Partnership common ground and difference: insights for KTP policy and research

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Abstract

This research demonstrates the value of the partnership metaphor for university knowledge transfer. Set in the context of growing evidence of a frustrated UK policy aim for a fully-fledged third stream it addresses concerns over stakeholder engagement and management, measurement and resource allocation. Focusing specifically on the partnership concepts of common ground and difference, the study identifies shared and different conceptions of academic and associate partners engaged in Knowledge Transfer Partnerships (KTP). These shared and different conceptions offer valuable insights for policy issues of engagement, management, measurement and resource allocation. Underlining the value of the partnership metaphor for third stream policy, it further highlights the importance of the missing industry partner voice. We suggest to researchers, policy-makers and practitioners not just that common ground and difference inherent in the concept of partnership should be recognised and managed, but further that these dimensions should be regarded as valuable sources of knowledge in the KTP process itself.

Key words: partnership; knowledge transfer; policy; innovation

1. Introduction

This research addresses the apparent frustration of a UK policy trajectory for a fully-fledged third stream of cross-boundary innovation between academia and industry. An evolving landscape of university knowledge transfer [1], accentuates the state of flux and importance of addressing the issues. Those of us involved know this to be a stimulating but challenging area of HE policy. Issues include engagement of stakeholders, and concern whether one-size-fits-all management, measurement and resource allocation models are fit-for-purpose. The Higher Education Funding Council for England acknowledges the need for 'better understanding' [2, p. 3].

Inconsistent engagement by academia and industry [3] with investigations into disciplinary or organisational factors prove inconclusive [4]. Local policy inflection or translation demonstrates heterogeneous stakeholder interpretation [5] [6]. Policy

is perceived as biased towards certain sectors, disciplines or organisation – arguably high tech, pure STEM, research-intensive domains [7] [8]. Critiques exist of policy's 'intellectual inadequacies' failing to value tacit knowledge, soft skills and non-monetized activities (e.g. [5] [9] [10] [11]. 'Monetized' measurement with income as proxy for impact and institutional resource allocation is acknowledged as 'imperfect' [2] [3]. Interest in understanding 'hidden innovation' [12] or knowledge exchange in 'newer areas' [13], acknowledges relevance of interpretive difference.

The third stream may regard knowledge as 'capital' and 'valid' in the new economy but conceptions about valid knowledge are multiple and evolving [14]. Given different stakeholder 'discursive' domains [7] and 'a relationship between the kind of knowledge and its transfer', stakeholder conceptions about valid knowledge and transfer is significant. Several typologies conceptualise the heterogeneity (e.g. [15] [9] [16] and UK policy discourse as embodying a patchwork of mixed metaphors [17].

This study draws on the partnership metaphor which incorporates understanding of common ground and difference between stakeholders. More contextualised research is required into different interpretive domains (industry, discipline, organisation, department and individual). Knowledge Transfer Partnerships (KTPs) are identified as appropriate for such interpretive research and engagement, management, measurement and resource allocation issues. Conducting a preliminary investigation of academic and associate partners I identify shared and different conceptions but further, these as valuable for insights into specific policy issues. The paper notes the importance of the missing industry voice. I conclude that partnership with inherent conceptions of common ground and difference provides an important framework for third stream research and policy.

2. Context

2.1. Innovation, Policy and Metaphors

Understandings about the nature of knowledge, transfer and innovation have evolved, as traceable in education, management and policy and present a complex landscape of understandings [17]. Valid knowledge is variously conceptualised as academic, multi or trans-disciplinary, the transfer process ranging from a linear transaction to something more collaborative, the role of academia ranging from expert to equal knowledge partner, and impact as economic and/or social. With metaphors useful for apprehending complex concepts and reflecting beliefs and values, the continuum of understandings has been represented by Four Metaphors [17].

The partnership metaphor may be most appropriate in the post-modern era of democratised knowledge with universities no longer sole authorities on knowledge.

Conceptions inherent in partnership represent a knowledge creation activity of trans-disciplinary knowledge, integrating knowledge from equal knowledge sources, leading to a new vantage point of meta innovation. But Williams' [18] identification of 'utility', suggest user judgement as important also.

2.2. Common Ground and Difference in Partnership

Personal metaphors are not necessarily shared and interpretive differences exist and in cross-boundary working individuality is significant. Meta innovation from intertwined boundaries [19], and common ground in trans-disciplinary knowledge do not mean subsuming stakeholder individuality.

Management literature recognises partnership and cross-boundary working as not necessarily entailing rational consensus between partners nor differences resolved [15]. If difference, even dissensus between partners is inherent, productive [20], then knowledge partners may express shared common ground and consensus but also difference and dissensus. Current thinking on partnership recognises multiple tensions [21], 'creative abrasion' as a positive force in innovation, and 'collaborative diversity and conflict' as 'our friends' [22, p. 22]. But implications for policy trying to engage, manage, measure and allocate resources for industry-university working are not clear.

Those of us involved in knowledge transfer know partnership is easier said than done. UK policy's patchwork of metaphors [17] is arguably ambiguous, not providing a coherent innovation framework [7]. Knowledge transfer may include spin-outs, consultancy, student placements etc. 'The wide-ranging moniker' that knowledge transfer has become [8], from outcome to outreach [16], and formal to informal [9], illustrates problems of embracing heterogeneity.

Engagement, management, measurement and resource allocation issues are symptomatic. Normative policy discourse of engagement and impact is not matched by HEI practice [23]. Different groups may 'translate' or 'inflect' policy [5] [6]. Even one stakeholder group (e.g. HEI tech transfer managers) can hold shared and distinct conceptions [24]. Tension and conflict arises from mismatching expectations between knowledge partners [25] [21].

A conceptually coherent interpretive approach is required to better understand and support knowledge transfer. This research demonstrates that not only should partnership conceptions of common ground and difference be recognised, and tensions managed, but these dimensions should be regarded as valuable sources of knowledge in themselves for researchers, practitioners and policy-makers.

2.3. Knowledge Transfer Partnerships

Contextualisation of research is important. Knowledge Transfer Partnerships (KTPs) provide this as exemplar policy innovation framework. A flagship mechanism, KTPs have existed for 30 years. Designed for innovation through partnership between academia and industry they aim to help business grow through innovation and facilitating transfer of knowledge. Managed by committee, funded by government and industry organisation and limited to 1-3 years, KTPs are arguably 'formal' transfer [9] KTPs allow interpretive research into different partners: academics ('knowledge base'); organisation ('company partner'); individual ('associate').

KTPs embody policy evolution and volatility. KTPs were technology-focused in the tech transfer era, broadened to creative, charity and public sectors in 2008, refocused funding on 'priority areas' of technology, then again revised to wider disciplinary eligibility 'not restricted to any specific business sector or technology' [26]. Impact requirements of 'innovation, economic and /or societal impact and challenge' are ambiguous [25], but impact statements are monetised: changes in profits of £163m; over 1,300 new staff; increase of £145 annual exports; investments of £93m in plants/machinery [27]. Some suggest a 5-staged approach to support KTPs [28] with a final 'Commercialisation'.

KTPs offer insight into engagement, management, measurement and resource allocation issues. Engagement by institution and discipline varies. The average number of KTPs per institution is 9 but ranges from 0 to up to 38 [25]. Technology and management areas are more engaged than others. Analysis of data regarding associate engagement highlights issues [25] with a gap of 300-400 'associate places approved'. Personal insight confirms engagement and retention of academics and associate to be challenging. Some academics are engaged in 2 or 3 KTPs, most not at all. Success in recruiting associates is variable: some projects find excellent candidates; others take several recruitment rounds; some fail to recruit. KTPs can be hugely successful but are not easy with projects terminating early. Given issues of engagement, management, measurement and resource allocation, the voice of knowledge partners operating within the KTP policy framework offers meaningful insights.

3. Approach

Based on evidence of KTP academic and associate engagement and retention issues, this study recognises perceptions of these partners as important in the cocreating activity of knowledge transfer partnership. It attributes value to the human voice in this policy and second order rhetoric as identifying perceptions of knowledge partners about their experience and what is valued about that.

The sample is academics and associates engaged in KTPs in one post '92 HEI. The HEI mirrored national patterns of inconsistent engagement by academics and associates: 9 KTPs in total at the time of the research; more in technology and management; some academics involved in several or one KTP but most not at all. Echoing national trends the HEI experienced problems with associate recruitment and early project termination: two KTPs in the HEI had recently failed to appoint an associate and two finished early with associates leaving. Four of the HEI's five academic Schools were engaged in KTPs at the time of the research. To capture insights from all engaged areas, partnerships were selected from each of these four. Projects were 'live' at the time of the research (3-8 months underway), with respondents representing a perspective of involvement in an on-going project. Details of projects associate and academic partners are presented in **Table 1**.

КТР	Academic School (Discipline)	Industry Sector	KTP Project Title	Academic Partner	Associate Partner
1	Health/ Social Care (Psychology)	Local Education Authority	Child Behaviour Management	Professor Prevention	Child Behaviour
2	Technology (Engineering)	Consumer Manufacture	Whole Life Engineering	Dr Materials	Sustainability Development r
3	Business (Management)	Hospitality	Strategic Risk Management	Dr Business Continuity /Risk	Business Continuity
4	Built Environment (Architecture)	Architecture	Post Occupancy Life Cycle	Senior Lecturer Environmental Performance	Sustainable Design Development

Table 1: Research Sample of KTP projects and Associate-Academic partners

This research was framed by a range of terms identified as representing the established knowledge transfer discursive domain and the continuum of conceptualisations about valid knowledge, transfer, partners and impact. Terms selected and meanings discussed by the respondents provide a basis for identifying their conceptions. Underpinned by partnership notions of the value of common ground and difference between partners, this study investigates similarities and differences in respondents' representations.

A questionnaire followed by in-depth interviews gathered second order rhetoric from four sets of academic and associate partners involved in four different KTPs. The questionnaire provided the list of terms identified previously. Respondents were asked to select their top three and propose new terms which best represented their experience of:

The types of knowledge involved in KTPs

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- The process of the KTP
- The overall scope and impact of the KTP
- Their contribution

Questionnaire responses guided the subsequent open-ended interview questions, allowing systematic data collection but exploration of conceptions behind the terms. Researcher and respondent had freedom to explore meanings, further representations and examples. Interviews were recorded and transcribed. Interview and questionnaire data were analysed separately and together. Data was indexed, organised, re-organised and analysed by categories of: individual; partners; associates; academics. Data analysed shared and different conceptions between partners and between associate and academic groups.

Whilst universal applicability of findings from an exploratory study of four sets of academic and associate partners is not possible, there is merit in contextualised explanations and focused relevance. Respondents from projects within one institution and similar points in time allow for contextualisation of findings.

4. Findings

4.1. Shared Common Ground

There are shared conceptions about knowledge transfer in the academic and associate voice as illustrated by the similarity and frequency of words selected and meanings discussed by respondents. 'Collaboration', 'skills development', 'partnership' and 'commercial relevance' are frequently selected by both parties.

The shared academic-associate voice represents the KTP process as having 'multiple perspectives' and 'collaborating' towards a 'common goal'. Common between the academics and associates and in contrast to policy, the process is represented as not straightforward and 'difference' between parties requiring 'communication', 'coordination' and managing 'diverse expectations'.

The shared academic-associate voice recognises types and sources of knowledge as 'multiple', including 'technologies', 'research', 'skills development' but also 'tacit' knowledge, and an eclectic range of 'government', 'NGOs', 'best practice', 'other sectors'. The academic-associate voice has common ground describing research as 'academic' but 'practical', in contrast to policy representing it needing adapting.

More clearly than policy, there is consensus in seeing the company partner as 'equal' with its own research. Academic and associate suggest partners make relationships work through 'collaboration', 'communication', 'negotiation', 'give and take', 'thinking differently' and practical 'know-how', 'rigour', 'coordination',

'management'. Uniqueness of contribution is represented including: 'breadth', 'networks', 'cutting-edge knowledge'. Different to policy discourse, beyond-contract contributions and attitude are cited: 'flexibility', 'hybrid skill set', 'having fun', 'vision'.

Academic and associate share a transactional representation of the impact and scope of the project which mirrors KTP discourse: achieving company objectives; career enhancement; possible publications. But in contrast to policy discourse the shared voice also represents something broader: 'market-leading'; meeting 'government rhetoric'; 'impacting on the supply chain'. Also different to policy, impact includes 'learning' and longer-term aspects: beyond-project opportunities and relationships; beyond-sector dissemination; global roll-out.

The academic-associate shared voice is consistent and distinct from policy's mixed metaphors representing: an intensively collaborative process; diversity and equality of knowledge sources; hands-on, practical contribution of partners; individual benefits mingled with broader impact (e.g. learning and longer-term opportunities).

4.2. Difference and Dissonance

Differences in the voices of academic and associate knowledge partners are highlighted by different terms which academic and associate use which the other party does not and highlights different perceptions of experiences of partnership. 'New', 'applied' and 'company knowledge' selected by associates differs and arguably contrasts as less 'pure' than 'academic knowledge' and 'technologies' selected by academics. Further, the terms 'integration', 'arbitration', 'co-ordination', 'establishing common ground' and 'having joint ownership' selected by associates arguably conceptualises a more laboured process than that suggested by academics citing 'positive social relationships' and 'networks'.

The academic-associate voice shares conceptions of a collaborative process of working across boundaries with parties of 'different languages', 'different masters', 'different expectations' engaging in 'discussing', 'working together' and 'negotiating'. There are distinct interpretations regarding this experience. The associates represent such partnership working as personally challenging requiring skills of 'communication', 'selling', 'marketing', 'coordination of data', 'integration, 'arbitration', 'negotiation' and even 'dispute' management'. 'Project management' is consistently cited and 'herding 4 wild stallions' is an evocative picture which policy and academics do not depict. The academic seems less personally challenged though needs 'flexibility' to 'look at' and 'do things differently'.

The academic-associate voice conceptualises valid knowledge as a broad range of multiple knowledge types, but dissonance and friction experienced or observed suggests mismatching judgement and expectations at varying stages. Some report a personal journey of changed perception about what is valid, or an observed, hoped for, anticipated change. One associate represents a personal shift from

more linear, 'transfer' end of the continuum towards more collaborative 'partnership' and non-transactional 'social good'. For example coming to see university knowledge as less commodified than expected: 'I thought this was going to be transfer of knowledge from university...but... it's learning for everyone'. Some associates and academics note dissonance of company partners who were 'initially negative' as 'they did not see the value of what the university was contributing', but recognise this evolves. Several academics seemed at the outset more understanding and philosophical about this: 'I'm sure this will change'.

In terms of impact, there is dissonance between partners and with their respective domains, identifying benefits beyond standard ones of associate career, academic publications and company profits. For example one associate represents winning an industry award as significant impact, dissemination and profile for all: 'joint ownership'. The academic in this partnership by contrast conceptualises the benefits as pertaining to 'just one party' with personal hopes for dissemination through academic publications. The domain in which the project's worth is validated is conceptualised differently and more broadly by one partner.

Broader conceptualisations are held by some who suggest their views are dissonant with their own domain. Representing the KTP as pursuit of interests and vision 'beyond the ivory tower' and '4 star research, some academics conceptualise their validating community or domain as beyond academia towards a broader social good. The associate who represented project impact as supply chain learning identified himself as different to other associate applicants with his broader commitment to 'the vision of sustainability'. These points of difference and even dissonance nevertheless conceptualise the partnership as able to achieve something valuable during the project's lifetime and/or subsequently.

5. Discussion

The voice of the academic and associate working across several disciplines in one HEI shows common ground and difference as important. Shared and different conceptions offer insights and implications for policy issues of engagement, management, measurement and resource allocation. The importance of the industry partner voice (the company) missing from this research is highlighted.

5.1. Engagement

Shared and different conceptions of academic and associate about the knowledge transfer partnership process provide implications for mechanisms aimed at recruiting, engaging and supporting the right people. Challenges of collaboration as identified through shared and different conceptions of the academic-associate voice are represented as unexpected or unusual, and highlight particular skills and attitudes required such as 'negotiation' and 'flexibility' (as opposed to more passive 'transfer' and 'adaption' of policy discourse). Emphasis on collaboration and

coordination, over academic or technical knowledge echoes previous assertions about the value of softer knowledge forms. For KTPs, selection mechanisms for engaging/recruiting individuals, teams or organisations (e.g. job descriptions and funding criteria), should perhaps not focus solely on technical or academic expertise but incorporate softer relationship and negotiation skills (acknowledged but not addressed in a practical sense by [15] [21]. The KTP scheme gives associates project management training but this study suggests such skills (and negotiation and conflict management) may be required in recruitment criteria.

Analysis of common ground and dissonance in partner voices suggests recruiting certain types of people. Dissonant academic representations of the KTP as pursuit of interests and vision 'beyond the ivory tower' and '4 star research', envisage a validating community beyond academia. Academics were already externally networked/networking - pre-established relationships and trust with the company leading to the project. These academics conceptualise themselves as members of a community of practice incorporating industry. Conceptualising value in trade publications, industry awards and supply chain learning may require partners who identify with a broader domain or meta knowledge beyond the traditional boundary of their own sector or personal utility. Policy managers should recognise the value of maverick individuals, who different to colleagues perhaps already work and conceptualise themselves across multiple domains. Nuancing notions of Etzkowitz's [19] 'intertwined boundaries' and Whitchurch's [6] 'blended professionals', findings here suggest recruiting 'intertwined professionals', those with 'blended networks'. To what extent industry partners engaged in KTPs also (need to) conceptualise themselves as different or broader than their industry peers needs further investigation but would have implications for engagement and recruitment activities aimed demand-side.

5.2. Management

Analysis of common ground and dissonance in partner voices suggests policy mechanisms should recognise that value judgements and requirements of different participants may change over the course of the project. Common and different conceptions about the value of 'learning' and 'better understanding' are informative. The associate who suggested 'initially I thought this was about transfer from university to the company' but then came to see it as 'more equal' recognises evolution in perception. Company partner dissonance recognised by some respondents (the company 'initially negative' as 'they did not see the value of what the university was contributing'), changed over time. This appeared positively anticipated from the outset by some academics. Implications for policy management are that different support for different participants at different stages may be required. This suggests greater nuance for CIHE's [27] 5 C's Best Practice Framework with partner understanding an area for management focus.

Dissonant associate voices frustrated that the partnerships' full potential may not be realised within the scope of the KTP, underscores the importance of time. Consensus and dissensus in academic-associate voices suggests KTP mechanisms need to understand that relationships, trust and understanding between domains take time. Different partner conceptions about what is valued exist and possibly starkest at the start. Some respondents seemingly undergo less of a personal perceptual shift conceptualising friction from mismatched perspectives as 'typical innovation diffusion'. Such understanding prevailed in partners with some pre-established relationship (between academic/company or academic/associate). Challenging Perkmann and Walsh's [9] association of open innovation and relationship-based transfer with informal KT, we see such relationships also exist but arguably as precursor in formal mechanisms. An earlier stage of 'Chatting' arguably precedes CIHE's [27] first stage of 'Co-Recognition'. The KTP mechanism might proactively support development of understanding and trust: 'informal interaction' activities (e.g. community engagement/networking events) with no purpose other than building partners' relationships and understanding. Informal interaction without apparent direct bottom-line gain may require particular mind-sets or perceptual shift for company partners or university third stream leaders driven by income-generation. This requires further research.

5.3. Measurement

UK policy discourse articulates an objective of social good and desire to identify hidden innovation and non-monetised benefits. Partner conceptions suggest 'learning' and 'better understanding' as key performance indicators (KPIs), but we need to understand what is meant by such terms for development of appropriate policy evaluation. Learning and understanding as valid KPIs may be difficult for company partners, and particularly those having bought in (literally) to the transactional discourse of monetized impacts. Whether in Williams' [18] terms company partners see the 'utility' of learning needs investigation. Further research needs to identify company partner conceptions and match/mismatch or change over time with those of academic and associate domains. However, if learning and understanding is valid for some, changing perception of other stakeholders (e.g. would-be industry partners?) may be required. Policy may need to focus as much on changing understanding about what is valuable as recording it. Acknowledging the missing industry voice, there is value in understanding where there are shared and dissonant value judgements and perceptions of innovation/hidden innovation.

The time-bound nature of formal mechanisms is problematic. 12-36 months for developing understanding is arbitrary: value may not be realised or perceived until after project completion. Longitudinal measurement and follow-up audits are crucial and some attempts at this exist. But end of project evaluation should ask partners to articulate post-project possibilities (e.g. as spotted by some associates but discounted as falling beyond project time frames). CIHE's [27] final stage of Commercialisation needs to revisit the 'Co-Recognition' stage.

5.4. Resource allocation

Policy aiming for intertwined boundaries and meta innovation needs to be backed up by resource allocation rewarding activities leading to this. One approach is rewarding and resourcing cross-boundary activity in the currency of individual domains. Developments with The Research Evaluation Formula (REF) arguably progress this with 'impact' measures and flow of resource incorporating the values of industry in academic KPIs. Weighting of 'impact' measures could be challenged. O'Beirne suggests integrating policy priorities into academic programmes [11]. The employability agenda is a curriculum-based example of integrating priorities of external stakeholders into academia. It remains to be investigated how company partners could share priorities and metrics of academic partners. Further, how do we develop shared meta perspective and KPIs between industry and academia as one broad/overlapping community? Developing appropriate KPIs requires better understanding of company partner to compliment the insights here. O'Beirne's policy picnics and networking are examples of cross-boundary activities developing meta perspectives, but do not address issues of industry engagement and metrics. Resource allocation should reward persistence and multiplicity of academicindustry engagement over time, and articulation of joint achievements and learning.

Issues with monetised and institutional resource allocation and searches for other models are informed by this research. Institutional resource allocation based on institutional track record or ability to engage in collaborative working are suggested as important as technical or academic expertise. Instead of priority sectors, KTP funding criteria may need to identify individuals or organisations with skills and predisposition for collaborative working. How and whether knowledge transfer is viewed by company partners as requiring maverick ways of working and associated resource allocation for certain types of company needs investigation.

6. Conclusion

More needs to be done to understand 'hidden innovation' [12] and knowledge exchange in 'newer areas' [13]. This study attributed value to the voice of knowledge partners engaged in a UK third stream mechanism. This research aimed to identify active stakeholder conceptions to inform current issues of engagement, management, evaluation and resource allocation. Adopting underpinning concepts of partnership which attribute value to common ground and heterogeneity, it identified shared and different voices of knowledge partners as valid sources of knowledge for researchers, practitioners and policy-makers.

The academic-associate voice engaged in KTPs in one HEI presents conceptions distinct from the mixed metaphors of policy. Shared representations are made about a collaborative, even combative process, the diversity and equality of knowledge sources, and the hands-on, practical contribution of partners. Individual

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benefits consistent with a transactional conception are articulated but also benefits such as learning, representing broader perspectives of time and space.

Difference and dissonance in the academic-associate voice presents challenges of partnership working and requirements to draw on skills, attitudes and vision which is articulated as unusual and/or unexpected. Knowledge partnerships supported by policy discourse currently under or misrepresenting this challenge sets expectations which are misleading. Such policy mismatch has resultant links to issues of engagement, management, measurement and resource allocation.

Policy engagement issues are informed by recognising non-homogeneity of partners. Valuing, articulating and targeting individuals and organisations with flexible cross-boundary skills, behaviour, attitudes and relationships that our knowledge partners voice represented might identify 'mavericks'. The academic associate voice represented the challenge and value of dissonance and creative abrasion. Policy management mechanisms should support individuals and organisations in the skills required to manage conflict and negotiation as a productive force. Policy measurement should be more longitudinal acknowledging the significance of time and breadth of perspective beyond formal project timescales, asking knowledge partners to articulate learning and changes to perspective in impact statements. Since industry partners may be conceptualised and conceptualise themselves as paying clients in a transactional relationship their perspective needs investigation. Finally, resource allocation should recognise the importance of relationships and individuals with cross-boundary meta perspectives. Models focused on individual not just organisational performance, and metrics rewarding development of cross-boundary conceptions might see KPIs including depth and breadth of external networks and cross-community relationships. Development of meta KPIs requires insight into all partners' perspectives.

Through an interpretive approach to understanding issues in the third stream and foregrounding partnership concepts of common ground and difference, the second order voice of our KTP knowledge partners reveals the value of partnership concepts for knowledge transfer. Consensus and dissonance in the academic-associate voice in one HEI provide sources of insight into hidden innovation. What this study has not done but highlighted is the importance of insight into all perspectives in a partnership: the extent to which the domain of company partner supports our findings and conclusions requires investigation. In this context there is value in valuing partnership as a conceptual framework.

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