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29 **The Role of Managers in Enacting Two-Step**
30 **Institutional Work for Radical Innovation in**
31 **Professional Organizations**

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67 **The Role of Managers in Enacting Two-Step Institutional Work for Radical Innovation**
68 **in Professional Organizations**

69 **Abstract**

70 Radical innovation in professional settings faces an institutional challenge. Professionals
71 enjoy autonomy predicated on jurisdictional knowledge and can resist radical innovation if
72 their interests are threatened. Our study examines how managers enact institutional work to
73 mediate professional resistance and so ensure that radical innovation can take hold. Derived
74 from comparative case studies of Italian hospitals introducing integrated service
75 configurations, we show that managers may hold back from introducing radical innovation
76 where they judge professional resistance as unsurmountable. In contrast, where the
77 professional context is more receptive because of micro-institutional affordances, then
78 managers enact a two-step process of institutional work, which encompasses
79 technical/cultural work and political work.

80 **Keywords:** Radical Innovation; Institutional Work; Professional Organization; Healthcare

81

82 **Introduction**

83 In innovation studies, managers commonly outline the main strategic or technological intent
84 of innovation, facilitate the adoption of new practices, grant autonomy to innovators within
85 project teams to pursue radical innovation, and design appropriate incentives to stimulate
86 their creativity (O'Connor and DeMartino, 2006; Hidalgo and Albors, 2008; Poskela and
87 Martinsuo, 2009). The processes of scientific discovery and implementation in professional
88 organizations reveal that these premises do not hold everywhere. In professional
89 organizations, the relationship between managers and the professionalized workforce is very
90 different (Von Nordenflycht, 2010). Professionals possess expert knowledge that is heavily
91 regulated and inaccessible to managers; hence the former control the design and
92 implementation of breakthrough innovations and direct breakthrough innovations in
93 directions that may not prove desirable for managers. Overall, processes of scientific
94 discovery and implementation in professional contexts reveal that managers might 'only' be
95 supporting actors, who facilitate professional decision-making (Currie and Procter, 2005;
96 Llewellyn, 2001). Further, because radical innovation may undermine professional
97 boundaries and changes longstanding professional practice (Barczak et al., 2006; O'Connor
98 and DeMartino, 2006; Hoegl et al., 2007; Glynn et al., 2010), professionals may actively

99 work to preserve the status quo. Under such conditions, managers may avoid engaging
100 professionals in the first place, or only incremental innovation ensues (Fitzgerald et al., 2002;
101 Vermeulen et al., 2007; Lewin and Reeves, 2011; Currie et al., 2012). Addressing this
102 challenge, our study reveals how managers engage and shape the efforts of highly-expert and
103 autonomous professionals towards radical innovation.

104 Theoretically, the challenge for managers in introducing radical innovation is an
105 institutional one. Professionals defend established boundaries and practices by reinforcing the
106 regulative, normative and cultural-cognitive arrangements in their organizations; i.e. the
107 established rules, social expectations and logics of actions. In professional contexts, these
108 three arrangements consolidate into ‘institutional pillars’ (Scott, 2001); i.e. they produce
109 stabilizing effects towards replication and reinforcement, rather than revision, of established
110 professional boundaries and practices (Suddaby and Viale, 2011; Muzio et al., 2015). To
111 realize radical innovation in professional organizations then, managers must act upon
112 institutional pillars.

113 Extant literature tends to emphasize the top-down effect of institutional pillars upon
114 innovation (e.g., Van Dijk et al., 2011; Yang and Wang, 2013; Shu et al., 2015). In contrast,
115 our study considers how top-down institutional influences might be mediated by managerial
116 agency that aims for radical innovation, through drawing upon the concept of ‘institutional
117 work’. Institutional work represents “the purposive action of individuals and organizations
118 aimed at creating, maintaining and disrupting [regulative, normative and cognitive
119 foundations of] institutions” (Lawrence and Suddaby, 2006; p. 216). Through focusing upon
120 institutional work, we illuminate mechanisms through which managerial agency shapes
121 radical innovation in professional organizations. We ask the research question: how do
122 managers act upon institutional pillars through institutional work to influence professional
123 organization towards radical innovation?

124 Empirically, to address this research question, a comparative case study of radical
125 innovation in 12 Italian hospitals was enacted to examine the interaction of executive and
126 middle managers with elite, high-status professionals (i.e., doctors) in the introduction of
127 radically new integrated service reconfiguration, which dilute professional boundaries and
128 change longstanding professional practice, and so exemplify our theoretical concerns through
129 impacting regulative, normative and cognitive institutional pillars.

130 This article proceeds as follows. Within the literature review, the institutional perspective
131 is detailed by focusing on both the structures and possibilities for agency. Then, a description
132 of the research setting and research design is presented. Data are shown by clustering the
133 empirical cases: management holding back from radical innovation (cluster 1); management
134 organizing for innovation through centralized projects (cluster 2); management organizing for
135 radical innovation through political work (cluster 3); management organizing for innovation
136 through two-step institutional work (cluster 4). Within the discussion, a comparative analysis
137 is presented. Finally, in conclusion, the theoretical contribution to literature about managers'
138 role in radical innovation within professional organizations is emphasized while the practical
139 implications and avenues for further research are crystallized.

140 **An institutional perspective on radical innovation in professional organizations**

141 Institutional theory conceives professional organizations as characterized by three
142 institutional 'pillars' (Scott, 2001), which cause actors to shy away from radical innovation;
143 i.e. regulative elements that establish rules to which actors should conform; normative
144 elements that introduce a prescriptive and evaluative dimension in social life, representing
145 how actors should behave appropriately; and cultural-cognitive elements that relate to shared
146 conceptions of what constitutes the social reality, and how actors should evaluate behaviors.
147 These pillars produce stabilizing effects in the organization, aligning the behaviors of
148 embedded actors towards the replication of enduring social structures and systems, thus

149 engendering isomorphism and path dependence. Radical innovation emerges only when the
150 stabilizing effects of institutionalized interests, norms and beliefs are breached.

151 These breaches are defined ‘micro-institutional affordances’, to represent the fact that
152 organizational actors become more aware and tolerant of radical changes (Van Dijk et al.,
153 2011). Three phenomena are likely to generate breaches. First, increase in multiplicity of
154 institutionalized interests, norms and beliefs co-existing in the organization, raises actors’
155 awareness of a need for change (Reay and Hinings, 2009). Second, heterogeneity of
156 organizational groups with distinct interests, norms and beliefs raises actors’ awareness that
157 radical change might appease stakeholders’ demands (Zietsma and Lawrence, 2011). Third,
158 ambiguity of institutionalized interests, norms and beliefs, raises actors’ awareness that a
159 radical change could help restore clarity (Balogun and Johnson, 2004). Micro-institutional
160 affordances hence represent situations in which compliance to established rules and social
161 norms, as well as the commitment to established values, interests and belief systems, is
162 challenged, either because their interpretation is more ambiguous or because new interests,
163 norms and beliefs become more relevant. So, embedded actors are more tolerant of, and
164 predisposed towards, radical change (Lawrence et al., 2013).

165 To take advantage of micro-institutional affordances, actors can engage in institutional
166 work (Lawrence and Suddaby, 2006). Institutional work can maintain, create or disrupt an
167 institutional arrangement and is classified according to whether it targets the regulative,
168 normative or cultural-cognitive pillar. Institutional work is political work if it
169 maintains/modifies rules, structures and property rights that define access to financial and
170 other material resources; technical work if it maintains/modifies beliefs around what is
171 considered appropriate behavior; cultural work if it maintains/modifies actors’ attachment to
172 institutions. Table 1 provides a summary of key forms of political, technical and cultural
173 work enacted to support radical innovation (see columns 1 and 2).

<<Table 1 about here>>

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Previous research in professional organizations, focused upon the interaction of professionals and managers, highlights that each actor, often in opposition, enact institutional work to maintain or revise established boundaries and practices. In institutional terms, boundaries represent demarcations between the jurisdictions of different actors, within which they can self-regulate; practices represent shared routines that inform actors' responses to specific situations (Zietsma and Lawrence, 2011).

Professionals usually have the upper hand because they possess expert knowledge required to develop and deliver products/services and accordingly have autonomy to choose when and how to engage with radical innovation (Abbott, 1988). Their institutional work defends this right and shapes the nature and extent of radical innovation (Suddaby and Viale, 2011; Currie et al., 2012). Professionals' institutional work revolves around shaping inter-professional boundaries that establish how professionals are connected and practices that establish what professionals should do in their jobs (Ackroyd and Muzio, 2007). Boundaries and practices are connected in a recursive relation: boundaries delimit the sets of practices that embedded actors pursue, while practices support specific boundary arrangements (Zietsma and Lawrence, 2010). Accordingly, professionals neutralize the 'threat' of radical innovations by reinforcing boundaries and thus protecting their self-regulation and exclusive jurisdiction (Lounsbury and Crumley, 2007; Suddaby and Viale, 2011). In operating "boundary maintenance around the differential areas of expertise associated with their work" (Llewellyn, 2001, p. 595), professionals perform technical work and cultural work to reinforce the normative/cognitive foundations of their claims (Micelotta and Washington, 2013).

Executive managers may attempt to enact institutional work such as: 'undermining the moral foundations' of professionals' autonomy; 'theorizing' cause-effect chains related to performance management and measurement systems; developing rules systems that change

199 the status of marginalized organizational actors or create hierarchies ('defining'); diverting
200 resources and property rights across professional groups ('vesting'); introducing auditing and
201 monitoring mechanisms ('policing') (See Table 1). These attempts, however, all struggle to
202 produce the expected changes without support from professionals (Suddaby and Viale, 2011;
203 Currie et al., 2012; Muzio et al., 2013).

204 Meanwhile, middle managers face an even bleaker outlook regarding their role in radical
205 innovation, with little evidence that they can successfully enact institutional work. Generalist
206 (without a professional background) middle managers are not commonly characterized as
207 institutional actors that drive radical change in professional organizations. Their role is one of
208 a supporting cast confined to facilitating strategic change or innovation within established
209 institutional pillars (Wooldridge et al., 2008). Thus, how executive managers and generalist
210 middle managers contribute to challenging institutionalized interests, norms and beliefs of
211 professionals is unclear, as attempts to introduce radical innovation unfold. Following which,
212 to repeat our research question: how do managers act upon institutional pillars through
213 institutional work to influence professional organization towards radical innovation?

214 **Research Design**

215 *The Empirical Case*

216 The study investigated the attempts of executive and middle managers in 12 Italian hospitals
217 to enable the creation of radically new services for complex care patients. The choice of the
218 empirical setting, Italian hospitals, is shaped by our theoretical concerns. Hospitals have long
219 been privileged contexts to induce theory about change and innovation in professional
220 contexts from an institutional perspective. Specifically, institutional accounts of change
221 within hospitals highlights the significance of their underpinning institutional pillars, which
222 renders maintenance of the status quo more likely than radical innovation taking hold (e.g.,

223 Reay et al., 2006; Currie et al., 2012). This empirical setting thus represents an extreme
224 context from which to induce theory.

225 The radical innovation under investigation involved service integration. Complex care
226 patients have multiple chronic diseases, which require long-term interventions, and access to
227 different clinical departments. Stroke patients, for instance, access neurology, radiology,
228 accident and emergency, physiotherapy, and nutrition departments during their treatment and
229 follow-up. They typically encounter separate and disjointed services, since each clinical
230 department implements a specialist, but compartmentalized approach. To allow better
231 continuity of care, managers wanted clinical departments to create *integrated services*, which
232 unite previously separate specialist services into a common workflow. Thus, they encouraged
233 the development of multidisciplinary teams comprising leading doctors across different
234 departments, to generate a single point-of-access service for patients with specific symptoms,
235 agreeing on new evidence-based criteria for patient referral and interventions, and defining
236 new rules for discharge, referral, waiting lists and resource access.

237 As an intermediate step, managers sought to establish the use of Integrated Care Pathway
238 (ICP) methodologies by clinical departments to stimulate and inform the radical redesign of
239 their services. An ICP is a structured multidisciplinary plan of care that translates scientific
240 discoveries, guidelines and evidence into new services, aiming to standardize care for a
241 defined group of patients (Kinsman et al., 2010). The adoption of ICPs was not the radical
242 innovation, but a methodology that hospital managers thought clinical departments could use
243 to design new services for patients with complex care needs. ICP methods informed the
244 creation of new care services in ‘markets’ where comparable services did not exist, and the
245 redesign of radically new services, which required significant changes in decision-making
246 criteria, integration of different clinical departments and management of patient flow
247 (Kinsman et al., 2010). This is consistent with the definition of radical innovation as “the

248 development or application of significantly new technologies or ideas [that] are either non-
249 existent or require dramatic behavior changes” (McDermott and Colarelli, 2002; p. 424).

250 The multidisciplinary teams within and across hospitals redesigned different services with
251 an ICP methodology. In the most successful case in the dataset (i.e. Cicero), different
252 multidisciplinary teams redesigned multiple cancer-related, cardiologic, gastroenterological,
253 optical, and neurological services. Each innovation mobilized different groups of clinicians
254 and an evidence base, and generated different outcomes. Another hospital (i.e. Sloan) took a
255 more focused approach and experimented with new services in relation to very rare
256 neurological diseases. More generally, hospitals could not adopt others’ redesigns, as they
257 were unavailable at the time of their innovation efforts; hence, they engaged in the whole
258 process of idea generation and implementation in isolation from each other.

259 Three key actors were engaged with this radical innovation. First, executive managers
260 enacted a strategic role to stimulate the creation of new services, and the integration of
261 previously compartmentalized services. They were generalist managers, as they lacked
262 medical expertise. Second, they were supported on the ground by generalist middle managers
263 in the Quality Departments, reporting into executive boards, but who lacked hierarchical
264 power over clinical departments. They also lacked medical expertise. Finally, based upon
265 their jurisdictional knowledge, doctors controlled the creation and implementation of
266 services. Several doctors involved were heads of clinical departments, hence combining
267 clinical and managerial responsibilities they acted as ‘hybrid middle managers’ (Llewellyn,
268 2001), exerting hierarchical power over nurses, junior doctors and other clinicians.

269 When radical, the ICP-based service redesigns required major revisions to institutionalized
270 interests, norms and beliefs related to boundaries and practices enacted by doctors within
271 clinical departments. First, they challenged clinical specialism and doctors’ capacity to
272 develop individualized care packages for patients (Adler and Kwon, 2013), by standardizing

273 care processes and therapy and diagnosis criteria. Second, they challenged institutionalized
274 reliance on tacit ‘mindlines’ derived from early training and socialization, where doctors
275 draw on experiential or more intuitive knowledge in diagnosing and managing patients
276 (Gabbay and LeMay, 2004). Now decision-making was based on more formal clinical
277 evidence. Finally, they reshaped inter-professional boundaries, requiring experts with
278 different roles and backgrounds to interact in multidisciplinary teams, disclosing their
279 knowledge to others, sharing decision-making, so conceding a portion of their autonomy to
280 peers (Lewin and Reeves, 2011).

281 *Data Gathering*

282 Data was collected from October 2011 to September 2012 across 12 comparative cases.
283 Initially, within the Italian healthcare context, exploratory interviews were undertaken with
284 managers in 20 hospitals, identified as high-performing organizations through publicly
285 available ‘league tables’ of quality of their services. Then, hospitals with comparable quality
286 were selected, as variations in this indicator could introduce confounding explanations in our
287 study. In this exploratory stage, within some hospitals identified as high performing,
288 managers knew little about integrated service, nor had they any thoughts about its
289 implementation, so these hospitals were excluded from further analysis. Thus 12 high
290 performing hospitals were identified that were active with plans for integrated services, but
291 not necessarily committed to their implementation in the short-term. Some reported system-
292 wide integrated care, whilst at the other end others reported they were not progressing
293 integrated services in the face of potential resistance. Such varied responses aligned with our
294 concern to explain managers’ institutional work in seeking to drive reform.

295 Across the 12 hospitals, a comparative case study approach (Eisenhardt, 1989) was taken
296 to examine the (re)design of complex care services according to principles of integrated care.
297 A substantial archive of documents around the redesign of frontline services and ICP

298 application was initially gathered. These documents provided evidence on the extent of
299 service redesign, criteria to assess clinical outcomes, and degree of implementation.
300 Documents relating to organizational strategies and policies for ICPs were collected along
301 with scientific articles in national and international journals, reports on ICP development, ICP
302 presentations for internal meetings, workshops or conferences, newsletters and leaflets on
303 hospital intranet or websites. These documents were subjected to data analysis along with
304 interview transcripts.

305 As the documentary analysis was insufficient to detail how ICPs were developed and
306 implemented, interviews with key informants became the primary source of data. General
307 middle managers in quality departments were first approached, as they were responsible in
308 each of the empirical cases for supporting service redesign through ICPs, to deepen access to
309 the 12 in-depth cases. Following this, the main actors involved in the innovation process were
310 identified and interviewed; i.e., executive managers (CEOs, Medical Directors, R&D
311 Directors), general middle managers in the Quality Departments, and doctors.

312 The interviews took place in two phases. First, across six hospital sites, one of the
313 researchers undertaking fieldwork, asked about actions stimulating service redesign, the key
314 interactions between actors as service was redesigned, and perceived factors affecting radical
315 innovation. Following Mantere's (2008) approach, the semi-structured questionnaire was
316 used to allow a "story-telling approach that is, to let the interviewees describe their views as
317 freely as possible, allowing them to interpret the questions freely and pursue those themes
318 that they regarded as central" (p. 298). In total, 60 informants in 12 hospitals were
319 interviewed, on average for one hour. Supplementary field notes kept track of in-field
320 observations, such as interactions between managers and doctors in departmental meetings
321 (50 hours of observation). Table 2 provides an overview of the research phases, hospitals
322 involved and research instruments for the various activities.

<<Table 2 about here>>

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In the analysis, one of the researchers (conducting the fieldwork) initially coded data, while others acted as external investigators, developing theory ‘from outside’ through independent within-case and cross-case analyses, to reach a common theoretical understanding of institutional work enacted around radical innovation (Eisenhardt, 1989; Mantere, 2008). Triangulation across analysts was performed to identify clusters of cases, as only one of the four authors had been involved in data collection, hence the remaining authors were able to challenge and interrogate derivation of clusters by the fieldworker (Mantere et al., 2012).

In outline, in successive stages of analysis, the intention was to move from a descriptive, empirical to an interpretive, more theoretical mode of explanation for the patterns of innovation induced across the comparative case data. The final step of the analysis involved categorization of the broader explanatory categories that were more empirically oriented into aggregated theoretical categories (types of institutional work and by whom), with consideration for how they linked to each other, e.g. how different actors’ institutional work, when considered together, produced (or not) a radical innovation effect (Pratt et al., 2006).

Following such analysis, the authors agreed to group the 12 cases in four clusters: (i) no management initiative: 4 cases where managers disengaged from radical innovation due to professional resistance; (ii) organizing for radical innovation through a centralized project: 4 cases where managers coordinated service redesign through the adoption of a standardized ICP format and the supervision of project teamwork; (iii) organizing for radical innovation through political work: 2 cases where managers carried out ‘political work’ aimed at introducing new regulations and incentives; (iv) organizing for radical innovation through cross-level institutional work: 2 cases where early adopters and managers carried out ‘technical work’, ‘cultural work’ and ‘political work’ to stimulate service redesign. In each cluster, cases were compared to identify common patterns, elucidating a general explanatory

348 model and delineating differences regarding how specific factors triggered diverse outcomes.
349 To assess the degree of ‘success’ in each cluster, the number of ‘original’ service redesigns
350 informed by ICPs and the number of departments involved (to measure the extent of changes)
351 were considered, along with the perceived radicalness of the ICPs and the degree of their
352 implementation in practice (both informed by clinical informants). The cases ranged from (i)
353 cases of zero radical service redesign attempted, with no instance of ICP adoption (i.e.
354 Black), to one case of more than 30 service redesigns informed by ICPs, whose degree of
355 implementation was confirmed by the institutionalization of new structures (i.e. Cicero). This
356 analysis provided a general model explaining how variations in organizing radical innovation
357 through ICPs related to the roles and institutional work of executive managers, middle
358 managers and professionals, which is outlined in Figure 1.

359 **Findings**

360 Table 1, column 3 highlights examples of institutional work enacted in the selected cases by
361 managers. Further detail about managers’ institutional work is provided below. The
362 combination of different institutional arrangements and institutional work led to specific
363 outcomes for each cluster. Terms in italics within empirical sections refer to forms of
364 institutional work enacted in the cases. Table 3 provides a summary of institutional work
365 within each cluster. In Cluster 1 cases (column 2, Table 3), institutionalized interests, norms
366 and values worked against radical service redesign, the latter which was generally perceived
367 as a low priority or clinically inappropriate. There was little evidence of institutional work
368 enacted by managers. More institutional work was enacted by professionals for maintenance
369 purposes around institutionalized interests, norms and beliefs. Quality managers who held an
370 interest in ICPs felt “*between a hammer and the anvil*” (Black, Quality Manager). ICP
371 development was then left to the spontaneous efforts of professionals and remained sporadic.

372 *The limited involvement of executive managers is a sore point for us. We cannot get ICPs into*
373 *their heads no matter how we try. For them, ICPs are not a priority and the time is not right*

374 *to put the delicate equilibrium between clinical departments at risk. So, ICPs depend on*
375 *doctors, who tend their own garden (Winter, Quality Manager).*

376 Since managers' institutional work was absent in Cluster 1, the empirical presentation will
377 focus in the following sections upon case Clusters 2, 3 and 4, with particular detail provided
378 about our exemplar Cluster 4 cases.

379 ***Cluster 2: Organizing for radical innovation through a centralized project***

380 The Cluster 2 cases were also characterized by institutionalized interests, norms and beliefs
381 preserving compartmentalized services and imbuing skepticism towards standardized care.
382 To illustrate our theoretical analysis, our empirical presentation focuses upon the case of
383 Green (see Table 3, Column 3, for combined analysis across Cluster 2 cases).

384 In Green, managers felt opposition from the 'old guard'; i.e., senior doctors controlling
385 key departments. The latter sought to *undermine the moral foundations* of ICPs, emphasizing
386 the risks of standardized care; and *valorized the normative/moral foundations of current*
387 *arrangements*, evidencing good clinical outcomes in so doing.

388 *It was difficult to negotiate change with the old guard. They were skeptical that sharing*
389 *decisions would lead to better decisions. They always argue that departments lose*
390 *responsibilities and become less effective. At this point there is little we could do to move*
391 *forward. (Green, Quality Manager)*

392 At Green, two events produced micro-institutional affordances. First, the retirement of
393 several key players in the 'old guard' weakened opposition to service redesign. The new
394 'young guns' looked forward to integrated care as an opportunity to improve effectiveness of
395 care and at the same time, their own legitimacy.

396 *The new generation of doctors has very different training, sometimes from other hospitals.*
397 *They saw ICPs and protocols with less blood in their eyes... Plus, they were filling big shoes,*
398 *so they were eager to put their names on some important changes. (Green, Quality Manager)*

399 Second, managers in Green initiated a major hospital redesign whereby space was opened
400 up and clinical departments co-located. The "restructuring of the walls" (Green, Quality
401 Manager) was appreciated by clinical departments since the previous geographical dispersion
402 had the downside of "too much isolation" (Green, Doctor). Professionals agreed that "it was a

403 *once-in-a-lifetime opportunity*” (Green, Doctor) to improve clinical services and inter-
404 departmental relationships. In response to this, professionals liaised with managers during the
405 hospital reconfiguration to understand how they could revise their services. In doing so, they
406 showed managers that they had become more tolerant of process re-engineering approaches.

407 *We reached breaking point, so we welcomed the relocation plans. We had to drive to any*
408 *meeting. It became unbearable with our schedule. At that point, we had to change something*
409 *in our services, so we asked for help from managers (Green, Doctor).*

410 Managers in Green became conscious that pressures to preserve the status quo had
411 weakened. They did not pursue institutional work to revise established regulations, norms and
412 cultural frameworks. Rather, they identified professional groups interested in ICP
413 development, and supported them through a centralized project management approach.
414 Specifically: (i) middle managers identified clinical groups open to service redesign and
415 championed these to executive managers to initiate local projects; (ii) executive managers
416 ratified projects, assigning to middle managers the task of supporting professionals without
417 interfering in their clinical decision-making; (iii) middle managers liaised with professionals
418 and were allowed to participate in their multidisciplinary project teamwork as part of the
419 *“supporting, not supervising cast”* (Green, Quality Manager), with middle managers
420 engaging in extensive administrative work that legitimized their role. Finally, professionals,
421 when assured that managers would not intrude upon clinical and operational decisions,
422 undertook the necessary expert work for ICP development.

423 *We won over doctors with our backstage work around documentation, organizing meetings,*
424 *collecting data. Doctors appreciated our efforts and told us they were glad to participate*
425 *because time was well spent, meetings were organized and our data collection enabled them*
426 *to focus on teamwork. (Green, Quality Manager).*

427 When supported by professionals, middle managers suggested the adoption of ICP formats
428 and co-produced an in-house ICP methodology. Guided by this, professionals collected
429 evidence to inform their decision-making, and produced illustrations of their ICP experiences
430 for others to read. The extent to which ICP development informed radical service innovation

431 was however questionable since professionals (i) interpreted ICP development only as a
432 research or experimental endeavor, without altering their practices; (ii) replicated their
433 compartmentalized decision-making in teams and hence produced ICPs which reinforced
434 established boundaries, and produced only incremental innovation; (iii) developed radical
435 innovation only in relatively ‘marginal’ services with few patients and resources. As a
436 consequence, at Green, there was a need for sustained administrative work by quality
437 managers, which cast doubt on the long-term future of ICP development.

438 *Nothing would work if I never show up. As soon as doctors sense weakness we are dead. But*
439 *we are also proving to be reliable, so now they are calling us. We are proud of this, but also*
440 *very exhausted. We wish for the next years to loosen our grip. (Green, Quality Manager)*

441 In summary, at Green, as with other cases in this cluster (see Table 3, Column 3), an
442 absence of institutional work by managers left aspirations for sustaining any radical
443 innovation unfulfilled. In Cluster 3 cases, detailed below, institutional work by managers was
444 evident, but ineffective compared to the efforts of professionals, as we detail below.

445 ***Cluster 3: Organizing for radical innovation through political work***

446 The Cluster 3 cases (Raffi and Dragan) experienced multiplicity and ambiguity of
447 institutionalized interests that stimulated tolerance towards practice/boundary revision. The
448 increasing promotion of multidisciplinary work from practice communities to which doctors
449 were strongly attached, and growing interest of doctors in becoming ‘clinical leaders’ and
450 ‘first movers’ in the field breached the stabilizing effects of institutional interests toward
451 compartmentalized care. Hospital managers sought to exploit the receptive context with a
452 strategy that could achieve quick results in terms of ICP development, without intruding upon
453 clinicians’ jurisdiction. Executives and quality managers both recognized they lacked
454 expertise and clinical authority to demand use of ICP methods to redesign clinical services.
455 Thus they did not venture into any *technical work* that openly criticized institutionalized
456 values and beliefs around compartmentalized care; or any *cultural work* that promoted
457 attachment to integrated care. To encourage the redesign of services, then, executives, with

458 the help of quality managers, designed and implemented a new regime of incentives for
459 multidisciplinary groups organizing their work through ICP methodologies. This was a soft
460 strategy of *political work*. On the one hand, it gave more opportunities and incentives for
461 multidisciplinary groups to emerge and reorganize their services. On the other hand, the new
462 regulations were not rule systems that demanded radical innovation and sanctioned non-
463 compliance.

464 At Raffi, executive and quality managers liaised to perform *political work*, without
465 interacting with ‘early adopters’. First, they *constructed new identities*; i.e. introduced a new
466 regulation that formalized the existence of ICP groups in the organizational structure. Second,
467 they *defined their status*; i.e. developed membership rules that clinical departments had to
468 follow to obtain mandated status. Third, they *vested* these new entities with ad-hoc financial
469 resources. Professionals interpreted such initiatives as managerial intrusion and circumvented
470 strategic intent by developing ICPs that reaffirmed pre-existing clinical services.

471 *We had those rules in place for a year, but then removed them. Directors received quite*
472 *vicious reactions from clinical leads, who argued that the rules rewarded departments for*
473 *principles that had nothing to do with the actual needs or effectiveness of their work. We*
474 *received a few “ICPs” [with visible quoting gestures], which basically were internal*
475 *protocols patched together (Raffi, Quality Manager).*

476 At Dragan, quality managers sought to build momentum from one very successful ICP
477 experience and stimulate a wider spread of the practice. They liaised with executives and
478 engaged with *political work*, outlining an experimental regulatory regime that promised
479 recognition and resources to professional groups providing evidence of multidisciplinary
480 configurations of care delivery; i.e. *defining and vesting new identities*. They insisted that the
481 ‘early adopting’ group not only promoted their ICP, but performed *theorizing work* with
482 organizational wide programs meant to institutionalize beliefs that ICPs produce superior
483 outcomes; and *educating work* with programs meant to provide peers with the skills and
484 knowledge required for ICPs. Early adopters, however, promoted their experiences only
485 temporarily and locally. They feared that further efforts would be perceived as ‘intrusion’ by

486 other clinical departments. Managers' reliance on *political work* in isolation from
487 professionals again failed to yield the expected results. Most departments avoided ICP
488 development to preserve their services, while a few pilot groups failed to develop into
489 functioning multidisciplinary teams, because of their inexperience with ICPs.

490 *Managers invited us to make a hospital-wide effort to promote our model across*
491 *departments. It was incompatible with our core duties; managing so many interactions with*
492 *other departments was killing our own development. Plus, many kept us at arms' length when*
493 *we needed to push things. That was not worth the risk. (Dragan, Doctor)*

494 In both cases, then, the new regulations encountered negative reactions from professionals.
495 The regulations were generated with limited interaction with professionals. Managerial
496 efforts were perceived as unexpected “*changes of pace*” (Dragan, Doctor). Furthermore, the
497 allocation of additional resources to ICP development struck doctors as inappropriate,
498 considering how regular practice was suffering from a shortage of resources. Hence, doctors
499 worked to divert the extra resources towards more traditional uses. They enacted forms of
500 *technical work* and *cultural work* to reinforce the centrality of professionals as priority-
501 setters, and emphasize best practices linked with more traditional, compartmentalized forms
502 of care. These professionals *reinforced the identities* of the heads of clinical departments as
503 central strategy-makers. Then, they *reinforced the normative foundations* of the existing best
504 practices, highlighting how they were generated by doctors' professionalism and by resources
505 that required buffering against any diminution. In doing so, they *mythologized* these
506 normative foundations, by using positive and negative experiences of care to highlight the
507 importance of these factors, and generate emotional attachment to them. At no point were
508 ICP methods, multidisciplinary work practices, or integrated care innovations, demonized or
509 deterred. In their attempt to change resource allocation, doctors engaged in *political work*,
510 particularly in forms of *advocacy work*. Using meetings and face-to-face conversations,
511 temporary ‘alliances’ of doctors sought to gain the support of executives. This was
512 successful. Executives recognized organizational risks associated with the regulatory regime

513 around ICPs. By prioritizing other goals, the stimulus to redesign care services through ICP
514 methods died down, and was left to the spontaneous initiative of clinical departments.

515 *The regulation regime for ICPs was designed to avoid any imposition upon clinical*
516 *departments. The new budgeting rule was optional, and not following it would not have*
517 *repercussions on their practice... They argued, however, that it did have repercussions. They*
518 *said: "the policymakers are cutting our funds, reimbursement money is delayed, and we need*
519 *to pay attention to every penny... and you redistribute pockets of resources for ICPs? There*
520 *are areas that need that money more urgently!" (Raffi, Quality Manager).*

521 In summary, in Cluster 3 cases, managers engaged in institutional work, but this was
522 decoupled from professional practice. Professionals also engaged in institutional work, the
523 effect of which was to halt the advance of ICP methodologies, and radical innovation. Only
524 in Cluster 4 cases, which we detail below is radical innovation realized.

525 ***Cluster 4: Organizing for radical innovation through two step institutional work***

526 In contrast to Cluster 3 cases, managers within Martin and Cicero developed a more
527 comprehensive strategy of institutional work around radical innovation, working closely with
528 professionals. Martin and Cicero experienced a multiplicity of institutional elements that,
529 similarly to Cluster 3 cases, stimulated tolerance towards practice and boundary revision. The
530 preservation of professionalism across clinical departments was countered by institutional
531 forces oriented to the preservation of hospitals' status as 'clinical leaders' and 'first movers'
532 in the field. The multiplicity of institutional demands was such that doctors were inclined to
533 seek opportunities of innovation within the boundaries of their professionalism.

534 *I came here five years ago and it was 'night and day', compared to my previous*
535 *experiences. The mantra here is: you cannot be only a doctor, but also an innovator.*
536 *So we need to prove that we have our own 'field' of action and that we constantly stay*
537 *on its innovation frontier. (Cicero, Doctor)*

538 This strategy was organized in two steps: (i) initiatives that institutionalized new interests,
539 norms and beliefs, allowing professionals to experiment with multidisciplinary working and
540 standardized care; (ii) initiatives that reinforced institutionalized interests, norms and beliefs,
541 orienting the professionals' agency towards ICP development. Hereafter, we present the
542 Cicero case in detail.

543 In the first step, executives did not enact any *political work*; e.g. linking ICP development
544 to special status or resources for professionals, after failed attempts in the past.

545 *We experimented with new rules and top-down directives. We received adverse feedback from*
546 *clinical departments lamenting that this was an unexpected change of pace and that existing*
547 *clinical outcomes before our intervention were of high quality, and that therefore the change*
548 *of pace was unwelcome. (Cicero, Executive Manager)*

549 Rather, quality managers liaised with early adopters (i.e. doctors with reported interest in
550 integrated care) to stimulate early experiments with integrated care services. Early adopting
551 doctors took the lead, performing *technical work* to introduce institutionalized norms and
552 beliefs related to interdisciplinary and standardized care. These doctors exploited earlier
553 efforts at Cicero to *design normative networks* that facilitated interaction and mutual
554 influence among elite doctors, whose offices were all located in the same physical area. This
555 had engendered a habit amongst these doctors to informally share stories about each other's
556 work and patients. Professionals could also count on 'Cicero Learning', an organizationally
557 mandated training framework through which doctors regularly interacted. Cicero Learning
558 became salient for the first step of institutional work. Doctors constantly interacted with
559 Cicero Learning through sending requests to organize seminars or courses that an advisory
560 board reviewed. They competed considerably for places as 'trainers' in Cicero Learning
561 because "*these credits count*" (Cicero, Doctor) for organizational prestige and career
562 progression. Furthermore, Cicero Learning had a reputation that attracted doctors to
563 participate as attendees. So, early adopters liaised with managers to take over responsibility
564 for popular training programs where they performed *educating work*; i.e. informing and
565 training fellow professionals about skills and knowledge needed to integrate professional
566 boundaries and practices. They also engaged in *theorizing work* to explain through cause-
567 effect chains why new boundary and practice arrangements benefited professional work; and
568 in *mimicry* to associate new institutionalized interests and beliefs with international best
569 practices. Early adopters thus inspired their colleagues with new ideas "*to stay at the frontier*

570 *of innovation*” (Cicero, Doctor) and made integrated care consistent with the cognitive
571 framework into which professionals were socialized. Executives had a hands-off approach
572 throughout this first stage, supporting the infrastructure and programmes within which the
573 early adopters performed their technical and cultural work. Quality managers provided
574 administrative support necessary for the continued engagement of doctors.

575 *We have programs aimed at encouraging excellence in medicine through international*
576 *experiences. We’ve had a few doctors promoting evidence-based medicine. They sent very*
577 *clear messages that, if we wanted to be amongst the best, most innovative organizations, we*
578 *had to embrace this change. (Cicero, Executive Manager)*

579 These efforts promoted multidisciplinary working across pre-existing professional
580 boundaries and practice, but did not explicitly demand service redesign. Clinical departments
581 were free to experiment with integrated configurations and process reengineering. According
582 to professionals’ individual preferences, this experimentation stage resulted in the
583 proliferation of alternative ways of working. Most were incremental service innovations; e.g.
584 creating research and evaluation groups, establishing regular multidisciplinary meetings to
585 discuss patient cases, revising internal protocols to clarify connections with other clinical
586 departments. More rarely, professional groups introduced radical service redesign.

587 *Departments were very receptive. All clinical departments have been doing something to*
588 *manage processes, improve quality and collaborate with others. They played with the new*
589 *concepts a lot and most departments began showing in Cicero Learning their own*
590 *experiences, constantly remarking how they came from cross-departmental collaborations*
591 *and were academically robust. (Cicero, Quality Manager)*

592 The proliferation of experiments across clinical departments signaled increasing erosion of
593 boundaries and the institutionalization of interests, norms and beliefs related to
594 multidisciplinary care. This experimental stage was “*long and slow*” (Cicero, Executive
595 Manager). As noted by an executive manager in Martin:

596 *It is like planting season. It takes time and luck. You plant your seeds, and pray to God that*
597 *the soil is fertile and that no flood or storm will ruin the harvest. And you wait. You patiently*
598 *wait for the seeds to grow because you cannot really force the soil to produce results*
599 *immediately. (Martin, Executive Manager)*

600 In Cicero, managers had “*prepared the soil*” over the years and could use structures (such
601 as Cicero Learning) created and developed over decades of constant revision. In this respect,
602 “*time was a gentleman*” (Cicero, Quality Manager) because it had allowed professionals to
603 develop their own understanding of and response to integrated care.

604 On the downside, the experimental stage had produced very different results, since
605 professional groups pursued their individual interests and understandings of integrated care.
606 Only few radical innovations were pursued and the coalition felt the need to more
607 systematically organize service innovation.

608 *We couldn't find one single product that all groups produced. ICPs seemed a particularly*
609 *smooth way to organize work but they were rare and were so different from each other. We*
610 *wanted to channel these efforts in a more systematic way. (Cicero, Quality Manager)*

611 Consequently, a second and faster step of institutional work was enacted to consolidate the
612 nascent interests, norms and beliefs, and orient the professionals toward service redesign in a
613 more sustained way. Three forms of institutional work were enacted in 12 months. First,
614 quality managers, executive managers and early adopters formed a stable coalition focused
615 on organizing service redesign. This required making the coalition visible to clinical
616 departments, and putting all its members in condition to perform other forms of institutional
617 work. Quality managers, earlier legitimized as go-to-guys for administrative support during
618 multidisciplinary experiments, led this effort, working to *construct a new identity* for the
619 coalition; e.g. Group for Multidisciplinary Care (GMC); which was then *defined and vested*
620 through ad-hoc rule systems defining the boundaries of its membership and conferring status
621 and resources to its members. Quality managers outlined key objectives, responsibilities and
622 operations of GMC, then amended by professionals and ratified by executive managers.

623 *Executive managers were sympathetic to our involvement. Their support was crucial because*
624 *we have good eyes and ears, but our voice is weak, so we need to sing in a chorus. We*
625 *interacted with doctors clearly interested in ICPs and pulled them into a stable group,*
626 *agreeing to meet every month specifically for ICP development. We officially promoted our*
627 *existence to clinical departments through Cicero Learning and emails, saying: “The Group*
628 *for Multidisciplinary Care can support you: it has these people and resources, can give this*
629 *support, you can interact with us in this way” (Cicero, Quality Manager)*

630 The definition and vestment of the new group primed *enabling work*. Quality managers
631 were equipped with a dedicated budget and work allocation to become the first interface with
632 clinical departments. Quality managers shaped their engagement in ways that did not crowd
633 out the engagement of the professionals.

634 *Doctors are the ones asking me to help; otherwise they can do it on their own. We had one*
635 *simple rule: tell us who produces what and show us the results. We don't want to give the*
636 *idea we are intruding, but also that we would do all the background work. There is a fine line*
637 *between being important and being indispensable. (Cicero, Quality Manager)*

638 Second, the coalition reiterated their earlier effort towards *theorizing* and *educating* work.
639 The adoption of ICP formats was regarded as the most valued experience emerging from
640 earlier experiments. Within Cicero Learning, quality managers and professionals co-produced
641 training programs promoting ICP experiences. The increasing pool of experiences promoted
642 the idea that ICPs did not endanger core jurisdictions, but actually improved clinical
643 effectiveness. *Theorizing* and *educating* were pervasive as quality managers and early
644 adopters used newsletters, intranets and notice-boards “*to create a vibe*” (Cicero, Quality
645 Manager) about ICP development.

646 Third, the coalition *constructed new identities and normative structures* through the
647 institution of “Care Centers” that included all specialties involved in the management of
648 specific patient groups. Executive managers outlined the general mission and scope of Care
649 Centers, while early adopting doctors and quality managers developed their clinical and
650 organizational specificities, which executive managers ratified and to which they assigned
651 specific resources. Care Centers represented an intensive form of *political work, reshaping*
652 *[doctors'] identity* (starting from their job description), the horizontal and vertical
653 relationship between doctors, and access to resources. Executives *constructed new identities*
654 also for the quality managers, embedded in the Care Centres as ICP coordinators. They were
655 assigned the formal responsibility to supervise the redesign of clinical services through ICP
656 methodologies. Executives *vested the new identity* with resources; e.g., adding assistants and

657 financial resources, and reducing requests for other tasks. Care Centers were encompassed in
658 a matrix-like organization in which doctors had to balance the interests of their own clinical
659 departments (autonomously manage resources/expertise for multiple pathologies) with that of
660 their Care Center (share the management of resources/expertise with peers for a specific
661 patient group). Care Centers were supported by *mimicry* work: i.e. the (expanding) coalition
662 promoted their development and maintenance consistently with international benchmarks,
663 and through *theorizing and educating* work, positive results were promoted as soon as they
664 emerged. Appealing to the institutionalized interests oriented towards innovation leadership,
665 doctors quickly attached themselves to existing Care Centers or created new ones.

666 *In the early stages, we spent time warming up clinical departments, after which many multi-*
667 *disciplinary ideas emerged. The time seemed ripe to formalize all this work. We developed*
668 *Care Centers, which are organizational constructs aggregating units from a patient-centered*
669 *perspective. They began with Cancer Centers, which is an area where medicine is already*
670 *multidisciplinary and then we created others across the organization. (Cicero, Doctor)*

671 Care Centers became a natural “basket” for ICP development. The coalition of actors built
672 upon professionals’ increasing attachment to Care Centers and their interest in innovation
673 leadership to *emphasize new normative associations*; i.e. emphasizing Care Centers require
674 radical innovation and ICPs represented appropriate ways to pursue this, and perform
675 *policing work*, i.e., introduce auditing/monitoring mechanisms performed by doctors to
676 ensure compliance with evidence-based guidelines in Care Centers.

677 *Many doctors were already familiar with ICPs so we didn’t need to tell them they were*
678 *important. We needed to make them happen here and now. It was made clear that it was*
679 *pointless to have Care Centers without service changes. We produced recommendations on*
680 *“translating the mission of patient-centered services into practice”; while Care Center*
681 *Coordinators managed requests about ICPs - de facto putting ICPs at the top of their*
682 *priorities. (Cicero, Quality Manager)*

683 To guarantee the sustainability of Care Centers, middle managers enacted the *embedding*
684 *work* needed to preserve professionals’ continued engagement and a constant flow of
685 resources for new work and personnel. They followed many “*small little things*” (Cicero,
686 Quality Manager) that professionals were less attuned to managing; e.g., schedules, amending
687 communication systems, following developments of research proposals for additional grants.

688 **Discussion**

689 Through ICPs, professionals translated scientific discoveries, guidelines and other evidence
690 into clinical practice. This effort was contentious as vested interests entrenched in
691 professional practice needed to be overcome. In the face of professional resistance, the study
692 reveals four strategies used by managers to organize their expert workforce for radical
693 innovation. Three were relatively ineffective; i.e. allow full autonomy to professionals
694 (Cluster 1); enact persuasive institutional work through extrinsic motivators (Cluster 3); use
695 centralized project management (Cluster 2). The fourth was however effective; i.e. a cross-
696 level and two-step strategy of institutional work (Cluster 4 cases). Henceforth, the four
697 strategies are compared, following which a theoretical model of institutional work for radical
698 innovation in professional organizations is outlined (Table 3).

699 <<Table 3 about here>>

700 ***Organizing autonomous professionals for radical innovation: Comparative analysis***

701 Discussion will focus upon Cluster 3 and 4 cases, to compare institutional work strategies for
702 successful realization of radical innovation. In both Clusters the stabilizing effects of
703 institutional influences around professionalism were softened by new institutionalized
704 interests, norms and values, around clinical innovation leadership and first-mover advantage.
705 The multiplicity, heterogeneity and/or ambiguity of interests, norms and values stimulated a
706 tolerance for boundary/practice revisions. These micro-institutional affordances were
707 perceived by executives, quality managers, and reforming doctors as an opportunity for
708 radical innovation. Executives and quality managers in Cluster 3 cases performed ‘political
709 work’ (Lawrence and Suddaby, 2006), using incentives to make professionals prioritize the
710 radical innovation. In Raffi and Dragan, however, this achieved sub-optimal outcomes
711 because the new regulations and incentives intruded upon professionals’ jurisdictions.
712 Quality managers’ hands-off approach to project management added ambiguity to their

713 request for radical innovation. Professionals were engaged by (but not in) the political work,
714 did not understand managers' motives for change, and were unprepared for integrated care,
715 so their response was to 'shut down' their early tolerance and protect established boundaries
716 and practices. Professional groups that adopted ICP-based methodologies did so in ways that
717 legitimized only incremental innovation, or even reaffirmed the status quo. The political work
718 enacted by executives and quality managers created ambiguity around adoption of ICP
719 methods, which could be easily misunderstood, as either *the* radical innovation, or that any
720 innovation was sufficient to gain extra resource. So, professional groups used ICP methods as
721 the end point to legitimize decisions that had already been made locally. Overall, the
722 institutional work in Cluster 3 decoupled managers from doctors, since the former developed
723 new regulations that pushed for ICPs without following up their implementation in practice;
724 while the latter had exclusive jurisdiction regarding interpretation of the new regulations
725 without having shaped their content. In essence, executive and quality managers attempted to
726 channel professional responses toward an established (and ultimately exogenous) ICP
727 standard. In doing so, these cases had worse outcomes than Cluster 2 cases. Here, the lack of
728 cultural and technical work was such that the radical innovation was not at the top of
729 professional priorities. However, quality managers' practical support stimulated professionals
730 to, at least, experiment with new boundaries and practices. Furthermore, Cluster 3 cases
731 achieved worse outcomes also than Cluster 1 cases because the professionals' rejection of
732 new regulations and incentives created tension with managers.

733 In contrast, two-step institutional work within Cluster 4 cases proved effective (see Figure
734 1). The differences with Cluster 1 and 3 cases are striking. With the latter, institutionalized
735 interests, norms and values produced strong stabilizing effects, reinforced by the institutional
736 work of doctors, who defended their autonomy. In Cluster 4, institutionalized interests, norms
737 and beliefs of professionalism mingled with interests to gain first mover advantage,

738 innovation leadership and advance organizational and individual prestige. This multiplicity
739 and heterogeneity of institutionalized interests generated micro-institutional affordances that
740 stimulated more tolerance for ICP-related experiments.

741 In the first step within Cluster 4, with the support of quality managers, early adopting
742 doctors led the technical/cultural work to increase attachment of professional peers to
743 integrated care; executives led the political work to create a favorable regulative and
744 structural context for local experiments. With more diluted boundaries, the second step of
745 institutional work consolidated the notion that ICP methods should inform radical service
746 redesigns. Executives and quality managers developed coalitions with doctors that exerted
747 hierarchical and professional authority over the latter's peers. The institutional work thus,
748 was not directed by executives and quality managers to professionals, but by a cross-level
749 coalition of 'reformers' towards 'defenders' in clinical departments. This institutional work
750 was internally coherent because executives, quality managers and 'reforming' professionals
751 operated a division of labor according to their interests and influence. So, doctors controlled
752 the technical and cultural work that related to their expert knowledge about clinical
753 effectiveness and risk; executives controlled the political work that related to their control of
754 resources; quality managers mediated the two interests, supporting each form of institutional
755 work with their technical knowledge and intermediate position. The coalition timed its
756 political work so it occurred after the establishment of the normative/cognitive foundations
757 for change, and avoided conflict between institutionalized interests, norms and beliefs. The
758 experiments in Cluster 4 were then different from those in Cluster 2. With the latter, no
759 institutional work challenged normative and cultural pillars rewarding professional autonomy
760 and protected jurisdiction. So, quality managers' clerical work generated numerous service
761 redesigns, but very few were radical innovations. In contrast, within Cluster 4, ICP methods
762 gradually revised normative and cultural pillars, and institutional work of 'reformers' meant

763 radical practice and boundary revisions were consolidated technically, culturally *and*
764 regulatively.

765 The two-step approach was crucial to organize professionals for radical innovation. The
766 initial technical/cultural work prepared the ground by emphasizing existing norms/beliefs
767 about innovation leadership and professional prestige. Executives and middle managers
768 worked institutionally to emphasize multiplicity of institutional demands (Van Dijk et al.,
769 2011), reaching a point where professionals perceived the need to find ways to balance these.
770 Professionals were allowed to ‘inhabit’ (Hallett and Ventresca, 2006) the new
771 institutionalized arrangements, experiment with alternative ways of working and reflect upon
772 whether eroded boundaries challenged their core jurisdiction. Only when doctors became
773 attached to multidisciplinary arrangements as a device to achieve innovation leadership,
774 prestige and clinical effectiveness did the time become ripe for political work. This second
775 stage of political work was characterized by: (i) a different type of political work that
776 funneled the professionals’ wide-ranging experiments towards ICP development, and (ii)
777 political work that consolidated ICP development and linked it with service redesign. While
778 in the previous stage, the technical/cultural work operated in continuity with the past, using
779 the same infrastructures (e.g., Cicero Learning) and nesting institutional work within pre-
780 existing institutional pillars; now it was possible to develop new structures (e.g., Care Centers
781 at Cicero) and regulations that established status and resources for those pursuing ICPs.

782 <<Figure 1 about here>>

783 ***Model of change: a two-step institutional work in professional organizations***

784 Figure 1 summarizes the conceptual model of institutional work enacted in the professional
785 organizations to support radical innovation. The ‘institutional work’ approach led to the
786 successful translation of scientific discoveries, guidelines and experiential knowledge
787 towards radically new services. It overcame the reluctance of powerful professionals to

788 operate in a collaborative environment; e.g. merge local discoveries and share decision-
789 making. This reveals a scenario – relevant and yet underestimated in more ‘traditional’ firms
790 – in which managers cannot really grant autonomy to professionals (who already self-regulate
791 and control their operations), and cannot fully rely on incentives, as these might interfere with
792 logics of appropriateness. The cases reveal that the innovation activities were informed by
793 more profound transformations in the institutionalized interests, values and beliefs that have
794 consolidated over the years. Attempts to grant “additional” autonomy or incentives without a
795 proper revision of these institutional pillars are likely to produce inconsistent results.
796 Building upon this general finding, the study provides three specific insights to extant
797 literature on radical innovation.

798 First, the institutional work perspective details the nature of defenders’ resistance to
799 radical innovation. Most models of change emphasize how the first action for ‘reformers’ is
800 to ‘unfreeze’ (Lewin, 1951) the organization from the status quo. Regulations, social norms,
801 culture and cognitive frameworks are highlighted as relevant contingencies that make an
802 organization unwilling or incapable of advancing radical innovation (Buchanan et al., 2005;
803 Paton and McCalman, 2008). Institutional theory suggests that these represent the basis of
804 legitimacy, coercion and compliance that inhibit the ‘free’ agency of embedded actors, such
805 as managers and professionals (Scott, 2001). The institutional work perspective adds a further
806 insight; i.e. it shows *how* embedded actors do not just comply with the institutional pressures,
807 but actively work to maintain the status quo. Our study shows how ‘defenders’ do not resist
808 the radical change *per se* (e.g., several professionals were indeed positive that integrated care
809 was a worthwhile idea), but the implications that the change would have on institutionalized
810 interests (e.g., changes to reimbursement mechanisms), norms (e.g., changes in jurisdictions
811 and autonomy) and values (e.g., changes to effectiveness and risks around care). Hence, the
812 ‘institutional work’ perspective can enumerate the tactics through which ‘defenders’ resist

813 innovation, by “unpacking” actions that are oriented at the reinforcement of institutionalized
814 norms and cognitive frameworks (i.e., technical work), at the local attachment to these
815 institutional pillars (i.e., cultural work), and at the production of incentive systems and rules
816 that reward certain behaviors over others (i.e., political work). The present study thus shows
817 how the ‘struggle’ between ‘reformers’ and ‘defenders’ around radical innovation is framed
818 by established institutional pillars and may generate new ones.

819 Second, executives, middle managers and professionals had key distinctive roles during
820 the two step institutional work. Extant research highlights radical innovation is more likely to
821 succeed when cross-level ‘dominant coalitions’ are involved (Damanpour, 1991; Kotter,
822 1999). The present study extends this by highlighting how the coalition might work internally
823 to pursue institutional work. Professionals’ jurisdictions remained fundamentally inaccessible
824 to executive and middle managers, so only professionals act as ‘institutional carriers’ of
825 normative and cultural/cognitive pillars. Furthermore, early adopters played a key role in the
826 institutional work strategy as they had the expert knowledge and professional background to
827 make sense of how diverse institutional elements integrate, following which they could enact
828 technical and cultural work (Lawrence and Suddaby, 2006) to shape new cognitive/normative
829 foundations of change (Scott, 2001). This was effective when professionals could keep
830 managers at a distance in the earlier stages of institutional work, so that boundary and
831 practice revisions could be negotiated between peers. By doing so, professionals did not feel
832 their institutionalized interests toward professionals were threatened by managerial interests.
833 Also, professionals’ technical and cultural work was particularly effective when encompassed
834 within organizational structures such as Cicero Learning to which all professionals were
835 already attached and in which educating and theorizing (Lawrence and Suddaby, 2006) was
836 tolerated.

837 In contrast, executives were involved in organizing radical innovation mostly through
838 ratifying behaviors and outcomes (necessary for professionals to increase their organizational
839 status) and structuring rules and regulations (necessary to obtain resources and facilities). In
840 doing so, they engaged primarily with political forms of institutional work. Executives were
841 unwilling to act without professional support, either leaving the responsibility for radical
842 innovation entirely to professionals; or limiting themselves to co-creating structures for the
843 co-optation of local interests (e.g., Care Centers). They linked with high-status professionals
844 to legitimize their involvement, to create coherence in the face of institutional multiplicity
845 (Van Dijk et al., 2011), and engage with the cognitive/normative assumptions held by
846 professionals within specific clinical departments. Attempts to enact political work without
847 professional links failed (cf. Raffi and Dragan). So, executive managers' role, although
848 crucial, depends on three contingencies: (i) their consciousness that micro-institutional
849 affordances reduce risk that frontline professionals resent their intrusion; (ii) possibility to
850 liaise with clearly identifiable local professional groups; (iii) support of middle managers as
851 lynchpins to engage with professionals at the frontline (Currie and Procter, 2005).

852 Middle managers' proximity to executives and professionals enabled them to mediate
853 different interests. Hence, although they did not control any of the 'institutional carriers'
854 affecting the regulative, normative and cognitive/cultural pillars, they were still able to enact
855 an institutional role in creating and maintaining new institutional arrangements. At Cicero
856 and Martin, middle managers liaised with professionals to support technical/cultural work
857 (e.g., preparing and sustaining the professionals' educating and theorizing in Cicero
858 Learning) and with executive managers to support political work (e.g. outlining Care Center
859 regulations and carrying out administrative work and thereby increasing professional
860 engagement with potential service reconfiguration) (Lawrence and Suddaby, 2006).

861 Third, earlier research has shown how radical innovation in professional organizations,
862 requires fundamental changes in ways of working and overarching institutional arrangements.
863 These changes require structured tactics of “small wins” that expand the pool of “supporters”
864 across the organization (Kotter, 1999; Reay et al., 2006). The present study emphasizes how
865 the ‘small wins’ were carried out primarily in terms of technical and cultural work; i.e. they
866 did not promote ‘just’ ICP methodology, but changes in deeper rules of legitimacy and
867 compliance within the organization, hence carried out primarily by the ‘early adopting’
868 professionals along with middle managers. The model induced from the present study has a
869 fundamental difference with other models of change, for which promoting the ‘small wins’
870 serve the purpose of diffusing the radical innovation across the system; i.e. increase the
871 number of adopters and supporters. In the present study, the first step of institutional work
872 does not promote the radical innovation *per se* since other professionals could be
873 fundamentally and legitimately indifferent to it. Rather, the ‘small win’ needed to celebrate
874 the ICP methodology underpinning radical innovation, so that other professional groups
875 could use that example to develop radical innovation in their own disciplinary areas. Thus,
876 ‘small wins’ in the study are aimed at changing the normative and cognitive bases of
877 legitimacy in the organization; i.e. validating applications of ICP methods to redesign
878 services to enhance effectiveness of care and reduce clinical risk. This institutional
879 perspective also explains why professionals (and particularly high-status doctors) led the
880 small wins while middle managers took the back-seat. As noted earlier, only professionals
881 controlled the institutional carriers connected to normative and cognitive pillars, hence their
882 role in the coalition is central from the very beginning. The ‘small wins’ matured into a
883 broader institutionalization of change only when the presence of professionals in the coalition
884 was broad enough to drive change in normative and cognitive pillars in the organization. In
885 Cicero, particularly, the second step originated when there was little doubt that clinical

886 departments were engaged with integrated care and needed a “*final stroke*” (Cicero, Quality
887 Manager). At this point, the political work enacted by executives (with middle managers and
888 professionals on the back-seat) generated radical innovation. Political work consolidated
889 nascent boundaries and practices; while the second stage of technical/cultural work oriented
890 professionals more systematically towards ICP methods as *the* approach for radical
891 innovation. This two-step institutional work strategy was then effective because it associated
892 radical innovation with incremental institutional change processes through which managers
893 emphasized an institutional dilemma (how to balance self-regulation and effectiveness with
894 innovation leadership and professional prestige) and gave professionals time to make sense of
895 how to integrate diverse institutional elements associated with professional organization and
896 radical innovation. Radical innovation thus ceased to be incommensurate with established
897 professional interests, norms and beliefs, and professionals spontaneously engaged with it.

898 **Conclusion**

899 This study investigated how managers organized a professionalized workforce for radical
900 innovation. In our study, managers could not grant autonomy to self-regulating professionals,
901 or rely on incentives. Our study of radical innovation in healthcare organizations highlighted
902 how managers drive radical innovation through developing cross-level coalitions and
903 enacting two stages of institutional work. By doing so, executive and middle managers used
904 the knowledge and influence of reforming professionals to change the vested interests, norms
905 and logics that protected the status quo.

906 Findings from this study might provide more ‘traditional’ firms with relevant insights into
907 how an expert workforce could be organized for radical innovation. The study looks at the
908 problem of autonomy from a different perspective. Previous research often asked “how
909 much” autonomy should be granted to experts, and how it enhances their creativity. The
910 present study shows instead what happens when autonomy is established in experts’ life, and

911 cannot be “taken back”. In that case, managers need to organize radical innovation by
912 adapting to experts’ autonomy and finding ways to challenge established interests, norms and
913 values. The study thus provides four key contributions to research on radical innovation.

914 First, the influence of professional organization upon managerial agency in the
915 introduction of radical innovation has been shown. The study highlights how the strength of
916 institutionalized arrangements and professionals’ institutional work constrained managerial
917 actions to such an extent that executives would reinforce, rather than challenge, the status
918 quo; and how middle managers would refrain from any action to avoid risk that professionals
919 perceive them as intrusive.

920 Second, the study shows when managers mediate professional organization to advance
921 radical innovation, particularly how managerial action is dependent upon their recognition of
922 ‘micro-institutional affordances’ (Van Dijk et al., 2011).

923 Third, the study details the managerial actions adopted in influencing the professional
924 frontline towards the intended radical innovation. Whilst centralizing decision-making
925 through political work had considerable limits in realizing radical innovation, enacting
926 gradual and collaborative institutional work proved successful, when complemented by
927 accommodation of professional experimentation with new practices and boundaries.

928 Fourth, the study emphasizes the importance of an institutional perspective in innovation
929 management studies. Institutionalized arrangements are commonly seen to prevent radical
930 boundary and practice revision. The study highlights managers can reconfigure regulative,
931 normative and cognitive institutional pillars to enable professionals’ spontaneous enactment
932 of radical innovation. Arguably, these findings can be transferred to any context where
933 institutional arrangements and workforce autonomy inhibit managers’ organization of radical
934 innovations. Professionalization dynamics have become increasingly relevant in
935 contemporary firms where professionals, such as R&D employees, scientists, designers,

936 software developers, claim autonomy and self-regulation derived from use their unique
937 knowledge and skills (Muzio et al., 2013), and use it to influence the nature and extent of
938 radical innovation.

939 Regarding practical implications, the study suggests managers can support the introduction
940 of radical innovation by first, developing stable alliances with local professional groups to
941 provide cognitive/normative foundations of radical innovation; second, allowing
942 professionals to inhabit nascent institutional arrangements and to make sense of how these fit
943 with prevailing interests, norms and beliefs; third, co-developing structures/rules that
944 encourage professionals to pursue radical innovation; and finally performing maintenance
945 work that preserves the professionals' attachment to new institutions. The study also
946 emphasizes the need to develop systems that identify signals of micro-institutional
947 affordances. Middle managers appear particularly well positioned to do this, as they are close
948 to executives and frontline professionals, and so can relate to multiple, heterogeneous and
949 ambiguous institutional interests held by different actors (Van Dijk et al., 2011).

950 The study calls for more research linking institutional constructs with radical innovation
951 and presents the opportunity to explore how micro-institutional affordances emerge (Van
952 Dijk et al., 2011). Furthermore, previous research highlights that managers' social position,
953 managerial experience and other individual characteristics align to explain decisions made
954 around strategic initiatives (Lockett et al., 2014; Mantere, 2008). Further research might
955 assess in greater detail when and why managers tend to select alternative strategies of
956 institutional work to support radical innovation.

957 Finally, some limitations could inform future research. First, the study relied
958 methodologically on comparative case study to contrast different approaches to radical
959 innovation. This is positioned in a grey area between the in-depth analysis of single case
960 studies and the statistical generalization of surveys (Miles and Huberman, 1994). Second, the

961 results stem from a hospital setting. While the authors believe the analysis is generalizable to
962 other contexts characterized by expert knowledge, further research to examine whether the
963 analysis can be applied to other settings should be encouraged.

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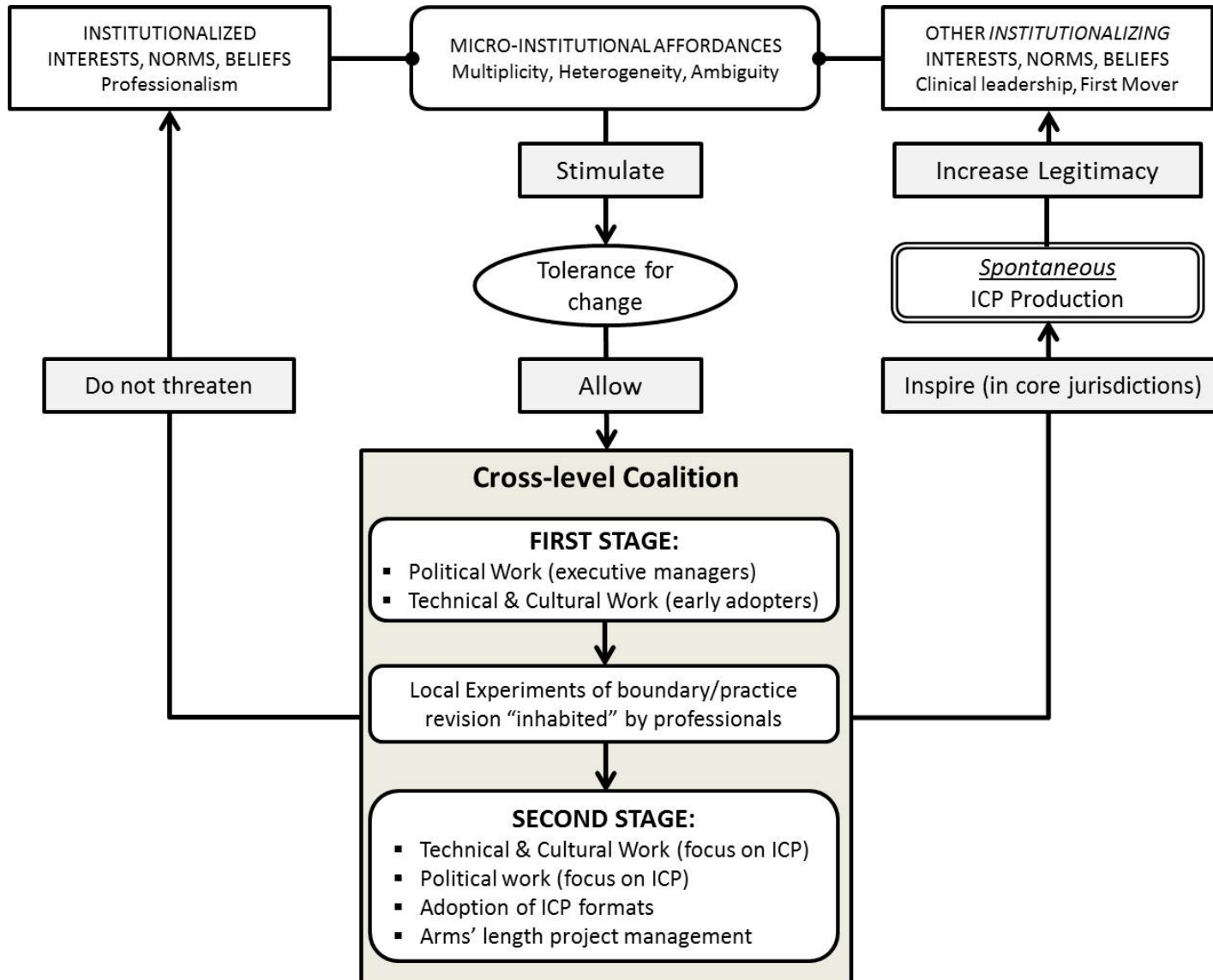


Figure 1: Model of cross-level and two-stage strategy of institutional work for radical innovation

Table 1: Forms of Institutional Work

Institutional work	Definition (Adapted from Lawrence and Suddaby, 2006)	Examples from our dataset
Political Work	Creating, maintaining, disrupting rules, property rights and structures that define access to resources and status	
<i>Constructing Identities</i>	Defining relationships between actors and the field in which they operate	Regulation formalizing ICP groups in organizational structure (Raffi) or Care Centers (Cicero)
<i>Defining</i>	Constructing rule systems that confer status or identity, define boundaries of membership or create status hierarchies within an organization	Membership rules to gain status in new ICP group (Raffi) or Care Center (Cicero)
<i>Vesting</i>	Creating of rule structures that confer property rights	Rights to ad-hoc financial resources to sustain ICP group (Raffi) or Care Center (Cicero)
<i>Enabling work</i>	Creating rules that facilitate, supplement and support institutions, such as the creation of authorizing agents or diverting resources	Definition of Group for Multidisciplinary Care to support Care Centers for ICP development (Cicero)
<i>Policing</i>	Ensuring compliance through enforcement, auditing and monitoring	Monitoring mechanisms by elite doctors to ensure compliance with ICP development (Cicero).
Technical Work	Creating, maintaining or disrupting beliefs, values and social norms that define appropriate behaviors	
<i>Changing normative associations</i>	Re-making the connections between sets of practices and normative the moral and cultural foundations for those practices	Linking Care Centers with radical innovation around ICPs (Cicero)
<i>Changing normative networks</i>	Constructing connections through which practices become normatively sanctioned and reviewed by relevant peer group	Panel of elite doctors responsible for ensuring compliance with ICP development (Cicero)
<i>Theorizing</i>	The development and specification of abstract categories and the elaboration of chains of cause and effect	Linking Cicero Learning programmes with frameworks for integrated care (Cicero)
Cultural Work	Institutional work aimed at creating, maintaining or disrupting actors' embeddedness to existing institutions	
<i>Mimicry</i>	Associating new practices with existing sets of taken-for-granted practices, technologies and rules in order to ease adoption	Development and promotion of Care Centers and Cicero Learning from international benchmarks (Cicero)
<i>Educating</i>	The educating of actors in skills and knowledge necessary to support the new institution	Using Cicero Learning programmes to educate elite doctors on ICP development and outcomes
<i>Embedding and routinizing</i>	Actively infusing the normative foundations of an institution into the participants' day to day routines and organizational practices	Middle managers performing administrative work to facilitate doctors' engagement and constant flow of resources (Cicero)
<i>Valorizing (undermining) moral foundations</i>	(Dis)associating new practice, rule or technology to (from) its moral foundation as (in)appropriate within a specific cultural context	'Old guard' linking ICPs with negative expectations about standardized care (Green)

Table 2: Study Informants and Data

Hospital Type	Beds* Employees*	Cluster	Informants	Archival Data
PHASE 1 INTERVIEWS				
CICERO <i>Teaching</i>	800 beds 2000 emp.	4	(7) Medical Director, R&D Director, Care Centre Assistant Manager, 4 Doctors	Care Centre Strategy, Care Centre Meetings Minutes, 2 ICP Documents, 3 ICP Presentations
MARTIN <i>Generalist</i>	1000 beds 2300 emp.	4	(8) Chief Executive, Medical Director, 2 Quality Unit Managers, 4 Doctors	1 ICP Document, 1 ICP Presentation, Workshop Minutes, 2 Internal Strategy Documents
GREEN <i>Teaching</i>	1800 beds 4500 emp.	2	(4) Quality Unit Manager, 2 Quality Unit Assistants, 1 Doctor	1 ICP ppt Presentation, 2 Scientific Articles, 1 Internal Strategy Document
SLOAN <i>Specialist</i>	250 beds 900 emp.	2	(9) Medical Director, 2 Quality Unit Managers, 1 ICP coordinator, 5 Doctors	6 ICP Documents, 1 ICP Presentation, 1 Internal Strategy Document
TAILOR <i>Teaching</i>	500 beds 1200 emp.	1	(7) 1 Quality Unit Manager, 2 Quality Unit Assistants, 4 Doctors	1 Internal Strategy Document, 1 Survey, 2 Student Theses,
WINTER <i>Teaching</i>	800 beds 2000 emp.	1	(4) 2 Quality Unit Managers, 2 Doctors	2 Internal Strategy Documents
PHASE 2 INTERVIEWS				
RAFFI <i>Generalist</i>	2000 beds 5000 emp.	3	(3) Medical Director, Quality Unit Manager, 1 Doctor	1 ICP Document, 1 Internal Strategy Document
DRAGAN <i>Generalist</i>	1500 beds 4000 emp.	3	(3) Medical Director, Quality Unit Manager, Quality Unit Assistant	1 ICP Document, 1 ICP Presentation, 1 ICP Poster, 1 Internal Strategy Document
WOODY <i>Teaching</i>	800 beds 2000 emp.	2	(3) 1 Quality Unit Manager, 2 Doctors	2 Internal Strategy Documents, 1 Budget Document
MANDEL <i>Generalist</i>	1400 beds 4000 emp.	2	(3) Medical Director, Quality Unit Manager, Quality Unit Assistant	7 ICP Documents, 3 ICP Posters, 1 Scientific Article, 1 Internal Strategy Document
SMITH <i>Generalist</i>	500 beds 1500 emp.	1	(4) Quality Unit Manager, 2 Quality Unit Assistants, 1 Doctor	1 ICP Document, 2 ICP ppt Presentations, Workshop Minutes, 1 Internal Strategy Document
BLACK <i>Specialist</i>	800 beds 2000 emp.	1	(5) 1 Quality Unit Manager, 4 Doctors	2 Internal Strategy Documents

* Numbers have been approximated to avoid identification

Table 3: Comparison of Findings

	Cluster 1	Cluster 2	Cluster 3	Cluster 4
Cases	Winter, Taylor, Woody, Black	Sloan, Smith, Green, Mandel	Raffi, Dragan	Cicero, Martin
Institutional Environment and Micro-Institutional Affordances	Interests, norms, beliefs on: <ul style="list-style-type: none"> Self-regulation, protected jurisdictions, effectiveness (institutionalized) 	Interests, norms, beliefs on: <ul style="list-style-type: none"> Self-regulation, protected jurisdictions, effectiveness (institutionalized) <i>Early adopting role (Sloan: rising); boundary experimentation (Mandel, Smith: local; Green: ambiguity)</i> 	Interests, norms, beliefs on: <ul style="list-style-type: none"> Self-regulation, protected jurisdictions, effectiveness (institutionalized) <i>Efficiency, boundary dilution, control (local)</i> 	Interests, norms, beliefs on: <ul style="list-style-type: none"> Self-regulation, protected jurisdictions, effectiveness (institutionalized) <i>Innovation leadership, prestige (Cicero & Martin: rising)</i>
Professionals' Agency	<ul style="list-style-type: none"> Perform technical and cultural work to defend status quo, particularly <i>undermining moral foundations</i> of radical redesigns; and <i>valorizing</i> status quo Local spontaneity outside of managers' view 	<ul style="list-style-type: none"> Because of greater tolerance to change, their institutional work against service redesign is weak. They experiment with ICP projects with managers, and often promote their local successes Local experiments do not change established arrangements 	<ul style="list-style-type: none"> Local spontaneity outside of managers' view Rejected requests to <i>theorize</i> and <i>educate</i> ICPs Reinforced <i>Undermining moral foundations</i> of ICP development; <i>valorizing</i> status quo 	<ul style="list-style-type: none"> Stage 1: Early adopters <i>educate, theorize, mimic</i> boundary dilution Groups experiment with practices to make sense of new institutions Stage 2: Groups <i>educate, theorize, mimic</i> ICPs Stage 2: High-status doctors <i>emphasize normative associations</i> and radical <i>policy</i> innovation
Executive Managers' Agency	<ul style="list-style-type: none"> Avoid any institutional work to avoid conflicts with professionals Occasionally, pursued narratives of stability and risk that reinforced professionals' technical/cultural work Inhibit middle managers' involvement 	<ul style="list-style-type: none"> Ratification of project work Prevent middle managers from involvement to avoid conflicts with and between professional groups No institutional work establishing new rules or incentives 	<ul style="list-style-type: none"> Political work (<i>constructing, defining, vesting identities</i>) to link status and resources to ICPs 	<ul style="list-style-type: none"> Stage 1: <i>Construct, define & vest identities</i> to Quality Dept. Stage 2: <i>Construct, define & vest identities</i> to Coalition + <i>Construct normative networks & identities</i> to ICP groups
Middle Managers' Agency	<ul style="list-style-type: none"> Collect/synthesize information up/downwards, manifesting their interest in change Wedded to traditional roles when aware of executive managers' and professionals' resistance 	<ul style="list-style-type: none"> Collect/synthesize information upwards and downwards Side-by-side work in projects No institutional work 	<ul style="list-style-type: none"> Collect/synthesize information up/downwards Support executive managers Wedded to traditional roles 	<ul style="list-style-type: none"> Collect/synthesize information up/downwards Stage 1: Support early adopters & executive managers Stage 2: <i>Embed & routinize</i> new networks and identities
Outcomes	<ul style="list-style-type: none"> No or isolated ICPs No radical service redesign Stable relationship between management and professionals 	<ul style="list-style-type: none"> High number of ICPs, but few informing radical service redesigns Experiments in marginal areas Heavy workload for managers Sensitivity to external jolts 	<ul style="list-style-type: none"> No or isolated ICPs No radical service redesign Temporary tensions between management and professionals 	<ul style="list-style-type: none"> High number of ICPs, linked with radical service redesign Feasible workload for managers Radical innovation institutionalized in new structures