Creativity, Transitions and Virtual Worlds
: Young People's Lived Experiences of Inter-Life Island

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ABSTRACT

This paper summarises some of the preliminary findings of the Inter-Life Project, funded by two leading UK research councils (ESRC and EPSRC 2008-2012). Inter-Life Island provided networks of support and various tools and resources to augment the opportunities available to young people in the 'real world'. The paper presents some qualitative results of an extensive investigation that attempted to illustrate *how* virtual worlds may be used by young people to scaffold creativity, provide a network of support, and enable the sharing of creative knowledge and skills. The research team used Activity Theory (AT) because we contend that it can provide a way of reconceptualising transition, by focusing on the development of a broad range of skills that young people need to develop in order to cope with increasing and sometimes paradoxical demands, and yet still be able to identify and develop their own goals and motivations in a negotiable way. Our results indicate that ILI-2 became a place that both the research team and the YPs featured here were able to experience as an authentic environment in which to work and socialise. The island came to have a familiarity and a history as it was customised by the participants through the development of working areas, buildings and presentation tools. The young people reported that this created a sense of both 'place' and 'group history'. These findings open up further multiple possibilities for the use of virtual worlds in education.

Key words: creativity, virtual worlds, informal learning, activity theory, transitions

1 Introduction

This paper outlines some of the early findings of our five-year interdisciplinary project 'Inter-Life', funded by two leading UK research councils (ESRC and EPSRC, 2008-2012). It focuses on a subset of the qualitative data (see methodology note below) in a project that mainly used an integrated multi-method approach (see Lally & Sclater, 2010, 2012 for more details). Subsequent work reported on the significance of Inter-Life in Careers Education Art and Design Education, Youth Studies, and the role of theory in empirical research (Lally & Sclater, 2013; Sclater & Lally, 2009, 2013, 2014, 2016). The project investigated young people's use of virtual worlds in citizenship education, intercultural learning, and informal learning. The

'Inter-Life' Project created a highly innovative three-dimensional virtual community in Second Life (a commercial 3D world provider), which we called 'Inter-Life Island'. The synergy between education and computing science was one of the interdisciplinary drivers of this work.

Inter-Life Island provided networks of support and various tools and resources to augment the opportunities available to young people in the 'real world'. It was a place where young people were able to draw upon the elements of creative engagement to co-operatively and collaboratively re-conceptualise their life experiences. This was undertaken through a variety of creative arts practices such as photography, film-making, story boards, fashion, music, and photomontage, to help participants develop new perspectives in their lives and explore new ways to address challenges they were facing. They were supported to do this in a safe, flexible environment to enable them to explore, play, take risks and resolve conflicts. Ethical issues and related safety matters relating to immersive technology enhanced learning were examined by the authors in an ESRC monograph (Lally et al, 2010, 2012).

This paper provides evidence of how a virtual space (with integrated mobile technologies) can support complex educational projects with robust learning outcomes, and be sustainable. The paper presents some qualitative results of an extensive investigation that attempted to illustrate *how* virtual worlds may be used by young people to scaffold creativity, provide a network of support, and enable the sharing of creative knowledge and skills. The Inter-Life Project successfully created two virtual island environments in consultation with users/participants : Inter-life Island 1 for 18 + young people to work on school to university and within university transitions, and Inter-Life Island 2 where pre 18s (13-17) could work on creative solutions related to the challenges of real world transitions. In this paper I examine the use of a virtual social environment (ILI-2) to provide a group of young people with the opportunity to participate in 'virtual communities' using an 'avatar' − a visual representation of a participant in the community that is chosen and customised by the participants.

In Inter-Life Island 2, we worked intensively for a two-year period alongside two communities of young people located in Glasgow and Trinidad. Our research alongside the Glasgow community took place in a physical setting (Glasgow University) as well as the virtual setting of Inter-Life Island, whereas with the Trinidad community described here we only worked in Inter-Life. Both islands are extensively modified environments based on Second Life (Boulos et al, 2007; Baker et al, 2009; Wankel & Kingsley, 2009). The Inter-Life project focused on how participants act and develop in Inter-Life while engaged in co-designed creative scenarios and how the skills and understandings acquired (personal learning outcomes) 'map' onto their 'real world' experiences of transition. Inter-Life views 'discursive activity' in which young people create significant new stories about themselves (identity development − Sfard and Prusak p16), as central to the internalization of social knowledge and its transformation. We contest that these processes help young people to cope with past experiences and new situations, as well as providing tools to plan for the future. This is driven by subtle negotiations across 'activity systems' − their home, their schools and Inter-Life existences.

The use of virtual social environments, such as Second-Life (rebuilt and adapted in this project into 'Inter-Life') provides users with the opportunity to develop a virtual alter ego (using an 'avatar' − a visual representation of a participant). This may or may not represent the moral and social values of the real-world person (see Figures 1 & 2).

> Cyberstar: I am the really pink one with green hair⋯. I think everyone does their own
> avatar to suit their personality⋯pink for me is a sort of funky personality, don't care

what people think of you if you go out with blinking boots up to here and a top down to there⋯ you don't really care.

Interviewer : This might seem like a stupid question to you ⋯ I wouldn't go outside dressed as a fox [interviewer has an avatar that is a fox] − I would be scared of doing that⋯people would think I was seriously weird. People might not serve you in shops⋯ my kids would think something strange had happened. So I wouldn't do that outside but I would be quite happy to be a fox on the Inter-Life Island. What do you think of the possibility that you can have an avatar that you can change⋯?

Cyberstar : Well this is me and I want to [change it]. It's quite fun. In real life you can't change it. Every avatar is individual and they want that avatar to look like them, they want it to be unique. In real life people tell you what you should and shouldn't wear⋯like if I go out and I buy a pair of boots and they say that doesn't suit you and you're like ' how would you know' are you me? You get pretty annoyed that people tell you what you think you should wear and what they think you hair colour should be and [I think] Listen if I want to wear this I will wear it. Your 're the boss of your own person and you're the boss of your own style. It feels like there were no rules⋯ people slag you off [insult you] more in the real world than they do in Inter-life because you are a person you want to be⋯I tried to be myself.

[UK Group Interview with Cyberstar 11/11/2010]

[Figure 1] Cyberstar dressing herself up in pink

Virtual worlds are 'persistent, avatar-based social spaces that provide players or participants with the ability to engage in long-term, coordinated conjoined action' (Thomas & Brown, 2009, p.37). Such 3D environments give an illusion of cognitive presence and offer co-located interaction and visualization, allowing new forms of collaborative interaction and engagement that we are now already seeing though online gaming (Moore, 1995).

[Figure 2] Trinidad group meeting including Ralph Navarita who chooses to represent himself as a packing box and Jianhua Galaxy as a fox (in the foreground)

Virtual world use is widespread, engaging millions of 'virtual inhabitants' in a real 'economy' in which US $450 million was spent in 2008 (Jacobson et al, 2010). The commercial potential of virtual worlds for education, training and commerce is now considerable. The multi-user and inter-user communications that can occur in virtual worlds mean that user-controlled avatars can work together in a very wide range of 'realistic' social activities. However, there are, as yet, very few reports in the literature of the realisation of this potential in citizenship and inter-cultural education (see Kafai & Searle, 2011, for one example). In the Inter-Life project an integrated inter-cultural 'context' from a 3D platform was developed, in order to investigate how young people can use this environment creatively – individually, and collectively – to assist in understanding and navigating their key life transitions.

The Island environment incorporated sophisticated in-world data gathering that was constructed for the project. This data supported the analysis of interactions and reflection. A secure data repository was constructed to gather in world information including position, orientation and communications. Special purpose spaces were also constructed in world to encourage reflection and provide a space for elective privacy and planning. Data was additionally gathered through phenomenographic interviews undertaken with the young people during and also on completion of the project.

The key research questions for the Inter-life Project were :

(1) How can the level of experiential and cultural assets of individual groups be enhanced and their ability to manage transitions both individually and collaboratively be helped through the acquisition of skills developed in a virtual word?

(2) How can participants act and develop socially in Inter-Lifer while engaged in co-designed creative 'scenarios'?

(3) How can the skills and understanding acquired (learning outcomes) 'map' onto participants' later 'real world' experiences of transition and the challenges they present?

(4) How can scenarios be used together with a suite of 'transition tools' to support young people individually and in groups?

In this work we used an activity theory (AT) perspective because we contend that it offers a real possibility to systematically integrate the key components of learning in virtual worlds − namely, tool development and mediation; internalisation of social knowledge; and transformations of the structures of human activity - as it arises from learning and development (Kaptelinin & Nardi, 2006). In particular, third generation AT (Engeström, 2001, 2008) recognises and attempts to address the challenges of understanding dialogue, the multiple perspectives of participants, and the complexity of interacting activity systems as those engaged in joint creative projects seek to develop their goals. The use of this perspective represents an attempt to 're-theorise' transition within a broader context than the immediate family − see below (Furlong & Cartmel, 1997).

2 Transitions and Young People

All young people (YP) have to face and negotiate complex life transitions, both in their personal lives and in their educational lives. Transitions can involve emotional, cognitive and social change and development, as well as coping with new expectations and requirements of educational and work placements. During transitions, young people have to cope with confusion, disenchantment, disorientation, alienation, sometimes resistance, and even bullying. In fact, we are all challenged by transitions yet they are also a universal life experience and not always result in positive change. Young people, especially, need to develop a wide range of skills in order to understand and manage these complex processes. In this paper I contend that many of the contexts with which young people are confronted are so complex that the cognitive and emotional burden requires additional resources and support.

It has been argued by Ahier and Moore that young people face radically 'new' forms of transition, and that this set of processes is more complex and diverse than in the past (Ahier & Moore, 1999), with 'extended dependency' during the period of transition from youth to adult. This results in increased uncertainties and risks for young people in the task of constructing their adult identities. Ahier and Moore argue that in order to understand this process, some new theorising and refocusing is required. Furlong and Cartmel (1997) and Beck (1992) have argued that this uncertainty has developed as the links between family, school and work have weakened, alongside similar weakening in 'traditional' forms of authority. The traditional structures of transition have also become obscured within a marketised education offering the 'illusion' of individual choice. Biesta (2006) agrees, arguing that a 'predicament' can arise from the concept of lifelong learning where participants can feel a lack of empowerment to create their own learning 'agenda' amid conflicting life and social demands. These factors can result in a paradoxical process: increasing 'individualism' in the public sphere, and simultaneously increased reliance upon family resources in the private sphere.

Underneath this, Furlong and Cartmel (1997) argue, the processes of transition may remain highly structured, continuing to reproduce class-determined, gendered and unequal life chances. Ahier and Moore (1999) suggest, however, that this focus on the family in its traditional forms as the unit of analysis does not take sufficient account of the complex forms of experiential, cultural and economic assets that now need to be managed in the process of transition. They argue that the need to facilitate transitions within a network of 'others' requires a re-theorising of transitions within a broader context, and not only within the immediate family and its associated processes of social reproduction.

Arising from this analysis, the Inter-Life Project aimed to develop an integrated inter-cultural

'context' of web-based and mobile technologies, called 'Inter-Life'. We sought to investigate how this space could be used, together with a suite of 'Transition Tools', to assist young people (individually and in groups) to acquire and develop skills to support them during life transitions. In this article, *experiences of transition skills* acquisition are presented and analysed with young people in Trinidad.

3 Developing Transition Tools for Virtual Communities

These 'tools' were conceived and implemented by the Inter-Life Project as a means of gathering together ways of working and engaging, ways of exploring, and ways of enabling young people to develop a set of skills that could support their understanding and processing of transitions in multiple contexts (they are entirely distinct from the data-gathering tools used by the research team to gather data about group processes unobtrusively).

The transition tools included:

(1) Creative practices: participants were able to use the display board system in Inter-Life Island 2 to create exhibitions of their photography and digital story-telling. In the Trinidad group the home environment/personal setting was used as a photographic subject for a collaborative exhibition.
(2) Research communities: participants worked collaboratively to undertake a research investigation of a challenging event or situation, and analysed the evidence so that its implications for the improvement of practice were clear (Kellett, 2005, 2009; Burton et al, 2010).
(3) Digital image documentaries: participants engaged in making short critical accounts of transition contexts, problems, issues and solutions, as 'documentaries' that could then be used as learning objects in 'Inter-Life'. An example of this was a film that was created to help tackle bullying.
(4) Supervision tools: use of the expertise of others to reflectively guide a participant through a significant event, highlighting the learning processes and outcomes (Lally & Scaife, 1995; Scaife, 2001).

In the virtual communities presented in this article, the principal tools used were (1) creative practices and (2) research communities. The other tools were used in a subsidiary way in the workshops discussed here. Supervision tools (4) were used to support research community activities, particularly where complex tasks such as filmmaking (3) were being undertaken. The following section provides further details of the rationale for these principal tools.

4 Creative Practices and Sharing Emotional Experiences in a Virtual World

Virtual worlds like Second Life (in which Inter-Life's ILI-2 is constructed) offer many possibilities for creative expression and the development of creative practices (Doyle, 2008). Early innovators in the field of creative expression in virtual worlds (Moser & MacLeod, 1996) provided the intellectual basis and impetus for the development of a range of artistic practices that were previously 'impossible' in 'real life'. There is now a burgeoning range of artistic activity (Doyle, 2010) occurring in these virtual spaces, including music and other performance

arts, experimental work on sound and immersive experience, and installations that metamorphose as the participants' avatars move through them. For example, Doyle's 'Kritical Works in SL' project (Doyle, 2008) argues that the Second Life space itself is performative for both the artist and the audience. Using Kriti Island, a research island she created for the University of Wolverhampton on the SL grid, Doyle interrogates the art works, Ping Space, Remembrance and Remains, and the Autonomical Grid produced by the virtual artists Angrybeth Shortbread, Chingaling Bling and Kisa Naumova. She analyses novel approaches to using the space of SL for creative practice. These move beyond SL as a purely presentational space, into aspects of performance in which the audience are part of the work itself. The Trinidad Virtual Research Community (TVRC) explored this potential on ILI-2. In this group we used photography and montage based upon photographic work to help the group to cohere (based upon pioneering work of Sclater, 2007, 20112010). Young people were able to express themselves through this creativity, share their worlds, enter the worlds of others and discuss these experiences, which themselves became part of the creative expression in which they were engaged together. Making digital documentary films was used by TVRC as a vehicle for attempting to examine 'real life for teenagers in Trinidad'. This kind of work has previously been undertaken in real-world informal spaces with young people (Lin et al, 2011), but not in a virtual world.

A further aspect of the creative dimension to this project is the sharing of emotional experiences as a way of creatively reconfiguring them so that the positive aspects are enhanced. This approach is also novel in virtual worlds, but has parallels in the work of Gorini and associates, who developed a virtual world health environment called P-Health, which utilises the immersive power and social potential of Second Life to support health education (Gorini et al, 2008).

5 A Note on Methodologies and Methods

The Inter-Life Project methodology is based upon pioneering work of Lally and associates. This work attempted to develop theoretical perspectives that would be sufficiently powerful to account for the key elements of online learning and teaching in higher education (De Laat & Lally, 2003, Lally & De Laat, 2003). Activity theory was identified as a promising candidate (based upon an approach developed by Halverson, 2002), and multi-method analytical techniques, including content analysis, social network analysis and critical event recall, were for the first time applied together to the analysis of text-based communication interactions, cognitive and meta-cognitive activities, and social network patterns of learning and teaching, in online environments (De Laat, Lally, Lipponen & Simons, 2006, 2007). In this article the approach to content analysis of real-time text-based interactions, revealing the many voices of activity, is combined with reflective interviews – these explore the development of identity among participants as it emerges through the creative and research activities in which they have been engaged. One member of the research team commented:

> 'I think a lot of educational spaces that exist are deeply constrained by social, cultural and political forces that mostly don't want them to be exploratory spaces and have very restricted views of knowledge creation and don't want to accommodate a mixing of the social emotional and cognitive whereas I think a lot of our learning is a mixture of all three of those...and so as an educator I was attracted to Second Life as a space where that possibility exists.'

6 Results and Discussion

The Trinidad Virtual Research Community (TVRC) consisted of young people from a fee-paying school in Trinidad. The community was coordinated by a teacher at the school, who also participated in the workshops (Indire Emerald – avatar name). Members of this group of young people were living with their own families, and tended to have access to excellent Internet connectivity and software/hardware resources in their own homes. The young people participated after school, but from their own homes. This group was constituted as a virtual research community. It had the explicit aim of supporting the community of young people as they came together, identified their concerns, shared them, began to focus on how to investigate them, and made films to depict them (see Figure 2).

These results feature a single one-hour workshop. The TVRC at the point in its history mentioned here had met on nine previous occasions (February – July 2011), sometimes with as many as five young people present at any one time. The aims of the group had been tentatively agreed in a previous workshop – as a place in which the young people, with support from the tutor team, could research issues of concern to them using photography and film as creative and expressive media. In this one - hour workshop three of the original group of 10 were present, including one of the three regular male participants – Ralph Navarita. One of the female young people – Shelly Coy – was making one of her infrequent appearances. Butler Lyric (male) was another occasional visitor to the group.

Butler was one of the young people who had made much creative use of the scripting system in ILI-2 in earlier meetings, in order to create new appearances for his avatar. He was something of a non-conformist in the group and had also introduced several objects (enormous chairs and jellyfish, for example) that had *interrupted* the group's activities and discussions in playful ways :

[Figure 3] A meeting to develop an agenda for the Trinidad group.

Cobalt Dertzer : where is the jellyfish from?
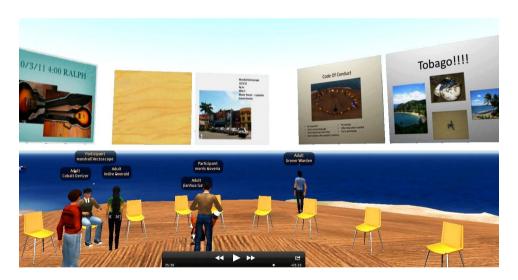*Shelly Coy :* butler
Butler Lyric : It's mine
Cobalt Dertzer : how did you make a jellyfish?
Grover Warden : Is this a friendly Jellyfish?
Butler Lyric : I lost it

Shelly Coy : ;)
(Trinidad Workshop 10-28/06/11 [i]: CASC)

Conflicts leading to creative activity occurred in 14% of the young people's utterances in this workshop. The tutor/researcher team consisted of a teacher from the school, Indire Emerald (Trinidad-based teacher), and three of the project's researchers, Jianhua Galaxy, Cobalt Dertzer (Scotland-based) and Grover Warden (England-based).

This meeting lasted approximately one hour, shortly after school ended (a regular weekly meeting time for this group). Two members of the group had already created film guides to help others use the transition tools of Interlife Island 2. The group was being guided by the tutor team (also researchers in Inter-Life) towards the creation of a series of short films that depicted 'real life' for teenagers in Trinidad, including the issues of 'drug misuse' and 'bullying' (selected from an extensive list provided by the TT). However, at this stage of the workshops (week 10), there had already been an early 'shared rules and etiquette' activity (weeks 1-2), and a series of 'creative arts' activities, involving collage and photography (weeks 2-6), in order to establish some agreed behavioural norms for the group, and to understand something of each other's context by sharing photographs on interactive boards on ILI-2 (see Figure 5).

[Figure 4] Photographs and ideas shared on the interactive boards.

Butler Lyric : I am having trouble uploading pictures
Grover Warden : have u had any luck with importing film or movies to ILI2?
Grover Warden : Neil and Morris can help with that. Have you watched Morris's two movies?
Butler Lyric : I have
Grover Warden : http://www.youtube.com/user/jamtechhd
Grover Warden : I will look to Cobalt and Morris to sort this with u today ... they have it all sorted that is one reason Morris is making orientation movies.
Butler Lyric : that would be helpful
(Trinidad Workshop 10-28/06/11 [ii]: TRCN)

These utterances focused on gathering help, ideas, resources and support in relation to the completion of the Young People's defined project. At this point in the workshop series (about halfway through a programme of over 20 meetings), the tools and resources were being developed in response to discussions within the group, but the organisational lead was being

taken by the Tutor, to minimise the burden on the young people as they tried to focus on clarifying their aims and skills for the film-making that was being developed. In quote [ii], Grover is directing Butler to an orientation video developed by another of the young people not present on this occasion – Morris Coveria. However, there were many occasions where specific problems occurred in relation to the tools.

In quote [iii] Ralph is trying to locate the creative photomontage he had made earlier:

Ralph Navarita : but if i claim one of the boards all my stuff should be there
Grover Warden : I agree about group tours very challenging *Cobalt Dertzer:* okay but the original board has gone?
Ralph Navarita : yes
Grover Warden : ok
Cobalt Dertzer : cool that's what i was unsure of
Grover Warden : no problem
Cobalt Dertzer : things were being backed up so your board contents will be there *Grover Warden:* email just received: Dear xxxx
Cobalt Dertzer : they just can't be seen at the moment
Cobalt Dertzer : I'll speak to xxxx and get it back for you
Ralph Navarita : ok (Trinidad Workshop 10-28/06/11 [iii]: FSP)

In the following exchange there is a discussion of film-making over the summer, and as the problem solving is pursued and tool availability checked (in this case, cameras and editing software), the group maps the 'in-world' activity onto their real world activity (MRW):

Ralph Navarita : i can teach you if you like
Ralph Navarita : some of the more advanced stuffs
Shelly Coy : i can help and do as much as I can over the summer just contact me
Grover Warden : Film-making is an ideal opportunity to demonstrate ILI2 teamwork and skill sharing.
Cobalt, Dertzer : it's also quite fun :)
Shelly Coy: yes, please thanks Ralph
Ralph Navarita : :)
Cobalt Dertzer : Shelly do you think Annabel would be interested in helping?
Grover Warden : Do you film editors have the software that you will need to do the film editing?
Shelly Coy : she might but she's going to England and Barbados for the summer
Shelly Coy : yes
Ralph Navarita : yes, I have access to iMovie and a few other programs
Grover Warden : iMovie is fascinating and very user friendly
Butler Lyric : I think I've heard of it
Cobalt Dertzer : cool well she (or you guys) are also welcome to make a short travel film of your holidays or just upload some pictures
Ralph Navarita : ok
Grover Warden : great diversification opportunity
Shelly Coy : that would be cool
Shelly Coy : cause I'm doing sailing
Ralph Navarita : very
Butler Lyric : Very what?
Grover Warden : We are certainly getting some serious planning for ILI2 summer activity

sorted out ... Will those of you who are here be able to tell all the other [TVRC] members and gain their support so it is not falling on your shoulders?
Ralph Navarita : ok
Indire Emerald : will everyone have access to a camera over their holidays?
Ralph Navarita : I will

This excerpt shows how the in-world concerns and demands are driving the development of real-world problem-solving skills among the YP. At the same time, real-world experiences are being used to support the YP film-making project. In later conversation with YP team members, Ralph commented that he had found ILI-2 to be a place where he could work. In particular, he was comfortable with the atmosphere it produced, and the possibilities for creativity that it fostered: 'It's an open environment, and if you want to do something you can...' (Ralph Navarita interview [v]). Ralph was particularly keen to point out that working on the island had fostered his sense of responsibility, because of the demands of the film-making project and his commitment to others in the group. Furthermore, he felt that the ILI-2 space had helped him to find out more about what his real capabilities were. When talking about the ability to represent oneself as an avatar, with a customisable appearance, he suggested that this enhanced his interest and engagement in the ILI-2 space, as he gradually refined his avatar so that it 'felt' like him.

[Figure 5] Interlife island was slowly populated by a variety of artefacts brought into the environment by the participants over time.

7 General Discussion

In this paper I have presented a preliminary analysis of one ILI-2 virtual community that was part of the Inter-Life project. It illustrates activity among young people living with their own parents and attending a fee-paying school in Trinidad. The design and data analysis were informed by Activity Theory as an organising framework.

The research team used Activity Theory (AT) because we contend that it can provide a way of

reconceptualising transition, by focusing on the development of a broad range of skills that young people need to develop in order to cope with increasing and sometimes paradoxical demands, and yet still be able to identify and develop their own goals and motivations in a negotiable way. These goals and motivations are foregrounded by Activity Theory in both the research process and the learning design process. AT has also helped us to conceptualize and focus on what might be described as a new 'activity system' that developed at the 'boundary' of home and school. We conceive of this as an 'inter-cultural' space, in which 'transition tools and resources' can be accessed by YPs to produce their own goals and agendas. We developed for this study a new coding schema to help us to focus on the dialogue, emotions and multiple perspectives that can be created and expressed in such a space through engagement with creative practices. We wanted to look at how young people's identities were forged and changed in this space through the gaining of new insights and the gaining of new perspectives that support the reconfiguring of how a YP looks at the world while engaged in authentic activity in a virtual context.

Our results indicate that ILI-2 became a place that both the research team and the YPs featured here were able to experience as an authentic environment in which to work and socialise. The island came to have a familiarity and a history as it was customised by the participants through the development of working areas, buildings and presentation tools. The young people reported that this created a sense of both 'place' and 'group history'. There is evidence here from the young people in the Trinidad community of emotional engagement through creative and research activities supported by the transition tools. The narrative accounts and exchanges of participants reveal something of the processes of individual identity, explored and changed through community activity and dialogue, and reflected on in interviews. The enhancement of positive self-image is also evidenced in accounts of avatar customization and personalisation, for example. Through this mechanism of customization the YPs were also further engaged in the ILI-2 environment.

Central to the Inter-Life Project, and to our investigation of the value of the two virtual communities featured here, is the development of skills, and emotional and cognitive resources that YPs may need to support themselves during critical transition experiences in the 'real world'. The ILI-2 'boundary space', a developing space 'in tension' between two activity systems (home and school), provided challenges through the opportunities it presented to act in more 'open' ways than was (often) possible in the established spaces of home and school. This led to conflicts and dialogue about how to act individually and collectively, about building groups, conceptualising and goal setting for joint projects. It also led to the supported development of strategies to address these conflicts. The YPs participated in a range of research and reflective activities, gaining personal insight into emotion, and developing a wide range of problem-solving skills. They planned and executed creative activities (with support) that expressed a need, issue or concern, an interest or a personal like. There is clear evidence of 'mapping' by YPs of experiences encountered in the virtual community into the 'real world' activity systems of home and school. There are also clear indications, supported by the comments made in interviews and during ILI-2 conversations, that aspects of identity are developing across 'real' and 'virtual' worlds. Ralph, for example, spoke of how his sense of responsibility towards others had been encouraged by the film-making activities in ILI-2. He also commented that similar increases in his sense of responsibility had been emerging in his preparation strategies for examinations at school. We were careful in the interview not to imply that these were directly connected, but observed that they were occurring in both contexts during the time period of the Inter-Life workshops.

The evidence presented here, gathered in the Inter-Life Project from working with YPs, represents approximately 15% of the YP workshop sessions. All of the YP participants were

self- selecting volunteers, and while group numbers were initially targeted at 10, the actual number of participants varied on a weekly basis. The individuals also changed, so that there was often a core group, and then one or two other members, changing on a weekly basis. This meant that much time was taken to establish and consolidate groups, and many activities lacked continuity and required reworking as the groups engaged, disengaged and re-engaged. These recruitment and retention issues persisted throughout the project. In addition, because of the importance of balancing the needs of YPs with the requirements of the research project, there was always the option for YPs not to participate, or not to provide data for the research project. Inevitably, some YPs participated in the activities, but did not feature in the data collection. Follow- up interviews were not always possible. This obviously limited the extent to which it has been possible to address some of the research questions. Ethical considerations meant that ILI-2 communication among YPs was limited to text, and voice audio was used only in research team meetings. This meant that effective YP communication in ILI-2 was restricted to those whose skills already included literacy of a sufficient level to participate in the text-based talk. In addition, technical, ethical and learning design difficulties resulted in little data and evidence about the value of private reflective spaces to the young people with whom we worked.

8 Summary and Conclusions

The Inter-Life Project has been an exciting educational and research journey, both for the research team and for the young people with whom we have worked and collaborated. Pursuing the main aim - to investigate the use of virtual worlds and creative practices to support transition skills development in young people - has challenged all of those involved to seek new theoretical and methodological solutions, as well as learning designs, in this novel medium, to help us to understand the complexity of the human processes and interactions occurring in the ILI-2 environment.

The Inter-Life Project created an 'inter-cultural space', conceptualized using activity theory, between the boundaries of the home and school activity systems. It also created 'transition tools' (e.g. Creative Practices, Research Communities, Digital Image Documentaries and Supervision Tools) to facilitate emotional, social and cognitive activity and support for young people using this space. An embryonic virtual social research laboratory (see the Inter-Life video at http://www.tlrp.org/tel/) was built 'around' the space to assist with data-gathering. We worked with two communities of young people, in different cultural contexts, to use the space to explore issues of concern in their lives, and develop life skills that could be employed by them in future life transitions. Our preliminary findings indicate that the TVRC did support both creativity (photography, photomontage, film-making and sharing of emotional experiences) and 'research' conceptualized and undertaken by young people, while 'scaffolding' valuable skills development for transition. There is also evidence that the skills and understandings acquired map onto the 'real world' experiences of young people. In other words, experiences acquired in ILI-2 have helped to provide the young people with whom we worked with the conceptual and processing skills and insights to undertake further 'life work'.

These findings open up further multiple possibilities for the use of virtual worlds in education. Having undertaken virtual world research within the context of informal learning, we argue for a greater application of these environments within more formalised settings in higher education. We see particular potential for the use of 3D worlds in many aspects of the visual

disciplines, such as art, design and architecture education. Creative practices developed and supported in virtual worlds can play a central role in both enabling the acquisition of transition skills and developing students' metacognitive and creative-thinking skills. These environments open up immense potential for inter-cultural learning and creative engagement between globally distributed learners. In higher education environments, the possibilities for collaboration between remote groups where 'presence' and long-term, coordinated conjoined action are required (Thomas & Brown, 2009) can be supported by virtual worlds.

In further publications (see introduction) we have reported more extended research analyses that will help to further our understanding of how young people can use virtual worlds to assist in their own life projects and work. In a 'real world' where the active agency of young people has few opportunities to be exploratory and creative in the service of their own agendas, 'virtual worlds' offer promise that is belied by their origins in online gaming communities.

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