Poetic Design: An Exploration of the Parallels between Expert Poetry Composition and Innovative Design Practice

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ABSTRACT
Despite parallels between the structure of poetry composition tasks and design tasks, there appears to be no previous research exploring the consequences of these correspondences for an understanding of skilled behaviour in these two domains. In the present study we interviewed five expert poets about their creative practices and conducted a thematic analysis comparing these practices to key findings concerning the nature of design expertise. Our discussion focuses on three behavioural equivalences that appear to be associated with poetry composition and innovative design: (1) the role of “sources of inspiration” in contextualizing activity and in informing the creation of novel solution ideas; (2) the involvement of “primary generators” in scoping tasks in terms of core objectives; and (3) the fluid and flexible nature of problem and solution representations, as captured by the notion that problem and solution spaces “co-evolve”.

Keywords
Creative process, poetry composition, design practice, inspiration, primary generator, problem-solution co-evolution

INTRODUCTION
The human mind is capable of incredible feats of creative endeavor across all domains, yet our understanding of the processes by which these creative acts occur remains limited. Poetry composition is a particularly neglected area of research, which is surprising given the status of poetry as a key domain of creative expression throughout antiquity and right up to the modern day. Most of our current knowledge concerning the nature of poetry-writing skills derives from autobiographical accounts written by expert poets. While these first-hand reports are valuable in introducing issues that may be associated with poetic expertise, it nevertheless remains critical to validate and extend the insights deriving from these reports through in-depth empirical analyses focusing on the imaginative processes of expert poets themselves.

The few empirical studies of poetry writing that do exist in the literature tend to adopt an educational perspective on the topic, focusing primarily on how novices write poetry. For example, Groenendijk, Janssen, Rijlaarsdam, and Van den Bergh examined the writing processes of students with a novice level of skill in poetic composition to determine the impact of these writing processes on the final poems. Their findings indicated that writing production in the first half the session, and revision toward the end of the session, was associated with better quality poetry, whereas pausing and early revision had a negative effect.

The majority of empirical evidence in relation to the domain of poetry, however, is centered not on poetry composition but rather on how students go about reading and interpreting poetry. For example, Eva-Wood found that college students who were instructed to both “think-aloud” and “feel-aloud” while reading poetry made more elaborative and better quality comments than those students who were only requested to think-aloud. Earthman found that college freshman students read literature in a more “closed” manner, while graduate students read in a more “open” manner. Graduate students were open to ambiguity and layers of meaning in the texts while freshmen were unwilling or unable to cope with such complications and subtleties.

In another study, Peskin compared how novices and experts constructed meaning when reading poems. Experts were able to make allusions to other literary works, contextualize the poem within its poetic domain, and anticipate the direction of the poem’s progression. By comparison, novices were able only infrequently to make the connections that were readily made by the experts. In addition, the novices achieved only simplistic representations of poems that lacked depth and they spent less time overall attempting the task than the experts. Peskin’s findings illustrate how difficult poetry understanding can be for novices, and imply that processes of composition will likewise be difficult for those with limited experience. Moreover, such observations of the complexities surrounding poetry-based activities underline...
how important it is to investigate the nature of expert performance in order to derive a rich understanding of the creative processes of those who are genuinely skilled within this domain.

We suggest that much of the difficulty surrounding the process of poetry composition derives from the inherently ill-defined nature of the task. Ill-defined problems are those where the goals are vague, where the optimal solution is unknown, and where the limitations of the problem space are not fully specified [25]. Poetry writing seems to exemplify this definition, with the poet typically starting from a point where they have uncertain goals, unclear constraints, and an almost limitless set of actions that can be taken to allow progression toward a final satisfactory piece of writing. Indeed, we note that there are no explicit universal rules that dictate what a poem can or cannot be, despite the availability of dictionary definitions of a poem such as “a composition in verse, usually characterized by concentrated and heightened language in which words are chosen for their sound and suggestive power as well as for their sense, and using such techniques as metre, rhyme, and alliteration” [27]. From this perspective, poetry composition is most certainly an ill-defined problem in just the same way that innovative design is typically conceived to be [2][32][33].

The overlap between poetry composition tasks and design tasks in term of their lack of definition is very useful from a research perspective since it suggests that some common processes may underpin activity in both domains. This means that we can make some good assumptions about the processes that may play out in poetry composition using insights gleaned from over 40 years of research on expert design practice with ill-defined problems (for recent reviews see [11] and [36]). There are three findings from the design research literature that strike us as being especially likely to show parallels in the poetry domain, given its emphasis on the production of original, inventive and imaginative outputs. We describe these findings below before progressing to a description of our study, which involved interviews with five expert poets about their poetry-writing practices.

Sources of Inspiration

The first finding relating to expert design that we were interested in examining in the context of poetry writing concerned the role of so-called “sources of inspiration” in contextualizing design activity and in informing the creation of new design solutions [15]. As Eckert and Stacey explain: “Almost all design proceeds by transforming, combining and adapting elements of previous designs, as well as elements and aspects of other objects, images and phenomena”. In this sense, then, designers will use a wide variety of sources of inspiration, including related design cases and within-domain analogies [5], analogies from outside of the domain [8] [1], visual images [7], works of art, and objects and phenomena from everyday life and nature. Often such sources are based on the “history” associated with particular design areas and are what future innovations are building from.

Eckert and Stacey’s own domain of research – knitwear design – supported the view that such sources of inspiration provide a “vocabulary” for communicating ideas to others. Thus a reference to the color blue from a particular year is distinct and unique from a reference to the color blue from another production period. While this referent seems to lack coherence from the outside, for those within the field it would be a highly contextualized statement that would contain a great deal of information. It is, therefore, the act of naming these sources of inspiration which provides a context for the designer’s work within their larger field and which informs the creation of innovative designs. These inspiration sources get combined with previous design decisions and, in combination, become units of information that can more easily be discussed and recalled. These units or chunks thereby provide a method for managing information complexity within the design process. In our study we were alert to potential role of inspiration sources in informing poetic narratives at all stages of their development.

Solution-focused processing and primary generators

The second general finding from studies of expert designers that we wished to examine in relation to poetry composition concerned its highly “solution-focused” nature [11]. This emphasis on solution generation in design seems to be in large part a consequence of the ill-defined nature of design tasks (see also Rittel and Webber’s poignant description of design tasks as “wicked” problems [28]). Design problems are not of a type where all of the information needed to solve them is available to the solver, such that they are neither open to exhaustive analysis nor amenable to single “correct” solutions. Indeed, much of the relevant information to solve the task can only be discovered by generating and testing solutions and by using these results to refine the understanding of the problem. What this effectively means – as Cross notes – is that in design problem solving a solution-focused strategy is clearly preferable to a problem-focused one [11].

The solution-focused strategy of designers often necessitates their reliance on some form of initial organizing principle to structure their activity [11]. One particularly interesting notion in this regard is that of the “primary generator” as espoused by Darke in the context of her pioneering, interview-based studies of expert architects [13]. Darke observed that these designers tended to impose a limited set of objectives on the task as a way to constrain the space of possibilities. Such objectives related to notions such as wishing to express the site, wanting to maintain social patterns or aiming to provide for a particular relationship between dwelling and surroundings. Darke viewed these objectives or initial concepts (i.e., the “primary generator”) as providing the architects with a “way into the problem”, while also enabling them to explore and understand the problem in a “conjectural”
manner (i.e., by testing the adequacy of initial conceptualizations of a solution).

Lloyd and Scott, in research focusing on architectural design processes, similarly described a moment when the designer can articulate how they “see” the design [21]. Lloyd and Scott referred to this as the designer’s “problem paradigm”, and suggested that until this point is reached the designer is engaged in trying to place the design problem within their area of experience. Schön, in his study of reflective practice, likewise described “problem setting” as the process by which individuals “name” things they attend to and then “frame” the context that the named item is examined within [31]. Schön suggested that expert designers frame the design problem in order to create the circumstances under which a solution can be sought. Although some researchers have noted the negative consequences that can arise from an overly-selective early focus on a single solution idea [4] [32] [35], it appears that this may be more of a problem in novice design practice, where such initial ideas can embody major inadequacies, as opposed to expert design practice, where initial ideas often prove to be highly successful [3]. In the case of expert design, there is now mounting evidence that the early narrowing of the solution space is often vital for effective design development since it enables the designer to manage complexity through a focus on core objectives and constraints. In the present study we again anticipated discovering evidence in our expert poets for the early deployment of primary generators as a way to guide and shape their subsequent poetic explorations.

Co-Evolution of Problem and Solution Spaces
The third general observation from design research that we wished to examine in the context of poetry writing is that design problems and solutions are fluid and flexible in nature, as neatly captured by the notion that problem and solution spaces “co-evolve” [22] [14]. As Dorst and Cross state: “It seems that creative design is not a matter of first fixing the problem and then searching for a satisfactory solution concept. Creative design seems more to be a matter of developing and refining together both the formulation of a problem and ideas for a solution, with constant iteration of analysis, synthesis and evaluation processes between the two notional design spaces – problem space and solution space”. These ideas seem to relate closely to the role of primary generators in design and the attendant view that design activity is highly conjectural in nature, whereby experienced designers use solution attempts as “experiments” that assist them in identifying relevant information about the problem. In contrast, novices may get stuck in their attempts to understand the problem before they even begin to start generating solutions [9], essentially getting bogged down in the problem space. In our examination of our interview data for the expert poets that we talked to we were vigilant for any evidence that problem-solution co-evolution might be a feature of their approaches to poetry composition.

METHOD
Participants
Five participants (2 male and 3 female, mean age: 34.8 years; standard deviation: 9.5 years) were recruited for participation in this study. Participants had to have published within the field of poetry. Participants had between 10 and 60 published poems (average: 29 poems; standard deviation: 18.8 poems). They had been writing poetry for an average of 9.6 years (standard deviation: 3.7 years) and writing in general for an average of 16.4 years (standard deviation: 9.4 years). Across the whole sample there were three published short story collections, one novel, two poem pamphlets, 13 individual short stories, and 145 published poems. Two of the poets had a bachelor’s degree and three had a graduate level degree or were pursuing one at the time of interview.

Materials and Procedure
Participants were asked a series of eleven questions with predetermined prompts for specific questions. These questions are available in the Appendix (the prompts are in square brackets). The topics of the questions were crafted specifically to address issues surrounding initial writing exposure, motivation, inspiration, writing process, editing process, and working with other writers and mentors. The experimenter customized additional questions to follow up on unclear or unexpanded comments that the participants made during the process of answering the pre-planned questions and prompts.

Participants were interviewed individually and were asked to answer as fully as they were able. The validity of their personal responses was stressed, with the experimenter reiterating that “there are no right or wrong answers” at the beginning of the interview. The interviews were digitally recorded and transcribed for later analysis.

RESULTS
Participants’ responses were analyzed for thematic content to determine the nature of both the global and the unique patterns that existed within the sample. The results presented here are limited to the responses relating to the following topics: motivation (Question 5), inspiration (Question 3), writing process (Question 2), and revision (Question 8), since these responses were most likely to reveal insights relating to our orienting assumptions concerning the nature of expert poetry composition as described in the introduction. The quotations presented below are the participants’ verbatim responses. Some quotations have been modified minimally for presentation purposes; however, such modifications did not change the intended meaning of the passages. Lengthy quotations are included to provide some context for each participant’s responses and to illustrate that these are not the product of selective interpretation on the part of the researchers.

Poet Motivation (Question 5)
Participants were asked what their motivation was for writing poetry. This question was included as it was thought to apply to the most basic and driving forces
behind these poets’ creative endeavors. Before drawing conclusions about why a specific poem is written we should ask the question “why write at all?” After all, poetry is not the most financially beneficial career path to take (a point that was raised by more than one poet). Moreover, as with all fields of skilled activity, to become an expert poet takes a considerable amount of time and practice, usually at the expense of other opportunities (i.e., given a fixed amount of resources those devoted to one area cannot be spent on another). The payoff for attaining expertise and proficiency within a skilled domain is often balanced by the cost incurred while gaining such expertise and proficiency [16]. In such situations it would be expected to find that intrinsic motivations are more common than extrinsic motivations, where the former are defined as doing something because it is inherently appealing or pleasing, whereas the latter are defined as arising when something is done because it leads to an outcome that is distinct from the initial activity itself, such as financial reward [30]. Overall, the motivation question prompted shorter answers than the other questions in the interview. Our expectations for the predominance of intrinsic motivation were confirmed since participants tended to talk about a “need to know” and about “wanting to do something well”. Participants, to a varying degree, nevertheless acknowledged that there were other, external rewards for their activities.

Participant 1 most closely typifies the intrinsic need to seek and solve as a rationale for their poetry writing, as reflected in the following statement: “To a certain extent it’s my need to know, and I find that writing itself is the most intensive way of thinking about anything and…writing a book upon a personal circumstance - it gives you the opportunity to think about it from every single direction and to develop your thoughts about it. I need to know. I need to know and that’s that – it’s always been there” (Participant 1, 232-244). The participant seems to be using poetry as a way to explore their subject matter to a satisfactory end. When this passage is taken as a whole it is clear that this participant thinks writing is a strategy for seeking general understanding and for understanding themselves in particular.

Participant 2 seems to have multiple motivations or points of reward from their poetry: “I’m quite garrulous and basically a story teller, and this provides me a way of bringing those tales to the best possible story they can be. Recognition comes into it on some level, but it’s not important, it’s more of ‘if I’m not doing this I’m not happy’, and that’s not even quite true; it’s something that I can’t imagine not doing. There isn’t much of a choice - there is a choice as to how and when but there isn’t a choice as to if” (Participant 2, 136-143). This poet first explains a match between their personality type and the story telling ability available within poetry. They spend most of their answer trying to describe their lack of personal control over the process.

Participant 3 did not initially have a response to this question, but upon a short pause they provided one: “I don’t know. I just do it…obviously I get something back from it, so I keep doing it. It isn’t about audience or even particularly being read. I think it’s doing something and thinking you’re doing it well and trying to get better at it. I think it’s good to have something like that” (Participant 3, 274-278). This was the second participant to acknowledge that poetry has an audience while denying that it had much impact on their behavior. Their final response in relation to doing something well and seeking to improve corresponds completely with the definition of intrinsic motivation.

Participant 4 had the least complex conceptualization of their personal writing motivation, yet at the same time they exhibited a rather idealised view of poetry within society: “I think that I just - I write because I don’t know what else I’d do. I don’t know how to not write. I’ve not done anything else; it just comes out. It was not like a conscious decision to write. I just get these lines and I think I might as well write them down and then I think I might as well kind of make that into something…I do honestly believe that literature and poetry and things can have like have a really positive impact on people’s lives and I think that poetry - and not in a grand way because I don’t think that what I’m writing contributes in any major way to that, but I think that really good poetry can and really good literature in general can somehow elevate people’s live and society - so I guess I’m motivated by that and the beauty of it; I just think poetry is a really beautiful thing and it’s just something that I wanted to be a part of” (Participant 4, 99-111). This individual simultaneously attempted to balance what they perceived as their current level of contribution to the field with their admiration of the field as a whole. Perhaps relevant to this interpretation is that this individual had been working in the field for the shortest period of time compared to the rest of our sample.

Finally, Participant 5 replicated the previous response pattern of trying to seek out knowledge and understanding through their writing, making a particular point to state that they were trying to understand the world and the people they see in it: “I love that ruminations and opportunity to make connections and…the word manifesto came to [mind] - its almost like a personal manifesto to try to understand my place and how the world works around me and other people. How I see it working around other people; how I see other people working. I’m just trying to work it all out; that’s an opportunity to do that really, and making connections between things” (Participant 5, 155-160). They also stated that: “I perform my work a lot and I love that, I absolutely adore it. Because it’s a very instant connection with the listener, the world, images and ideas you’re feeding them, but the communication is - feels secondary, definitely feels secondary to my initial need just for me to work things out, but then once I’ve worked it out I need it to communicate to someone else or it wouldn’t be finished, and that’s the ones that aren’t sort of sitting in the folder are the ones that aren’t communicated - so yeah, that is a
definite motivation but it feels secondary” (Participant 5, 163-170). Like the previous participants, Participant 5 indicates that communicating the finished work is an important part of the process, going as far to state that works are not finished if they are not communicated.

**Inspiration (Question 3)**

Inspiration is a difficult factor to study in an experimental context, since it cannot be guaranteed to occur when an observer is looking for it. Yet poets are a group of individuals who are highly motivated to self-manage their moments of inspiration. It is with this in mind that we questioned our participants about their sources of inspiration under the assumption that by being experts they would have the reflective, metacognitive skills to discuss it. Across all of the responses there seemed to be one common frame of reference, which was that participants wrote about what they were familiar with. They were inspired by what they saw to a varying degree in their lives, their families, and their daily experiences.

Participant 4 explicitly stated that they: “…like to be inspired by the everyday…I’m a lot more interested in the mundane, the everyday and just the everyday things that people say to each other when they are on the street, or kind of how they look at each other - just ordinary people doing ordinary things can be much more poetic - and I see my job as taking that inspiration trying to make it poetic” (Participant 4, 42-48). While this participant focused on things that they witness there is a distance between themselves and what they write about.

Participant 3 indicated that they had been working on a series of poems with a strong narrative: “…but I didn’t know that that’s what I was doing until I was into doing the poems” (Participant 3, 100-101). They went on to point out that they heard someone say: “‘I used to swim there with Michael’, and I just thought that was a really beautiful line, so I put it into this poem and then I thought ‘Who’s Michael?’” (Participant 3, 105-107). This quotation seems to exemplify both the characteristics of having a primary generator and also of solution-focused writing.

This poet additionally indicated that there was more than one large theme in their work. They explained that they were not aware of the larger frame until they were well into the creation process. Although it is not evident in Participant 3’s quotations presented here, they did speak of writing on two personal themes, one of which was grief, and it was apparent that this individual was readily able to draw connections between their own experience and what they write about. When they elaborated on their themes they explained that: “…it’s always a bit like that - linking things - but you kind of, you push ahead with it and you look back to see if there’s a pattern and at that point you start dropping some things and building up on others…perhaps with novelists or people who write differently they might actually be more structured to begin. For me I’m not structured to begin”. This comment seems to speak to the highly conjectural nature of their writing process, whereby some things are tried out and then maintained and developed if they work, whereas other things are attempted but then omitted if they fail to show any promise.

Participant 5 stated that: “…it sounds so pretentious. I would say where I find it [inspiration] is actually in me. I don’t look for it and I think actually if you start looking for it you go blind - really you don’t see it - and I think that the inspiration is when it sparks inside you. If I do go looking for it it’s about being very still and quiet and seeing what comes up. I tend to write about - so what inspires me I would say is the sea; I spend a lot of time at sea and I would also say that the natural world. I spend a lot of time in the natural world - and social history; I’m very interested in that so they are I would say [those are] the primary things that inspire me” (Participant 5, 120-127). Participant 5 had the most metaphysical interpretation to the question. Their key concepts seem to relate to stillness, quietness and patience and waiting for an opportunity to present itself. Their opinion of actively searching for inspiration was quite negative. The two named sources of inspiration - the natural world and social history – were both ones that would provide opportunities for quiet contemplation.

Participants 1 and 2 both named their own lives as sources of inspiration. Participant 1 said “I suppose the core inspiration is probably the deepest conflicts in your own life” (Participant 1, 171-172), and they also stated that “…the centre core or the ‘engine’ of the book (as my favourite editor says) is always something that is very – some sort of conflict or circumstance that is very important to you” (Participant 1,190-192). When asked about what inspired them to write Participant 2 stated the following: “Well mostly in life and in family and in social constructs. The class issues that come up between working class and middle class or upper middle class; there is a lot of friction between a working class environment and having higher education and that disconnect with my past - that’s the appreciation of my past, but inability to live in that environment” (Participant 2, 80-85).

Both Participants 1 and 2 also explicitly stated that the topics they write about should be very important. Participant 2 presented an interesting explanation for this when they noted that: “You write from conflict, you write for what is important for you because [you] have to be passionate about it for it to be interesting. To make it relevant to other people you better find it important” (Participant 2, 93-96). This explanation takes the audience or poetry consumer into account. It raised the idea that successful poetry makes people “feel” something and that the best way to do that is to feel something yourself about the poetry. This is certainly supported by Eva-Wood’s findings that students encouraged to “feel-aloud” were better at understanding poems [18].

There was a range in responses to Question 3, especially pertaining to the degree to which personal experience was used as inspiration for writing. The majority of participants
did draw upon their own life experience. All participants were able to articulate what in the past had inspired them to write.

**Writing Process (Question 2)**

Our participants seemed to represent a continuum of how much they were able to activate their own writing process internally. Participant 4 represents one extreme, where their focus seemed to be placed on taking in what initial concepts are available to them. By comparison, Participant 1 appeared to take an active role in blending information, seeking and applying the gathered information to their preferred technique, where they expand the information to fit what they are working on.

Participant 4 indicated that they recognized that their usual method of writing starts with “collecting lines” (Participant 4, 15-19). They stated that “For me it’s always been about kind of collecting these lines and phrases and words as they come in and then seeing what they’re saying, and seeing what they’re trying to tell me, and trying to build something with that afterwards” (Participant 4, 23-25). Participant 4 placed an emphasis on the organic nature of their process, whereby they focus on collecting these lines and connecting them together. The “active” portion of their process, however, seems not to be focused at this initial stage where the line first appears, since the individual believes that the emergence of this first line is not something that is within their perceived control. Furthermore, this individual specifically stated that they cannot sit down and decide that they will write a poem: “I’ll collect these lines and then try and work out what they are saying. I know some poets can sort of sit down and say ‘Okay, I’m going to write a poem today about this; or this has happened so I’m going to write a poem’. But I’ve never been able to do that” (Participant 4, 20-23). This notion of collecting lines and working from them seems to have certain qualities in common with the concept of the primary generator. These initial lines have a way of delimiting the boundaries of the poetic design space, providing a focus for subsequent writing activity.

Like Participant 4, Participant 2 also spoke about a single, initiating idea that sounded remarkably similar to a primary generator. For them this first idea may have come from a variety of sources: “...there is an initiating idea that just sort of comes out of experience or, um, just sort of family events sometimes – often, though, it’s a matter of reading poetry and being prepared to write, and almost forcing the writing where it’s read poetry and, um, read a poem, chose an image or a word or something out of the poem that speaks to you, and write from that - write your own experiences from that point using - either using that as a jumping off point, using that as a part of the poem” (Participant 2, 21-28) This participant seems to have a way of seeking out inspiration when they talk about reading poetry and choosing something that “speaks” to them. It is not entirely within their control to determine what will spark that feeling but they are able to put themselves on the right path.

Participant 3 described their writing process as being focused on solution generation or writing that is not solely dependent upon feeling inspired. As they put it “…laying it down is almost a different process. It’s just that you’re into more of ah a sense of work about it, you know what I mean? You’re not hanging around waiting to be inspired or anything; you’re sort of getting on with it, and somewhere in the getting on with it something good will happen. That’s what you hope for” (Participant 3, 69-73). Our interpretation of this is that only by producing something can it later be evaluated as being a good solution, or otherwise. First you must have solution options. This strong solution focus seems to be consistent with the claims of Cross, who argues that design progresses in a highly solution-focused manner [11].

Participant 1 indicated that to pursue their writing they used a “…relaxation technique, which I think helps you separate yourself from your ordinary everyday life” (Participant 1, 94-95). This statement points to Participant 1’s belief that there are different mental spaces, with the creative space being different from the one normally used when dealing with standard daily occurrences. They went on to describe their theory of the imagination and information gathering: “…you don’t imagine something up; you always have to look at something in order to get the information because your information isn’t in your head. You go out and look at the details; you go out…and spy on people, which is a lot of fun. You go to coffee shops and you look and you listen and you try to use all of these details and you take that information home and you do your relaxation technique and then you embroider once you’ve freed your mind and…it’s wonderful, because it does get you into the zone - you know, where actors want to be in order to create” (Participant 1, 111-121).

Participant 5 is unusual within the sample because while the other individuals seem to be describing a process that exists at a point that varies along a continuum, Participant 5 instead seems to describe these different points along this continuum as within their normal range of writing processes. They state that: “Sometimes, very occasionally, I will sit down and something that comes out, an expulsion, and that can be prompted by a bit of thinking prior. There was a poem I wrote having seen a play and the next morning I got up and I had to get that play out of my system. It was incredibly powerful…and I just sat down. And when [poems] come out like that they are almost there and they need very little striking out, but that hasn’t happened that often. I suppose they fall into categories”. So this experience seems to be of limited internal control. This rare type of poem comes into existence rather suddenly and nearly fully formed: “There is that category [and] there is the category of having an idea that I chip away at on the paper. Then there is the idea that sits in my head and I chew slowly over and over - that slowly starts to come out in the
written word”. These two categories are differentiated by the space where they are developed. The second category is worked primarily on paper: a concrete, real-world and visible space, while the third category is worked through primarily in the mental space. Participant 5 further stated that: “Then there is the other, which is a bit more of melding of styles which I have done a lot of written research for, and then I bring that research together. So there are four different ways I would say I go about it. And I don’t know what the preference is because I like them all - because they all serve different jobs” (Participant 5, 43-58). This fourth and final category seems to represent an effort to create new and previously uncharted territory. In other parts of the interview the participant spoke of setting challenges for themself in order to explore the poetic form that they had created.

Revisited (Question 8)

Never is it clearer that poetry composition is, by its very nature, based on iteration than when poets discuss the revision process. While it might not be represented in each quotation presented here, each participant nevertheless mentioned repeatedly the need to revise what they had written. The participants focused on three main issues with the revision process: (1) the need to gain objectivity; (2) the need to repeat the process of editing; and (3) that view that reading aloud was an effective strategy for finding the “gaps” or problem areas within a poem. These three themes will be explored simultaneously below, which reflects the way in which participants talked about them in an interdependent manner.

When discussing their revision process Participant 1 stressed its time consuming nature as follows: “...what [I] do [when] I get my manuscript to a certain point and get a section to a certain point [is] - then I print it off and then I go through it again and again on my own and I edit it and re-edit it and it goes through maybe ten edits before I show it to anyone. It takes a long time” (Participant 1, 315-320). They used a metaphor for the revision process where the writer is working on a pad of paper and the perfect work is on the bottom sheet and each round of revisions allows the writer to tear off the top sheet bringing the writer closer to the perfect work. For Participant 1 the general theme being expressed through this metaphor is the “repetition” of the editing process.

Both Participants 2 and 3 used reading aloud as a way to isolate instances of disfluency in their writing. Participant 2 stated that: “I do a fair bit of reading aloud. There are two things that happen. One is pushing to get through how much you’ve set for yourself to edit, and that can be - catching the glaring things, the places where you stumble, the place where it’s very unclear or big gaps, those sorts of things, but then also you have to have a focused approach where anything that has niggled - but you look at it and you’re not sure what’s wrong…you have to stop and really look at those three or four lines that might be ten to twenty words, or sometimes is only two lines - it might be eight words - and often what it is is too much condensing when what you need often in those places is simplicity. So simplifying complex situations while maintaining coherence and clarity” (Participant 2, 271-289). Participant 3 echoed this sentiment as follows: “Go back and look at it. Read it over again, sometimes read them out loud because I like read them out loud, but it’s also the rhythm that I’m writing for my own speech rhythm, so if I read it a few times I realize when I get to that bit it goes ‘chkk’ - then maybe I need to change it because that’s not a good thing to happen in the middle” (Participant 3, 412-416). It is apparent from the statements of Participants 2 and 3 that the read-aloud method depends upon their personal intuitions and feelings concerning where things are either working or not working within the poem.

Participants 4 and 5 both spoke of trying to gain some objectivity in their assessments of their poems. Their primary method for increasing their objectivity was to put the poem away and wait several weeks before reassessing it in order to determine what needed changing. Participant 4 stated: “Um, I’ll try and if I get a full first draft of a poem that I think I’m quite happy with I’ll tend to put it away for a week or two and just leave it - just as it is - and try not to do anything to it, and then come back to it because then - it’s when you’ve been writing something and you’ve been working on it you can’t judge it…so you put it away and you come back to it and immediately you see everything that is wrong with it, whether the rhythm is off and lines that don’t work. I’ll maybe do that two or three times with a poem. Rewrite it, put it away again, and then think ‘well I’ll come back to that again in two weeks’ - eventually it just gets to a point that you’re happy with it, so maybe you send it away to a magazine and then if they reject it then you’ll think ‘maybe I’ll look at it again’. It’s kind of an ongoing process” (Participant 4, 234-245).

Participant 5 seems to be describing fixation, where they are focused on this single solution when they say that: “…what sometimes happens is if I finish a poem [and] that I might have a bit of time, and I finish it say in the morning of a day - basically I can’t let it alone then and if I’ve got a day for writing and I will spend that day tweaking it and fiddling about and it just gets under my skin, which isn’t necessarily the best way of doing it, but it just becomes - I become quite obsessed by it. And then I’ll put it away” (Participant 5). Fixation can be a negative factor when it stifles creative idea production and prevents other solutions from being pursued [3] [4] [20]. From Participant 5’s description, however, it would seem that the particular form of fixation being discussed gives rise to an opportunity, as explained when they go on to say that: “The best thing to do is write it and put it away not having done all that stuff before hand, so I may or may not do that, so I put it away and not look at it for however long, and I’ve got a folder of poems. and in that folder there’s poems you know that have been kicking around for however long…I’ve got two folders: a folder of poems that I’ve just written that I really don’t know if they are worth anything; and then there are
ones that I like are upgraded...but they still get untouched, they don’t get looked at for a while and as [I think] ‘oh, what about that poem’ and I’ll go back to it...and then I’ll either read it aloud [or] if it’s a longer poem I’ll record it so I can listen to it and hear myself again with objectiveness now that I’m no longer the active reader. I’m just listening rather than reading and listening” (Participant 5). So Participant 5 makes use of multiple strategies as part of their revision process, including fixation, revision delay, and reading aloud.

Participant 2 made a novel and interesting point regarding the inspiration of the poem in the editing process, when they stated that: “There is an editing line that ‘you must kill all your dearest little babies’ because what was the inspiration for the poem is no longer a part of the poem. Often what was the perfect line that you love so much is often unnecessary in the poem when it’s finished, because the poem is now saying what that line meant to you but wasn’t in the line. It was in the story or the moment or the inspiration of the poem” (Participant 2, 327-333). The idea that your initial clever thoughts are made redundant and superfluous by the output that you have produced is both striking and intriguing.

In relation to the practical matter of how participants pursue their revisions, a single quotation from Participant 3 serves to clarify the typical logistics of the revision process: “Sometimes I’ll get a notebook out and I scrawl something down at length and later I’ll type something up. I’ll change it as I type it usually, but sometimes I’ll just start something on the computer…I quite like the typing up because I can see the length of the lines relative to each other, whereas I can never see that with my own writing” (Participant 3, 426-434). All five participants indicated that they made use of mixed methods for their revisions, preferring to use pen and paper at the beginning as this allowed them more freedom to write and cross out, while also preserving a visual history of their changes. Invariably, however, their efforts were transcribed to the computer, from which they were usually printed out and then edited again.

Our brief review of revision activities has focused on the multiple strategies employed by the participants during the revision process and their view that revision is cyclical in nature, with reading-aloud facilitating intuitive analysis, and time delays allowing for the attainment of a degree of objectivity. Future research could explore evidence of fixation and sketching during revision. The use of sketching would certainly require an entire paper in itself.

**DISCUSSION**

We focus our discussion on the three orienting themes presented in our introduction, which we believed would have relevance in the context of expert poetry composition: (1) the possible role of “sources of inspiration” [15] in contextualizing poetic activity and in informing the creation of novel solution ideas; (2) the potential involvement of “primary generators” [13] in scoping the poetry-writing task in terms of core solution-oriented objectives; and (3) the fluid and flexible nature of problem and solution representations in poetry writing, as captured by the notion that problem and solution spaces “co-evolve” [14][22]. All three of these themes derive from a wealth of design research conducted over the past few decades.

In terms of sources of inspiration, all five of the poets that we interviewed seemed to be heavily inspired by one common factor, which related to what was “familiar” to them and, thereby, in some sense what was “ordinary”, “mundane” or “everyday” (e.g., daily experiences, family circumstances and personal conflicts). The degree of commonality across these poets was striking, and probably attests to the simple fact that what was familiar to these individuals was also what they were passionate about. This passion was explicitly acknowledged by some of these poets when they explained that successful poetry makes the audience “feel” something, and that the best way to embody such emotional connotations within the poem is to feel something yourself about what is being written.

In relation to the role of primary generators and solution-focused processing in poetry composition, there seemed to be a wealth of evidence supporting the poets’ tendencies to find an early way into the poem via a key objective or concept that paved the way toward subsequent solution exploration. Most of the poets commented on developing their poems from an initial idea or from a “first line” that had come to them. One poet even spoke of the first line eventually becoming redundant by the end of the writing process because the poem as a whole was now “saying” what had been originally inspired by that first line. We are intrigued by this notion that primary generators may become redundant once they have served such a crucial role in sparking off the writing process in the first place. This observation seems to validate the role of such primary generators in providing the poet with a platform to frame their subsequent exploration of a topic in a conjectural manner while also affording a way for the poet to manage the complexity of the poetry-writing task itself. Solution-focused behaviour and the conjectural aspect of poetry writing also seems to reveal itself in the dominant role that revision plays in the process, with the poets describing revision as something that they needed to do as well as an aspect of the process that they enjoyed.

In relation to the issue of co-evolution of problem and solution space, Dorst and Cross reported that the designers they studied: “…did not treat the design problem as an objective entity”; rather, individual designers took different interpretations and those interpretations themselves changed constantly during the course of the task [14]. We acknowledge that our interview-based data did not allow us to provide clear-cut insights into the way in which poetry composition involves problem and solution representations that are highly fluid and flexible in nature. Certainly the importance of revision in poetry writing is suggestive of such fluidity, as indeed, is the claim that first lines may end up being omitted from the final poem. But we prefer to see
we have no reason to expect) or some strong aspect of
and usually implies some extreme biological basis (which
strict binary differentiation is rare within human behaviour,
variability because of random factors. Second, we note that
small sample of poets, which can accentuate individual
suggestions in this regard. First, we have what amounts to a
across the poets or for binary differences. Why, then, are
responses for the questions that we asked our interviewees,
presenting evidence for the existence of a continuum of
A criticism of our study could be that we seem to be
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involved in terms of process, so this is a highly pertinent
could very well change our interpretation of what is
Furthermore, the lens through which we explore this output
analyzes seems to be
macro-level questions may seem unnecessary and pointless,
needs to “create”, therefore writing is the solution? These
macro-level questions may seem unnecessary and pointless,
except that we have a situation where the output under
analysis seems to be both the problem and the solution.
Furthermore, the lens through which we explore this output
could very well change our interpretation of what is
involved in terms of process, so this is a highly pertinent
philosophical and practical quandary that is ongoing in our
own research.

A criticism of our study could be that we seem to be
presenting evidence for the existence of a continuum of
responses for the questions that we asked our interviewees,
rather than evidence for either complete commonality
across the poets or for binary differences. Why, then, are
our participants answering differently? We have two main
suggestions in this regard. First, we have what amounts to a
small sample of poets, which can accentuate individual
variability because of random factors. Second, we note that
strict binary differentiation is rare within human behaviour,
and usually implies some extreme biological basis (which
we have no reason to expect) or some strong aspect of
external behavioral reinforcement within society. In this
latter respect, educational experience is one way through
which society can provide reinforcement systems that
ensure people are either very similar or very different, but
our poets were largely self-taught and had only periodically
engaged in writing partnerships and mentorships. Self-
tuition, on the other hand, encourages idiosyncratic
differences to arise since individuals are reacting to their
own random interactions with the world in the absence of a
formalized education structure. As such, it may be the very
lack of formal training in poetry writing that promoted a
degree of variety in our participants’ responses. Nevertheless, as was clear in our study, despite individual
differences in poetic expression and approach there were
certainly some dominant trends that cut across our sample.

To conclude, the current study represents a first step in the
investigation of what we term “poetic design” – an area that
is clearly wide open for future investigation. The data
presented here suggest that there are aspects of striking
commonality between poetry and design, and such
similarities can hopefully be used to inform future studies.

APPENDIX
1. When did you start writing poetry? And when did you
decide poetry writing was going to be a major vocation?
2. Is there a specific process you like to use? A pattern you
have noticed?
3. Where do you find inspiration? [Is it from the same
place?]
4. Do you write about personal experiences?
5. What is your motivation for writing?
6. What kind of research to do conduct? [Historical?] [Personal?]
7. Do you use writing groups or writing partners? [How do
you find that process?] [What kind of outcome do you
get from that?]
8. How do you revise your work?
9. Did/do you have a mentor(s)? [How did that
relationship work?]
10. Are there any tools or exercises you use to aid your
writing process?
11. Is there anything that you want to add that I missed?

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