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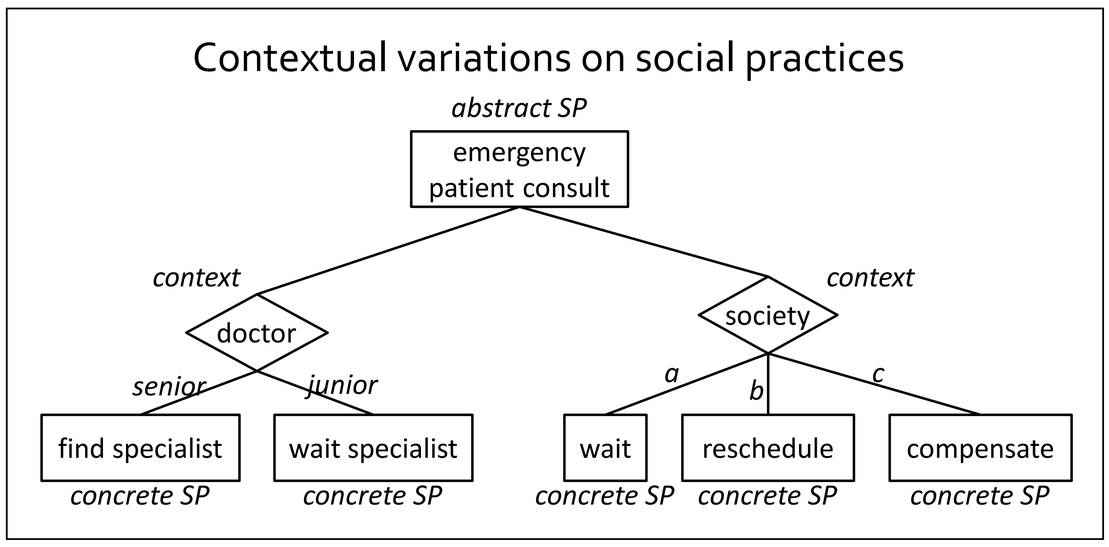
Querying Social Practices in Hospital Context

People use social practices as means to make sense of their environment, assessing how that context relates to past, common experiences, culture and capabilities. Social practices can therefore simplify deliberation and planning in complex contexts. In the context of patient-centered planning, hospitals seek means to ensure that patients and their families are at the center of decisions and planning of the healthcare processes. This requires on one hand that patients are aware of the practices being in place at the hospital and on the other hand that hospitals have the means to evaluate and adapt current practices to the needs of the patients.

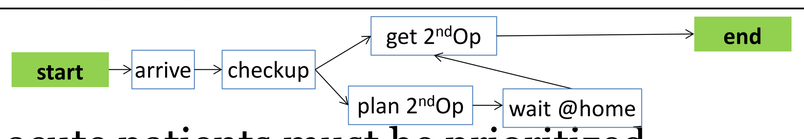
Patient Centered Planning

Hospital planning with patient needs in center.

- working together to ensure good communication, information and education.
- respecting patients values and putting patients at the center of planning.
- taking into account patients preferences and expressed needs
- coordinating and integrating care planning.



Social practice applied to patient centered planning

Social Practice		A: Hospital SP (informal)	B: Hospital SP (formal)
Context	Roles	junior doc, senior doc, regular patient, acute patient, patient	$jd, sd, d, rp, ap, p : ap, rp \in p \wedge jd, sd \in d$
	Actors	j, s, r , a	$play(j, jd), play(s, sd), play(r, rp), play(a, ap)$
	Resources	rooms, scheduling system…	$o_1,\ldots,o_m$
	Places	hospital, MRI-room, ER…	*hospital*, *MRI-room*, *ER*
Meaning	Purpose	diagnosis of patient teach junior doctor	$purpose(a, consult, sp) = diagnosis(a)$ $purpose(j, consult, sp) = learn(j)$
	Promoted Values	tending patients promotes learning getting a diagnosis promotes awareness a long stay demotes timeliness	$promote(sp, tendPatient(j), Learning)$ $\forall p : promote(sp, diagnosis(p), Awareness)$ $\forall p : promote(sp, longStay(p), \neg Timeliness)$
Expectations	Plan patterns		$a_1(arrive);a_2(checkup);(a_5(get2OP)+$ $(a_3(plan2op) ; a_4(wait);a_5(get2OP)))$
	Norms	acute patients must be prioritized junior doctors cannot give diagnosis	$O(jd, plays(a, ap), prioritize(jd, a))$ $F(jd, plays(a, ap), diagnose(jd, a))$
	Strategies	patients wait senior doctors find available specialist junior doctors wait for available specialist	$strategy(\top, DO(p, wait), sp)$ $strategy(diagnose(d,p), DO(senior(d), phone), sp)$ $strategy(diagnose(d,p), DO(junior(d), wait), sp)$
	Start Condition	acute patient arrives	
	Duration/End	patient has plan	
Activities	Possible Actions	wait, phone, diagnosis, …	$wait(), phone(), diagnosis(X, p), \ldots$
	Requirements	doctor: medical expertise patient: wait	$\forall a_i, play(a_i, d) : cap(a_i, medicalexpertise)$ $\forall a_i, play(a_i, p) : cap(a_i, wait)$

Operational Queries

A simulation with social practice agents can give insight into how resources, values, norms, and strategies influence the expected outcome of operational actions, such as assigning a doctor to an acute patient.

- Can help with answering queries such as "What are the expected behavior of the senior/junior doctors?"

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