**An object-oriented approach to education policy research:**

**Deepening the analysis through an activity-theoretical and critical discourse analytic framework**

**ABSTRACT**

This paper responds to current conceptual interest in the policy object as a unit of analysis in education policy research. The theoretical perspectives of activity systems theory and critical discourse analysis are combined in a transdisciplinary framework to provide a fine- grained analysis of policy deliberation and a broader methodological apparatus with which to study discourse and activity. The value of this framework is illustrated through analysis of a policy-oriented text produced by a UK higher education mission group (the University Alliance) in the period preceding the UK general election in 2015. The analysis demonstrates how artefacts are deployed to mediate the policy object and illuminates how the group is claiming space in the policy sphere to challenge traditional constructions of research excellence which deprivilege this group. The emancipatory contribution of this form of strategic critique for policy communities is discussed.

1. **Introduction**

In current higher education policy research, there is extensive critique of the ways research and wider performance metrics of international provenance are shaping practices at the national and institutional level. Several analyses point to an increasing isomorphism in higher education policy and attribute this to an increasing institutional orientation to international rankings and metrics (for example, see Deem, Lucas, & Mok, 2011, Hazelkorn, 2015). Marginson and Rhodes (2002) propose the concept of ‘glonacal’ as an analytical heuristic to capture the dialectic between the macro-dynamics of the international context which influence the normative policy environment but also the micro-dynamics of local variation which shape and influence national policy responses.

The discourse-analytic approach proposed in this paper defines a theoretical and methodological orientation which draws analytic attention to the complex nature of policy genesis and gives detailed consideration to how different meanings are attached to concepts such as research excellence and impact and how associated metrics operate in practice, in material ways. The theoretical perspectives of activity systems theory (AST) and critical discourse analysis (CDA) are combined in a transdisciplinary framework to provide a fine- grained analysis of policy deliberation and provide a broader methodological apparatus with which to study discourse and activity.

This paper seeks to make a methodological contribution relevant to the domain of education policy research. A common critique in this field centres on techno-rational assumptions of a linear, top-down policy design-implementation relationship (see, for example, Trowler 2002). Increasing concentrations of actor-centred analyses, in response to this critique, foreground the creative responses to policy interpretation and enactment in local contexts (see, for example, Braun et al 2010). Within this vein of research, Sin (2014) conceptualises the policy object as a useful, additional variable in policy research. This perspective provides a way of focusing analytically both on actor conceptions of a policy text (ontology) as well as what policy becomes in practice (enacted ontology), thus reflecting the dialectic between policy design and implementation and emphasising the space for agency and interpretation in enactment. In a comparative study of Masters degree conceptualisations (as influenced by EU Bologna harmonisation policies) in three national contexts, Sin uses policy object ontology to ‘designate what policy actors believe the policy object is and how they conceive of it’ (2014:446). The present paper responds to this conceptual interest in the policy object as a unit of analysis and extends the focus on how enactment is mediated both by human agency but also by the affordances of artefacts which both enable and constrain activity.

The theoretical discussion is grounded, in the latter sections of the paper, in a context of current debate about the influence of research excellence metrics on policy and practice in the higher education context internationally. An analysis of a policy-oriented text produced by a UK higher education sector ‘mission group’ illustrates the conceptual and empirical findings which can be derived from this form of transdisciplinary methodology. A common focus in education policy-oriented research is on the response of the policy recipients to top-down policy interventions (see, for example, Ensor 2015, Bourke et at 2013). The focus on lobbying texts produced by potential policy recipients in this analysis provides a valuable insight into the concerns and preoccupations of particular groups in a diverse higher education sector and the proactive strategies deployed to influence government policy.

The principal concern of the paper is to demonstrate the commensurability of the two perspectives used in this analysis (AST and CDA) in terms of ontological stance, emancipatory orientation and complementarity of theoretical and analytical constructs. Critics of CDA emphasise the over-privileging of discourse over action (Engeström, 2005) and a restricted form of analysis which examines discourse independently from the ‘practical field of action’ (Jones, 2007: 353). The methodological contribution of the proposed approach is to extend the frame of analysis, increase the analytical gains and overcome the perceived tentativeness of discourse analysis (Jones, 2007), (Fairclough, 2009). There is acknowledgement of the need for education policy-oriented research to move beyond critique and offer resources for policy actors to respond (Ashwin & Smith, 2015). The empirical analysis presented later in the paper draws attention to the forms of deployment of contemporary metrics associated with research excellence in shaping and re-defining the object of activity.

The paper is structured in three main parts. The first section demonstrates the value of using AST as a frame for analysis of policy deliberation but identifies some of its limitations; in particular the treatment of discourse. The second part shows the significant compatibilities and complementarity between the two frameworks (AST and CDA). The third section illustrates the approach with data from the UK higher education policy context. The final section identifies the analytical gains from this form of analysis for research and policy communities.

1. **Discourse and Activity**

Engeström’s formulation of Activity Systems Theory (AST) builds on antecedent theorisations of human activity as object-oriented, mediated action (Leont'ev, 1978) (see Figure 1) and is informed by empirical work focused on complex, large-scale distributed work activity in national and international contexts. In the evolution and conceptual development of AST, Engeström displays an increasing regard for discourse in the study of activity but one that is essentially ‘one-way’, thus falling short of conceptual or theoretical integration. In this section it is argued that the relationship can be more ‘two-way’ and ‘transdisciplinary’ (Fairclough 2009), whereby the two perspectives gain from and are developed by one another.

[figure 1 here]

Engeström (2002) characterises the object as the ‘problem space’ at which activity is directed. An analytical distinction is drawn between object (a horizon of possibility) and outcome (a temporary stabilisation formulated around goal-directed action). Analytical emphasis is drawn to the way objects are formulated into outcomes by means of mediating artefacts which are defined as tools and signs, both physical and symbolic (Engeström, 2002). Engstrom emphasises the provisional and changing status of artefacts as activity unfolds. A concept or model may be used as a tool to diagnose and understand but may also become reified as a ‘frozen definition’ to identify and classify (Engestrom 2005: 320). This theoretical perspective draws attention to the dialectic between these auxiliary artefacts and their object.

Engeström (2005) explores opportunities for expansive learning in health, legal, educational and technological contexts and examines alignments and productive potential of aligning AST with other theoretical perspectives to develop more powerful analytical and conceptual tools. Principally, AST is posed as a solution to limitations in other theoretical frameworks by extending the frame of analysis and providing analytical concepts with which to take account of extra-linguistic features of the discursive context. The consideration of the role of language in object-oriented activity is evident in several of Engeström’s empirical studies but this is more of an analytical orientation than a theoretical perspective. Engeström reviews a study of the activities of a work group responding to a machine failure, originally undertaken by Harts-Landberg and Reder (1997) and a subsequent study of the incident analysed from a discourse perspective (Taylor, 1999). This discourse-based analysis pointed to forms of conversational exchange by tool experts and team members of the machine operator, which were interpreted as ‘influence attempts’ (by participants from two different teams) and therefore, as “competing ways of enacting organisational power structures by asserting authority over an individual worker” (Engeström, 2005 p.140).

In a reanalysis of this data, Engeström challenges Taylor’s interpretation (1999 op cit) for its privileging of these ‘influence attempts’ above the material outcomes:

*But this account seems to leave out of the equation the pressing issue for production, namely the Rexford machine and the metal bars. Taylor does mention the ‘corporately valued object’, but in his account it comes somehow as a secondary consequence of an influence attempt.” (Engeström, 2005: 140)*

Broadening the frame of analysis can lead to a significantly different interpretation and generate different lines of further research which are centred on the material outcome. In a study of the failure of ‘postal buddy self-service kiosks’ (introduced to American post offices in 1993), Engeström (2005) shows the value of studying language as a mid-level form of analysis. Initially deploying concepts from actor-network theory to explain the technology failure, Engeström shows the limitations of this ‘macro-level analysis’ and turns to the interview data collected from the developers and focuses, in particular, on their ways of talking about the technology.

In its search for convergence, irreversibilisation and closure, this kind of [actor network] analysis overlooks the inner dynamics and contradictions of the activities of the various actors in the network….. Monologism prevails also in the treatment of individual actors’ conceptions and interests. Not much attention is paid to hesitations, dilemmas and shifts in the actor’s voices, all relevant when the mind is seen in dialogical and argumentational terms. (Engeström 2005, p261).

The use of discourse in this analysis is used to demonstrate the value of AST as a perspective which brings focus to the inner dynamics of complex work activity (including the tensions and contradictions) and the need to maintain the dialectic between the mediating artefact and object.

In a study of work teams in an American/Finnish organisation, Engeström tests Nonaka & Takeuchi’s (1995) model of knowledge creation and draws on video transcript data from a series of team meetings. The analysis showed that there were significant parts of the meeting which did not map onto the categories suggested by the Nonaka and Takeuchi model and which Engeström described as sequences of ‘formulating/debating a problem’ and ‘analysing/debating a problem’ which he attributes to the discursive construction of the object:

An entity becomes an object of activity when it meets a human need. The subject constructs the object, ‘singles out those properties that prove to be essential for developing social practice’ using mediating artifacts that function as ‘forms of expression of cognitive norms, standards and object-hypothesis existing outside the given individual’ (Letorsky, 1984 p137) In this constructed, needs related capacity the object gains motivating force that gives shape and direction to activity. The object determines the horizon of possible actions… (Engeström 2005 p319).

This analysis highlights both the significant role of language in defining the object but also the role of artefacts. The explicit modelling of the activity system within the triangular formation (see figure 1) provides an ‘analysable inner structure’ to these elements and maintains the dialectic between object and outcome. The empirical illustration provided later in the paper draws analytic attention to strategies aimed at expanding the policy object in order to claim a space in the policy sphere.

In the empirical studies discussed above the role of discourse has tended to emerge in a secondary way. However, in a paper entitled ‘Communication Discourse and Activity’ (Engeström 2005: 139), the issue of alignment with Conversation Analysis (CA) and critical discourse analysis (CDA) is tackled directly. Engeström (2005) is critical both of the Conversation Analysis and CDA communities for a tendency to focus on texts that are not ostensibly embedded in any activity which can result in an inevitable tentativeness in analysis and can lead to weak warrants and truth claims. To address these dilemmas, Engeström argues for a focus on practical, object-oriented activity. In this context, Engeström suggests AST can provide conceptual tools rather than ‘weak metaphors’ lacking in analytical power (as levelled in his critique of Wetherell’s Conversational Analytical framework) and a unit of analysis which can locate discourse in meaningful, productive activity. The solution for Engeström is solved by using this broader unit of analysis. However, AST can fall prey to a form of researcher objectivisation that is imposed by the analyst’s decisions of how to constitute the activity system as a basis of analysis:

*The analyst constructs the activity system as if looking at it from above. At the same time the analyst must select a subject member (or better yet, multiple members) of the local activity through whose eyes and interpretations the activity is constructed.* (Engestrom and Miettenen 1999 p10)

In the context of educational research Ashwin (2012:56) highlights choices that must be made by the researcher, in relation to their research questions; for example, whether to define the teaching-learning environment as an activity system or to define students and academics as part of two different activity systems. As will be shown in more detail in the next section,CDA’s tools for investigating texts’ external relations can help to construct the activity system empirically by following the ‘nexus of practice’ (Scollon, 2001); thus avoiding arbitrary closure and the objectivising aspect of the AST methodology in its application.

Through his empirical work, Engeström acknowledges the role and place of discourse within activity systems. However, despite the significant discursive features of data used in empirical studies, AST has not *‘deployed the substantial theoretical tradition’* of critical studies of language (Sannino 2008) or displayed significant methodological development (Engeström & Sannino, 2010). Yet, just as Engeström proposes that activity systems theory enhances other theoretical frameworks (such as actor network theory) by providing a further layer of analysis of the inner dynamics of actor’s perspectives within the network, CDA can provide further insight by looking at the inner workings and dynamics of discourses than Engeström’s existing treatments of discourse has been able to do.

1. **A Trandisciplinary Approach**

This section identifies clear lines of conceptual integration between activity systems theory and critical discourse analysis. The analysis draws on the formulation of critical discourse analysis developed by Chouliaraki and Fairclough (1999) which highlights the importance of analysing discourse in its wider context of production and interpretation. Deploying Fairclough’s concept of ‘transdisciplinarity’ (Fairclough, 2009: 176) a process of theoretical development is achieved by operationalising concepts from one theoretical perspective (activity systems theory, in this case) by formulating them with CDA categories and achieving a greater degree of analytical precision. Applying this definition of transdisciplinarity, it is argued that the combined framework succeeds in operationalising parts of the framework of each perspective which have not been fully exploited and extending the analytical power and validity of the analysis.

The two perspectives are commensurable in ontological stance. In Discourse and Modernity Chouliaraki and Fairclough (1999) align with Harvey’s ontological conceptualisation of discourse in social practice (Harvey, 1996). From this perspective it is argued (1999: 23) that all practices ‘combine physical and symbolic resources, in varying degrees, and discourse is always a significant moment’ (Chouliaraki & Fairclough, 1999:23). . In this analysis discourse is viewed as one ‘moment’ in a practice; each internalises the other without being reducible to them (op cit:37). Discourse is privileged only in methodological terms as being more amenable and accessible to study than other ‘moments’. This perspective encourages a focus, therefore, on the language of the text, the contexts of, and relationship between, the production and interpretation of the text; and on the relationship between the discursive process and social context.

Both perspectives emphasise the transformative nature of social action and conceptualise agency in compatible ways. For CDA, agency resides at the individual and collective level. Creativity and individual agency, manifest in creating new articulations in the discourse, is acknowledged. However, texts also are regarded as capable of being agentic. The concept of ‘nodal discourses’ is used to describe condensed, selective representations of complex realities and to emphasise the ways such discourses can move across contexts and scales, colonising new contexts or being appropriated by social actors (Fairclough, 2005a). In the contexts of complex activity and large scale objects which Engeström describes, the sphere of collective motives and objects are not readily accessible to individual awareness.

*Yet this sphere is not outside of human agency. It is at this level that powerful forward oriented and future creating images and ideals are formed individual dreams and collective visions merge. (Engeström and Cole 1997 p.306)*

Engeström (2005: 91) refines the concept of agency, which is often portrayed as overcoming barriers and therefore a ‘control’ metaphor. He defines a form of agency which is manifest in complex situations and invokes metaphors of ‘cultivation’ in relation to large scale objects. The mastery and cultivation of such large scale objects depends on new forms of distributed and coordinated agency. As such, this form of analysis conceptualises agency as both a human-generated force but also artefact mediated.

Both CDA and AST represent approaches to constructing a more communitarian unit of analysis (i.e. beyond individual mediated action). The two perspectives share some complementary interim theoretical constructs such as focus on contradictions and hybridity, multivocality, contestation. Chouliaraki and Fairclough (1999) developed their analytical framework to address both the internal relations set up within a text as well as its broader relations to other texts and social practices. The analytical focus is to locate discourse in the wider network of social practices and the tools of analysis enable study of the interplay of social constructions created within texts to represent social reality and processes of wider social change. The focus on genre and dialogicality helps to articulate the anticipated activity or practice that the discourse forms a part and brings a broader range of elements into the analytical frame. Attention is drawn to ‘nodal’ discourses (Fairclough, 2005a) , in a second use of the term, through analytical tools of intertextuality and interdiscursivity, help to identify the common, material anchor points of each text to surrounding social events and practices. The internally-focused part of the analysis draws attention to ways tensions are articulated or reconciled through an analytical focus on hybridity.

AST strengthens the analysis through its explicit focus on artefacts as part of the sociomaterial landscape. The AST perspective gives analytic attention both to how the horizon of possibility is determined both by discursive strategy but also the material artefacts deployed in the discourse. This perspective helps to illuminate parameters imposed by artefacts in shaping and framing the object); and potentially in limiting or enhancing the creative potential of activity (Engeström, 2005). As will be shown in the empirical analysis of policy deliberation

 in the UK higher education context, AST can locate contradictions within particular domains of the activity. This form of analysis can generate more testable claims and generate fruitful lines of enquiry.

Historicity underpins the two perspectives.In activity systems theory, this is embedded throughout the system: in mediating tools, division of labour and rules. From AST’s perspective, transformation in activity is explained by accumulating tensions and contradictions which can generate expansive learning. These can be caused by new innovations introduced from outside the activity system or by discursive reconstruction of the object. In CDA, this historical context is reflected and addressed through hybridity, genres, styles and differing articulations of these within new orders of discourse. Yet, whilst shaped by the past, social action is always open to the future; the dialectical logic underpinning both perspectives reflects the openness and innovatory aspects of human action. Fairclough (2005b) traces process of social change through the initial projection of new ideas in texts as ‘imaginaries’ and subsequent processes reflecting the degree of incorporation of imaginaries into practice; through rhetorical deployment or in a greater degree of internalisation, through inculcation. CDA views discourses as ‘nurseries for change’ (Tusting, 2005), a perspective which highlights the creativity evident in new articulations or orders of discourse.

The perspectives of AST and CDA centre on emancipatory agendas**.** AST is concerned with the stretching of scale and reach of objects and technologies; the increasing complexity of work and activity; the unplanned trajectories and consequences of such growth which are manifest in ‘runaway objects’ (Engeström, 2005::98). AST’s emancipatory aims relate to the *‘reforging’* of objects, re-finding of meaning in large scale objects, and facilitating of *‘expansive learning’* (Engeström, 2005). AST is predicated on a ‘situated interventionist’ approach whereby the researcher seeks to collaborate with research participants to recognise contradictions and tensions underlying activity as opportunities for ‘expansive learning’. CDA associates with issues relating to late modernity: hybridity of discourses, globalisation, identity, reflexivity and commodification, and emphasises the dialectic dynamic (Chouliaraki and Fairclough, 1999). CDA seeks to render explicit the way language perspectivises and constructs social reality and to illuminate and create resources for change (Fairclough, 2001). Chouliaraki and Fairclough outline a research agenda centred around ‘the communicative construction of public space which centres on the search for effective forms of communication’ (1999 p.89).

CDA scholars have sought to operationalise an alignment with activity theory but this has been at a largely contextualising level; to determine significant sites of engagement (Scollon, 2001), or a historical/cultural frame for analysis (Gee, 1999) and to overcome perceived ontological barriers (Jager, 2001) rather than transdisciplinary application. Sannino (2008) draws attention to the dialectical relationship in which discourse arises from activity but also ‘generates (and regenerates) activities’and points to the need for methodological tools to study discourse and activity conjointly. The next section articulates how the conceptual framework is operationalised into a methodology which draws both on the methodological apparatus of AST and CDA.

1. **Methodology**

The transdisciplinary analysis is oriented to the activity and the way it is represented. The object of activity can be articulated firstly by examining the text’s external relations to events and practices and, secondly through analysis of the text’s internal relations: both at a macro-level, in terms of structure and organisation, semantic relations, forms of logic and argument, genre features; and at a micro level in terms of the particular grammatical strategies deployed to represent social actors and processes and lexical choices in representation.

The analytical protocols described in table 1 define how the tools of CDA can be deployed to operationalise and extend AST. In the analysis, subject refers to the individual or group whose agency forms the point of view in an analysis (Engeström, 2002). Attention is drawn to the forms of legitimation used by the subject to claim authority, the genre, style and modality deployed which is an indication of anticipated practice (Fairclough, 2003 p.166). The forms of dialogicality and intertextuality, both between texts and within the text, give a further indication of positioning. For example, the extent to which the text is responding to previous texts (or anticipating future texts) and the extent to which the text displays a unified, authoritative voice or represents multiple voices can be indicative of subject positioning within social and power relations.

[table 1 around here]

The communities represented in texts can be examined through forms of representation of social actors. This part of the analysis can attend to thematic foregrounding of particular social actors within clausal structures; predications and attributions to particular social actors; and the particular lexical choices in their representation. Artefacts can be identified through an analytical focus on those conceptual, analytical and/or physical tools referred to in texts and the ways they are used. CDA adds further nuance to the analysis through consideration of the semantic representation and forms of logic and argument within which these artefacts are embedded. The concept of division of labour can be interrogated in terms of the groups and organisations identified as being oriented towards a shared object. The analysis can highlight where texts are referring in neutral terms to a current division of labour, or a problematic division (highlighted as a tension), or are depicting a future, desirable division of labour. Rules and norms can be identified through an analytical focus on presuppositions, assumptions and propositions. The rules and norms represented identify those material constraints upon practice and those which are represented as commonly held norms which guide practice.

The transdisciplinary analysis assists in articulating the object and illuminating the discursive strategies which underpin this object orientation. Engeström suggests that hybrid discourse can evolve to overcome problems but give insight to tensions running through activity. Fairclough (2003) draws attention to the forms ‘overwording’ which can draw attention to attempts within texts to reconcile tensions. The form of modelling made possible by this analysis helps to conceptualise the nature of the contradictions: For example, whether it relates to division of labour or rules and norms. Secondly, whether the tension is represented as being within the activity system or between different activity systems, characterised by Engeström as secondary contradictions (between activity systems) (Engeström, 2009). As such, the analysis attends to, and locates, the tensions and contradictions represented explicitly and implicitly within the text and examines how the text represents possibilities for transformation of the object.

1. **Analysis**

This analysis centres on a policy-oriented text produced by the University Alliance, a membership organisation representing twenty UK universities in February 2015, just prior to the UK general election (University Alliance, 2015). Since 1992 there has been no formal mission differentiation in the UK higher education system at national policy level and a number of higher education mission groups have formed over the past twenty years to represent particular interests to government and key stakeholders. The role of mission groups (as self-constituted membership organisations) in exerting a form of pressure-group politics has been examined in previous studies (Filippakou & Tapper, 2015). Research has identified material differences between member institutions represented by UK mission groups in terms of funding and student profiles (de Jager, 2011). Morrish & Saunston (2013) suggest that the discourses of self-representation deployed by new universities reflect a status anxiety in a context of dominant, normative definitions of research excellence. A previous study by the author examined the activities of the (then) four mission groups in the period surrounding the 2010 general election (author citation a), with particular emphasis on the policy positions formulated by each group and the international discourses and benchmarks deployed to support these positions. Since that time, there has been significant change in both number and composition of mission groups (Baker, 2013). A particular focus of examination in the current analysis was on contemporary constructions of research excellence and use of sector and other metrics to define research performance.

**5.1 Subject**

The subject of the analysis is the University Alliance mission group and analytic attention is focused on the forms of representation deployed by this group. In focus and title, ‘Evolve, Connect, Succeed: Funding a healthy research and innovation ecosystem’ the report aligns lexically with a Government White Paper entitled ‘Innovation and Research for Growth’ (DBIS, 2011) which draws on this ecosystem metaphor. In genre, the 47 page document is constructed as a management report with detailed exposition and analysis, recommendations and an executive summary. The report is explicitly addressed to government and funders and is expressed as a joint endeavour to *“help secure a research ecosystem that will support the excellent research and innovation that the UK needs to succeed”* (p4). The genre choice of report affords certain features and constrains others. In style and tone the text is measured and makes recommendations rather than demands. The text makes few presuppositions. Extensive exposition is devoted to identifying shared ground with government policy. Several intertexual references (N=11) with government reports reflects this strategy. A conceptual metaphor of Alliance Universities as ‘anchor institutions’, ‘globally connected, locally rooted’ (p.1 & 45) underlines this representation of alignment with government priorities.

[Figure 2 around here]

As shown in figure 2, representational claims are made by the group in terms of research performance, productivity and excellence. Explicit forms of dialogicality are evident in the University Alliance text but these are principally related to government texts. Perspectives of other groups within the sector are represented and counter-argued but these are not attributed and are portrayed as mistaken propositions. For example:

*Arguments that large academic research groups perform better than small ones are not new, and underpin suggestions that funding should be concentrated in fewer institutions.(p15)*

*Before analysing some of the mechanisms for allocation which exacerbate the problem, certain myths around the benefits of concentration must be dispelled.(p11)*

In understanding ‘genre’ as a way of acting, the management report format constitutes a client relationship (Fairclough, 2003:26). The text makes a series of representational claims which position Alliance Universities as key contributors to national priorities and various strategies of legitimation emphasise the research contribution of this group through research innovation and knowledge exchange. This initial phase of analysis illustrates particular forms of subject positioning: of aligning with government policies whilst seeking to address and neutralise competing arguments and policy positions of other sector groups.

**5.2 Rules/Norms**

The analysis represented in figure 2 identifies those explicit and implicit rules and norms which enable and constrain activity. The report highlights the value of the ‘dual support’ funding system and policy mechanisms which enable open competition. The report identifies ways in which the material position of Alliance Universities is deprivileged by particular rules and funding algorithms (p.21).

The text draws attention to common presuppositions (‘myths’ p.11.) in the sector of the benefits of research concentration but the attributions are backgrounded. The text represents tensions in terms of systemic faults and latent instabilities in the system:

*Mechanisms which allocate funding on the basis of either scale or historic funding volume will not drive the overall performance of the research base. (p.6)*

*But whilst Science 2.0, the open access agenda and open innovation are steering policy discourses, there remain systemic disincentives [my emphasis] to these agendas, creating barriers to the switch from competitive to collaborative mode. (p.27)*

The text draws attention to, and seeks to reinforce, existing government policy statements and principles.

*The recent 2015-16 grant letter underlined this principle as did a commitment in the science and innovation strategy (p11).*

Problems are attributed to mechanisms and inadvertent outcomes. Solutions posed in the text are oriented to alleviating systemic faults and strengthening interconnectivity in the system.

*More could be made of latent capacity in the system by recognising the contributions of all partners and smoothing the transition from competitive to collaborative mode. (p 7)*

*Other simple tweaks such as recognising co-investigators and their home institution as well as principal investigators in funding audits [..] and considering systems of transitive credit which can help give appropriate recognition to all individuals in a team for their work, should also be considered (p7).*

Through this form of discussion, criticism of actions of government and funders is minimised and attributed to systemic, latent problems and inconsistencies. The text devotes considerable exposition to portrayal of how a healthy ecosystem can work.

**5.3 Community**

The analysis identifies those social actors identified in the text in terms of individuals or sub-groups who share the same general object and construct themselves as distinct from other communities (Engeström 2002). As shown in figure 2, Government, business, research councils and post-graduate students are particularly identified as having shared interest in the proposed strategies. The significant role of Alliance universities in post-graduate research training is highlighted (p21). A changing employment landscape is depicted in which the majority of PGRs will work in organisations outside of academia (p 20). A mismatch in identified in sectoral policy initiatives which have concentrated PGR funding in research-intensive universities (p.24) and the text depicts industry as key stakeholders in doctoral training.

The analytical tools of CDA reveal the discursive strategies which serve to foreground or background social actors in ways which emphasise the positive roles played by these groups and minimise potential criticisms. References made to Universities (as distinct from Alliance Universities) are of a general nature and in the majority of cases portray the contribution of universities to a ‘healthy research and innovation ecosystem’. Explicit reference to another university group (the Russell Group) is made on 2 occasions and is identified only in a footnote and references section (p.12 and p50).

Of particular analytic interest is how problems are represented and addressed through recommendations. The analysis draws attention to the discursive strategies to win conviction, the ‘texturing’ of the argument (Fairclough, 2003: 166). Through the particular grammatical and semantic representations deployed, there is a backgrounding of social actors as protagonists in the problem formulation. The text deploys the grammatical technique of nominalisation to represent negative developments. These are depicted as trends with unattributed protagonists:

*The reconfirmation of the principle of funding excellence wherever it is found may help reverse the recent trends [my emphasis] towards increasing concentration.(p.11)*

Through this discursive strategy, the text reaffirms ways the government is already enabling the research environment but highlights aspects where further support is needed. These are framed as ways ‘optimising the innovation ecosystem’ (p8).

**5.4 Division of Labour**

The analysis identifies those social actors being oriented to the general object in more engaged and active ways, through being represented in the vertical and horizontal division of tasks. In a number of places the University Alliance text refers to and reinforces government interventions:

*Therefore University Alliance has welcomed the new provisions for taught postgraduate student finance announced as part of the 2014 Autumn Statement and, as this system develops, hope that similar opportunities will be extended to research postgraduates in the future.(p.22)*

*The Government’s request for HEFCE to lead a programme enhancing collaboration which includes the recognition of collaborating institutions, and involving Research Councils UK and other partners, should therefore be much welcomed.(p.27)*

Through extensive portrayal and modelling of the characteristics of a healthy environment, the text highlights further actions that could be taken through exerting influence on funders and funding processes. This is worded in direct but neutral terms:

*Government should support funding councils to determine excellence through competitive processes.* (p19)

In this way, the text identifies the need for government mediation of sector strategies which have deprivileged Alliance universities. The form of representation minimises critique, attributing problematic aspects to systemic outcomes and consequences.

**5.5 Artefacts**

The particular focus of this transdisciplinary analysis is on the deployment of artefacts in the discourse and the policy positions they support. In a context of increasing deployment of international metrics in national HE policy discourse (eg.OECD data, Global university rankings), the nature and provenance of benchmarks in the report is examined. Of particular research interest is the appropriation of ‘impact case studies’ as an artefact; both as a qualitative tool and as a metric. There are twelve case studies, represented in text boxes throughout the report to provide illustrative examples of research excellence and application. The impact measures derived from the institutional case studies are deployed in the text in a series of correlations with research output. The analysis is used to make the argument that there is a low correlation between research output and impact. The policy recommendations also relate to the role of research impact as a measure of research excellence:

*The impact agenda has begun to tackle the mismatch between the societal and economic objectives of publicly-funded research and the much narrower view of research excellence taken by some evaluation systems. (p.32).*

International comparators are invoked to support proposals for broadening the definition of research excellence.

*National and international policies have recognised that specialisation and complementarity at the unit level is important for success at system level. This is seen, for example, in the European Commission’s Smart Specialisation agenda.(p.10)*

*The US system is by most measures the world leader in research and development but has a lower concentration of funding than the UK… On the other hand, Germany has an explicit policy of concentrating research in a small number of research institutes, but research quality is not as high as in the UK. (p.14)*

The report draws extensively on the ecosystem metaphor in title, structure and framing of the argument. Through the affordances provided by the metaphor, the report challenges policies and trends which have resulted in concentration of research funding:

*The complex interactions that make this ecosystem thrive can be understood through the analogy of the natural environment: where the success of the whole requires diverse agents both to excel through competition, and co-evolve through interdependency (p6).*

Claims of ‘research power’ of Alliance Universities are predicated on the appropriation of particular research performance metrics: ‘44% contribution to income earned through graduate start-ups’, ’13.8% of 3\* and 4\* papers (with 3% of national research funding)’, ‘research impact-correlation’. In making these claims the report challenges current norms and definitions of research selectivity:

*This element of responsiveness within the ecosystem is not measured by many traditional research indicators, like data on research outputs and citation analysis. Assessment of research excellence has traditionally looked inwardly to the scholarly community for validation of quality’ (p32)*

This form of combined analysis can help to illuminate the effects of artefacts in shaping the object. An alternative definition of research intensity is proposed, congruent with the ecosystem metaphor, which fosters critical mass across institutions (p22). In this particular text, the active deployment of the new artefact of the impact study and the conceptual metaphor or the ecosystem sheds light on how the group is claiming space in the policy sphere to challenge traditional constructions of research excellence which deprivilege this group.

**5.6 Object Orientation**

The text is conceptualised as a contribution to political discourse and decision-making in terms of making normative judgements about what actions should be taken in respect of HE policy. It can be regarded as a form of policy deliberation (Fairclough & Fairclough 2015), whereby the text formulates a problem-solution relation. Aligned to interpretive political theory, problemetisations are recognised as social constructs rather than objective facts and circumstances are formulated differently by particular social groups. The strategy of this text is to develop a portrayal of a functioning research system closely aligned to the government’s preceding White paper. Through this portrayal the limitations of particular research metrics are identified. The combined analysis helps to locate the dimensions of tension and contradiction that are represented in the particular formulation of activity. This text represents tensions in parts of the activity which are associated with rules and norms. Tensions are attributed to systemic weaknesses and flaws in criteria; rather than being attributed to the social actors responsible for formulating the criteria. The discursive strategy constitutes social relations which reflect close alignment with government.

The transdisciplinary approach draws analytic attention to the artefacts deployed in the discourse and the semantic and logical relations in which they are embedded. The analysis demonstrates the particular affordances of the ecosystem metaphor and the ways in which research impact is appropriated as a means of refuting dominant claims centred on research funding concentration and as a way of broadening the narrative of research excellence. As illustrated in figure 2, the text is oriented to an object of ‘creating a world class research and innovation ecosystem’. The proposed outcome of this object orientation is a reframing of research excellence around a broader set of characteristics. In this way, the text emphasises the growth potential associated with the correctives and seeking to expand activity system.

1. **Limitations**

This analysis provides a critical examination of the use of language and artefacts in formulating the object and expressing a particular strategy of social change by one UK higher education mission group; and is inevitably partial in scope. A broader analysis can take account of how the texts figures in the broader social practice (see for example, author citation a). Desk research shows that the three mission groups and sector representative body deployed differing genres, production and dissemination practices as lobbying activity (including production of ‘manifestos’ and publishing an open letter in broadsheet newspaper). Shaped by genres and selected sites of engagement these texts express strategies for social change in differing ways. In a larger scale study it would be possible to examine the effects of these texts both in terms of the policy actors the texts are oriented towards and those it claims to represent. This stage of analysis would draw on perspectives of actors located in the field of debate (see [author citation b] for an account of such a participatory approach.

1. **Conclusions**

The paper has advocated a transdisciplinary approach which combines AST and CDA in an examination of policy deliberation. The first part of the paper demonstrated ontological and conceptual compatibility of the two perspectives. The analysis presented in the second part of the paper illustrates the analytical gains from the approach. The combined AST/CDA method interrogates the activity of which the text forms a part and further illuminates the discursive construction of object. CDA’s focus on genre and dialogicality helps to articulate the anticipated activity or practice that the discourse forms a part of. In turn, CDA is strengthened by the socio-material emphasis of AST and the attention given to the particular ways artefacts are deployed in the discourse, how they interact with existing division of labour and rules and mediate the object.

This form of textual analysis provides a point of entry to the analysis and a way of sensitising the researcher to a sphere of practice in order develop an understanding of the activity from a particular subject’s point of view. The analysis provides a means of constituting the analytical frame, of deploying texts as a form of ‘mirror data’ (Daniels et al, 2010:111), which encapsulate tensions and contradictions in practice in a field of practice. As such the proposed approach has resonance with the emancipatory research orientations associated with activity systems theory.

Through the analytical tools oriented both the text’s external relations to social practices and internal relations (in semantic and grammatical features) the analysis is sensitised to the provenance of discourses and artefacts. The definition of ‘research excellence’ was of particular analytic interest in terms of the discursive strategies deployed and the benchmarks appropriated to challenge dominant definitions of research excellence. As Fairclough has shown in an analysis of a series of political speeches and policies associated New Labour discourse (Fairclough, 2000), such representations are not ‘static’ across texts, but evolve and represent changing concepts over time. This analysis has shown the extensive range of strategies deployed within the text to challenge dominant definitions of research excellence both in discursive techniques and in the way artefacts are used.

The empirical analysis draws attention to the ways universities, de-privileged by dominant discourses of research excellence, appropriate particular research indicators to pursue strategies to increase access to national research funding. The active appropriation of ‘impact case studies’ in the University Alliance text, to underpin both qualitative and quantitative analysis, demonstrates a way of broadening the discourse, creating new forms of metrics and reinforces the suggestion that research is becoming an increasingly differentiated game (Marginson, 2014).

The methodological approach draws the analytical focus beyond the text to the extent of materialisation of the discourse and assists in formulating further, testable hypotheses. In the context of current debates about the contribution of education policy research, close attention to the policy text makes visible the nature of contested definitions of constructs such as research excellence and the associated strategies for social change with which they are associated. The analytical focus on object-orientation takes the analysis beyond critique and examines the parameters imposed on the discourse by the artefacts deployed. This methodology, in illuminating the differing ways metrics are deployed and for what purposes can enhance the debate about their role and impact, and has value for policy communities in higher education.

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Figure 2 Activity Systems representation of University Alliance Text

