited for situations that require ongoing cooperation.

Shared Understanding

At some point in the collaborative process, stakeholders must develop a shared understanding of what they can collectively achieve together (Tett, Crowther, and O'Hara 2003). Shared understanding is variously described in the literature as "common mission" (Alexander, Comfort, and Weiner 1998; Roussos and Fawcett 2000), "common ground" (Wondolleck and Yaffee 2000), "common purpose" (Tett, Crowther, and O'Hara 2003), "common aims" (Huxham 2003), "common objectives" (Padilla and Daigle 1998), "shared vision" (Manring and Pearsall 2004; Walter and Petr 2000; Wondolleck and Yaffee 2000), "shared ideology" (Waage 2001), "clear goals" (Glasbergen and Driessen 2005; Roberston and Lawes 2005), "clear and strategic direction" (Margerum 2002), or the "alignment of core values" (Heikkila and Gerlak 2005). Shared understanding can also imply agreement on a definition of the problem (Bentrup 2001; North 2000; Pahl-Wostl and Hare 2004). Or, it might mean agreement on the relevant knowledge necessary for addressing a problem.

The development of shared understanding can be seen as part of a larger "collaborative learning process" (Daniels and Walker 2001). Blatner et al. (2001) have developed a useful survey strategy for assessing the extent of collective learning that results from collaboration.

Intermediate Outcomes

A number of the case studies suggest that collaboration is more likely to ensue when the possible purposes and advantages of collaboration are relatively concrete and when "small wins" from collaboration are possible (Chrislip and Larson 1994; Roussos and Fawcett 2000; Warner 2006; Weech-Maldonado and Merrill 2000). Although these intermediate outcomes may represent tangible outputs in themselves, we represent them here as critical process outcomes that are essential for building the momentum that can lead to successful collaboration. These small wins can feed back into the collaborative process, encouraging a virtuous cycle of trust building and commitment (Rogers et al. 1993; Vangen and Huxham 2003b).

These considerations lead us to draw the following conclusions:

> (10) If prior antagonism is high and a long-term commitment to trust building is necessary, then intermediate outcomes that produce small wins are particularly crucial. If, under these circumstances, stakeholders or policy makers cannot anticipate these small wins, then they probably should not embark on a collaborative path.

Joint fact finding is a type of intermediate outcome that a number of authors mentioned in a positive light (Saarikoski 2000). We also note the argument of Vangen and Huxham (2003b) that small wins may not be an appropriate strategy for trust building where stakeholders have more ambitious goals that cannot easily be parsed into intermediate outcomes. They suggest that in this situation, trust can be built by early joint exploration of the overall value of collaboration.

CONCLUSION: TIME, TRUST, AND INTERDEPENDENCE

The term "collaborative governance" promises a sweet reward. It seems to promise that if we govern collaboratively, we may avoid the high costs of adversarial policy making, expand democratic participation, and even restore rationality to public management. A number of the studies reviewed here have pointed toward the value of collaborative strategies: bitter adversaries have sometimes learned to engage in productive discussions; public managers have developed more fruitful relationships with stakeholders; and sophisticated forms of collective learning and problem solving have been developed. Other studies, however, point to the problems that collaborative strategies encounter as they pursue these valued outcomes: powerful stakeholders manipulate the process; public agencies lack real commitment to collaboration; and distrust becomes a barrier to good faith negotiation. Our purpose in this article has been to draw positive and negative findings together into a common analytical framework that can begin to specify the conditions under which we can expect collaborative governance to work (at least in terms of "process outcomes") and where we might expect it to founder.

Based on a meta-analysis of 137 studies of collaborative governance across a range of policy areas, our findings are largely empirically inductive—though we have also sought to build on and incorporate prior theoretical work. In reviewing these empirical and theoretical studies, our goal has been to identify the contingent conditions that facilitate or discourage successful collaboration. In exploring these contingent conditions, our goal has been to move beyond a situation in which collaborative governance is regarded as

inherently "good" or "bad." We want scholars and practitioners to ask themselves about the contextual conditions likely to facilitate or discourage the desired outcomes of collaborative governance. We believe that this "contingency" approach is useful both for practitioners who may be considering the adoption of a collaborative strategy and for scholars designing future research.

As a summary of the critical variables our meta-analysis found to be important in collaboration, figure 1 provides the basic analytical framework for this contingency theory. Practitioners can use this framework to identify key challenges and limitations to a collaborative strategy. Are there serious differences in the power of stakeholders? Do all stakeholders have the organizational capacity to participate in a meaningful way? Is there sufficient leadership to guide the process through difficult patches? How much remedial trust building is necessary? These questions and many more are suggested by figure 1.

We regard this article as offering a contingency "theory" in the sense that it offers a framework for organizing a series of contingent propositions and cause-and-effect relationships. Our claim is not that it is a complete or fully worked out set of propositions or causal relationships but rather that it provides a basis for further empirical testing and theory elaboration. Figure 1, for example, specifies causal relationships between different variables that affect collaborative governance outcomes. This specification is the result of our inductive meta-analysis of a highly diverse set of cases. As described earlier, we adopted a meta-analytic strategy of successive approximation in lieu of a more ambitious quasi-experimental strategy because key concepts in this literature were weakly specified and our "data" were not systematic. For the purposes of future research, figure 1 can be treated as a hypothesis that might be evaluated using a quasi-experimental design.

Two possible strategies for a quasi-experimental design have occurred to us in the course of this research. First, a survey of individual stakeholders might be utilized to operationalize key behavioral variables, such as "commitment to the process." Good examples of the use of surveys in collaborative governance research include Margerum (2001) and Frame, Gunton, and Day (2004). Pre- and postcollaboration surveys might be a particularly useful strategy for assessing attitudinal change (Blatner et al. 2001). Second, research might be designed to take advantage of "natural experiments" in collaboration: situations where there are multiple independent cases of collaboration operating under the auspices of a similar regulatory program, public agency, or law. Examples include Murdock, Wiessner, and Sexton's (2005) study of the Environmental Protection Agency's Project XL or Schneider et al.'s (2003) study of the National Estuary Program.

Our point, however, is not that aggregate statistical analysis is the only useful research strategy that could build on our research. Figure 1 might also suggest further case study research. Case studies are particularly valuable where the interaction between variables is nonlinear, and we believe intensive ethnographic research might be the most successful strategy for developing greater insight into the nonlinear aspects of the collaborative process. Case study research into trust building, the development of shared understanding, and commitment formation would be particularly valuable.

We conclude by emphasizing three core contingencies suggested by our analysis: time, trust, and interdependence. Figure 1 does not fully represent the prominence of these contingencies because their influence is pervasive and not easy to parse as distinct variables. Yet practitioners ought to consider each of these general contingencies before embarking on a collaborative strategy.

Many of the case studies note that collaborative governance is a time-consuming process (Gunton and Day 2003; Imperial 2005; Margerum 2002; Roussos and Fawcett 2000; Till and Meyer 2001; Warner 2006). Consensus building, in particular, requires time and cannot be rushed (Coglianese and Allen 2003; Yaffee and Wondolleck 2003). When remedial trust building is critical, the time necessary for increasing trust is likely to add significant time to the process. Therefore, collaborative governance is probably not a good strategy for situations in which agencies must make or implement decisions quickly. However, it needs to be pointed out that up-front investment in effective collaboration can sometimes save considerable time and energy in downstream implementation. Once stakeholders achieve a working consensus, the literature suggests that implementation can occur quite rapidly. Thus, policy makers might be more favorable to collaborative governance where they expect a difficult implementation process.

Reinforcing Logsdon's (1991) argument about interdependence and the model by Vangen and Huxham (2003b) of trust building, our analysis suggests that agencies ought to consider the interactive effects of trust and interdependence on potential collaboration. We found, for instance, that high conflict situations characterized by low trust could still be managed collaboratively if the stakeholders were highly interdependent. Interdependence fosters a desire to participate and a commitment to meaningful collaboration, and it is possible to build trust in situations of high interdependence. By contrast, where interdependence is weaker, it will be difficult to effectively build trust. Stakeholders will engage in collaboration with one eye on alternative (noncollaborative) strategies. If one stakeholder is threatening to defect from collaboration, the commitment of all stakeholders is likely to suffer, and it will be difficult to develop a sense of ownership, understanding, or trust.

It is important to point out that both trust and interdependence are partly endogenous—they are shaped in positive or negative ways by the collaborative process itself. Thus, stakeholders entering into a collaborative process may not perceive themselves to be particularly interdependent. But through dialogue with other stakeholders and through achievement of successful intermediate outcomes, they may come to a new understanding of their relationship (Heikkila and Gerlak 2005; cf. Warner 2006). Many of the cases we read suggest that stakeholders come to recognize their interdependence through the collaborative process.

Whether collaborative governance is a passing fancy, we do not know. We confidently predict, however, that the demand for better cooperation and coordination between government and stakeholders is unlikely to wane in the near future.

APPENDIX

First approximation (32): Andranovich (1995), Beierle (2000), Booher and Innes (2002), Bryson and Crosby (1992), Chrislip and Larson (1994), Coggins (1999), Daniels and Walker (2001), Echeverria (2001), Fawcett et al. (1995), Freeman (1997), Fung and Wright (2001), Gray (1989), Healey (1996, 2003), Innes and Booher (1999a, 1999b), Kraft and Johnson (1999), Langbein (2002), Lee (2003), Lober (1997), Nelson and Weschler (1998), Ozawa (1993), Reilly (1998, 2001), Schedler and Glastra (2001), Schuckman (2001), Smith (1998), Susskind and Cruikshank (1987), Takahashi and Smutny (2002), Thomas (1995), Weber (2003), and Wondolleck and Yaffee (2000).

Second approximation (30): Ansell (2003), Beierle and Konisky (2001), Coglianese (1997), Conley and Moote (2003), Ebrahim (2004), Ekoko (2000), Elliot et al. (1999),

English (2000), Fung (2001), Gebhardt, Kaphingst, and De Jong (2000), Hamalainen et al. (2001), Imperial (2005), Innes and Booher (2003), Leach, Pelkey, and Sabatier (2002), Logsdon (1991), Manring (1998, 2005), McCloskey (2000), Meyer (1996), Mizrahi and Abramson (2000), Murdock, Wiessner, and Sexton (2005), Phillips (2001), Plummer and Fitzgibbon (2004), Schneider et al. (2003), Seidenfeld (2000), Springer, Stokes Sharp, and Foy (2000), Waage (2001), Walter and Petr (2000), Weech-Maldonado and Merrill (2000), Yaffee and Wondolleck (2003).

Third approximation (33): Alexander, Comfort, and Weiner (1998), Borrini-Feyerabend (1996), Bouwen and Taillieu (2004), Bradford (1998), Brinkerhoff (1999), Brown (2002), Coglianese and Allen (2003), Coughlin et al. (1999), Farrington and Boyd (1997), Franklin (2001), Geoghegan and Renard (2002), Gilliam et al. (2002), Gunton and Day (2003), Heikkila and Gerlak (2005), Lasker and Weiss (2003), Lasker, Weiss, and Miller (2001), Lindell (2004), Manring and Pearsall (2006), Margerum (2002), Merkhofer, Conway, and Anderson (1997), Mitchell (2005), Mutimukuru, Nyirenda, and Matose (2002), Plummer and Fitzgibbon (2004), Saarikoski (2000), Short and Winter (1999), Tett, Crowther, and O'Hara (2003), Till and Meyer (2001), Tompkins and Adger (2004), Verstraeten et al. (2003), Warner (1997), Warner (2006), Weaver and Moore (2004), and Weible, Sabatier, and Lubell (2004).

Fourth approximation (42): Abdelhadi et al. (2004), Blatner et al. (2001), Bryson, Cunningham, and Lokkesmoe (2002), Buanes et al. (2004), Burger et al. (2001), Busenberg (1999), Carter et al. (2003), Edelenbos (2005), El Ansari (2003), Frame, Gunton, and Day (2004), Futrell (2003), Geldenhuys (2004), Gemmill and Bamidele-Izu (2002), Glasbergen and Driessen (2005), Heikkila and Gerlak (2005), Huxham (2003), Huxham and Vangen (2000), Innes et al. (2006), Klijn and Koopenjan (2000), Lee (2003), Mahon et al. (2003), Margerum (2001), Martin, Tett, and Kay (1999), Matta, Kerr, and Chung (2005), Mitchell and Shortell (2000), North (2000), Pahl-Wostl and Hare (2004), Pelletier et al. (1999), Pokorny et al. (2004), Power et al. (2000), Redpath et al. (2004), Rhoads et al. (1999), Roberston and Lawes (2005), Rogers et al. (1993), Roussos and Fawcett (2000), Rummery (2006), Ryan (2001), Selman (2004), Sjoberg (2003), Vangen and Huxham (2003a, 2003b), Waage (2001), and Warner (2006).

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